World Health Organization
REGIONAL OFFICE FOR South-East Asia

Evaluation of adoption of people centred NCD service delivery within primary health care in WHO South-East Asia Region

2014–2021

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Abbreviations and acronyms

FGD	focus group discussion
GDP	gross domestic product
GPW13	WHO Thirteenth General Programme of Work, 2019-2023
HPN	Healthier Populations and Noncommunicable diseases
IDI	in-depth interview
IEC	Institutional Ethics Committee
PEN	Package of Essential NCD Interventions
PHC	primary health care
NCDs	noncommunicable diseases
NMAP	National Multisectoral Action Plans
RC	Regional Committee
SDGs	Sustainable Development Goals
SE	South-East
SEARO	South-East Asia Regional Office
TOR	terms of reference
TWG	Technical Working Group
UHC	universal health coverage
UNEG	United Nations Evaluation Group
WHO	World Health Organization

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Executive summary

Introduction

Improving the coverage of screening and effective treatment services for Non-Communicable Diseases (NCDs) is a priority for the WHO South-East Asia Region. Among the several initiatives to support Member States in "prevention of NCDs through multisectoral policies and plans with a focus on best buys' as a Regional Flagship" in 2014 and the Colombo Declaration on strengthening health systems to accelerate delivery of NCD services at the primary health care level, endorsed at the Sixty-ninth session of the WHO Regional Committee for South-East Asia (SEA/RC69/R1) in 2016 can be identified as the key approaches to support the Member States during the period 2014–2021, to realize the global and regional targets for NCD prevention and control.

Objectives

Two objectives undergird this commissioned thematic evaluation on adoption of people centred NCD service delivery within primary health care in WHO South-East Asia Region countries (2014–2021): first, to document regional progress by identifying achievements to expand access to people-centred NCD services within primary health care and highlighting options for reducing the gap in the care cascade of select NCDs (hypertension and diabetes); second, to provide recommendations on sustaining gains, accelerate action and innovate to achieve the impact targets of GPW13, reduce NCD-related premature mortality by 33 per cent by 2030 and stay aligned to the South-East Asia Regional guidance on PHC.

Methods

Based on the guiding research questions, a conceptual framework for the evaluation was developed and presented to the Regional Evaluation Management Group of the WHO South-East Asia Region. The conceptual framework comprised three domains to be evaluated under the themes of people centred NCD service delivery within primary health care, namely, governance, service delivery and community participation. Within the three domains, 15 specific areas were identified to be evaluated.

To fulfill the requirement of multiple types of data, a sequential, mixed-methods research design was adopted. Care cascades for diabetes, hypertension and cervical cancer services were used as tracers for the evaluation.

A documentary review was carried out by two scholars with another group of contributors developing policy timelines for each country in the Region. Secondary data and indicators were compiled and analysed by a team of two scholars, drawing on STEPS and other survey data to assess coverage. A rapid evidence review was developed and executed to arrive at nationally representative or findings directly relevant to the research questions for all the countries in the Region.

Country stakeholder mapping was carried out. Following this, with inputs and nominations from the country offices and ministerial focal points, primary data gathering took place from in-person missions to seven regional countries, namely Bangladesh, Bhutan, India, Indonesia, Nepal, Sri Lanka and Thailand. This evaluation report distills information acquired from over 100 experts in 11 countries ranging from country offices, ministry departments, public sector primary care providers, civil society and academic interest groups. Data were indexed across the fifteen domains by a team of five researchers and finalized after multiple analysis meetings.

Ethical guidelines of the United Nations Evaluation Group were followed. Institutional Ethics approval was obtained from the George Institute for Global Health

Evaluation findings

Governance of people centred NCD service delivery within primary health care

Evidence indicated that WHO's normative guidance supported countries with governance reforms to introduce NCD service delivery within primary health care during the period of 2014–2021. With a range of policy measures ranging from guidelines, policies, processes, and legislative reforms and in many cases commensurate financing, countries in the Region have adopted bespoke methods to connect standards with their existing human resources and administrative machinery to prioritize what they are able to act on to address their unique NCD burdens. Estimates of NCD burden in populations generated through the WHO STEPS surveys have facilitated some countries with aligning multilateral investments to the specific needs NCD needs. Reforms in health insurance, procurement, access to medicines and emphases on prevention were evident in a number of contexts while countries with larger existing investments have taken a wide- and deep-level reform of entire systems, coupled with augmenting medicine and diagnostics availability towards universalising access.

Quite clearly, governmental capacities, on the whole, have shaped and prioritized addressing NCDs in the WHO SE Asia Region.

Delivery of people centred NCD services within primary health care

Undertaking primary health care reforms with a focus on NCD services was cited as a major force multiplier for advancement of delivery of people-centred NCD services. A variety of approaches during the period of 2014–2021, with the latter period acting as a pivot point

in many cases. Some countries have invested in population-level screening coverage specific to diseases, while others have invested in improving human skill levels and orientation and prioritizing service delivery to urban areas. Investments in services were attributed to reduced NCDs burden and consequences. Changing political leadership, disruptions of services due to COVID-19 pandemic, and hurdles met while integrating and operationalizing technological tools and enhancements were cited by most countries as hindrances to the progress.

In relation to the remaining challenges, gaps in coverage for vulnerable populations, for those in remote areas (whether in distant islands in archipelago settings or mountainous or tropical forest terrain) are hard realities. Screening coverage is growing but remains low. Medicine availability and costs was cited as another hard constraint.

Community participation for people-centred NCD services within primary health care

There was evidence that modalities for community participation in NCD service delivery are linked to governance structures of the countries in the Region although in most cases efforts are nascent. Institutionalized systems for contributions range from national health assemblies to local outreach mechanisms that allow the communities to engage in the health sector activities. The need for reforms to enhance participation and voice in decision-making was evident. Imparting more information on NCD risks and counseling the public was cited as an initial step to greater community demand for and engagement in people-centered care.

Conclusions

Commitments to NCD management at the primary level in the WHO South-East Asia Region have been undeniably strong. Momentum and WHO-offered technical resources have increased in recent years. Using a country-tailored approach, the Region should now focus on operationalization, adaptation and uptake of guidance, establishing a strong baseline, filling gaps as and where needed, and employing cross-learning approaches where possible. Critically, for NCD programming to truly be mainstreamed at PHC level using a people-centred approach, an expressed focus on community engagement and buy-in may help to amplify and sustain the progress made in the Region so far. The path may be long, but countries in the Region are facing the right direction.

Recommendations for WHO South-East Asia Regional office

A. In relation to governance of people-centred NCD care at the PHC level, the World Health Organisation South-East Asia Regional Office should

   (1) **Sustain** the momentum and advocate for political leadership among Member States to utilise and adapt NCD tools like PEN, STEPS, HEARTS and MSAP, with a particular emphasis on enablers and drivers at the level of governance, drawing on best practice examples and innovations in the Region; **and**

(2) **Support WHO** Country Offices and Member States – through, but not only limited to, Country Cooperation Strategies, and otherwise - to enhance the integration of NCD services as a tracer for Health Systems Strengthening (HSS) reforms and de-verticalization of PHC in light of existing health system architecture and country context. This ought to include guidance on engagement with subnational and national governments, the private sector, existing partnerships, bilateral and multilateral fora (like the WHO's PHC forum, ASEAN or SAARC)

B. In relation to service delivery of people-centred NCD care at the PHC level, the World Health Organization South-East Asia Regional Office should

(1) **Support** Country Offices to develop purpose-driven service delivery strategies based on existing and previous contexts, reform pathways, epidemiological transitions, pilots and innovations. This may require, as appropriate, at least one of these three options:

- **Providing** core orientation and implementation guidance on NCD service delivery reform at PHC level, providing core implementation support and core level training for actors in the government. Geography is a hard reality (e.g. small island developing states (SIDS), landlocked mountainous terrains) as well as more specific needs and contexts (e.g. political transitions, humanitarian conflict situations, climate change); **or**
- **Supporting** and skilling so that verticalized or pilot NCD programming may be integrated and scaled up as a core function of PHC with upgradation of necessary health system supports like sustaining free access to medicines, expansion of cascades of care, and support for team-based service delivery; **or**
- **Monitoring** and assessment to determine gaps in population coverage, service coverage and financial risk protection related to UHC from the perspective of users and non-users, as well as optimization of strategies to fill specific, identified equity and efficiency related gaps thereby; **and**

(2) Significantly **enhance** regionwide knowledge generation, management and translation on NCDs in alignment with existing global and local PHC related processes and forums, supporting health information systems within the Region to generate and use disaggregated, purpose-driven data on NCDs, reducing both duplication and fragmentation of knowledge in and from the Region

C. In relation to community participation to support people-centred NCD care at the PHC level, the World Health Organization South-East Asia Regional Office should;

(1) **Expand** the regional evidence base on national and subnational efforts to link and scale-up impactful and promising community initiatives and platforms to support planning, monitoring, patient support, and resource allocation; **and**

(2) **Advocate** for the participation of the public and in particular groups facing disadvantage and/or marginalization as well as persons living with NCDs in the development, design as well as monitoring and evaluation of NCD policies programmes

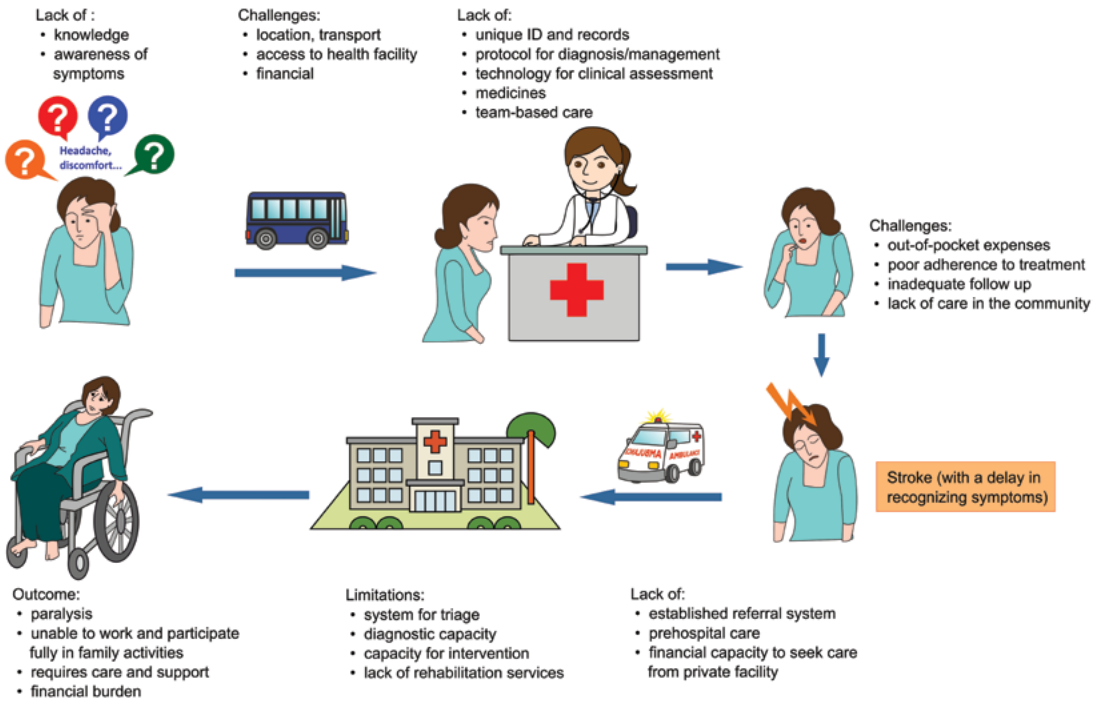
1. Introduction

1.1 Scope and Purpose

Noncommunicable diseases (NCDs) – including cardiovascular diseases, cancers, chronic respiratory diseases, and diabetes are a priority for WHO South-East Asia Region[1]. Nearly half of all deaths from NCDs occur prematurely between 30–69 years of age. A quarter of the adult population in the Region suffer from hypertension[2] and every twelfth adult has diabetes[3]. The economic burden from NCDs account for almost 4 to 6% of GDP in most of the Member States[4].

One billion more people benefitting from universal health coverage is one of the Triple Billion goals of WHO under GPW13. Sustainable Development Goal target 3.8 of Universal Health Coverage (UHC) requires increased access to NCD services. People-centred services are those organized around the needs of people so they may make decisions about their own care[5]. Primary health care is a model of care that makes first-contact accessible, affordable comprehensive, and coordinated patient-focused services[5]. Services for NCDs are the weakest in primary health care in low- and middle-income countries and the domain with the greatest need for action in the UHC service coverage index, owing to a number of challenges (see Fig. 1).

Fig. 1. Challenges in providing optimal health care for NCDs



Source: [6] Reproduced with permission

Increasing access to NCD services is one the goals of the Regional PHC Forum

- At least 50% of eligible people receive drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes.
- An 80% availability of affordable basic technologies and essential medicines, including generics required to treat major NCDs in both public and private facilities.

In 2016, all Member States at the Sixty-ninth session of the WHO Regional Committee for South-East Asia unanimously adopted the Colombo Declaration to accelerate NCD service delivery at the primary health care level.[1] Annual progress reports have been submitted to the Regional Committee since then, documenting progress in NCD service delivery.

The Department of Healthier Populations and Noncommunicable diseases (HPN) in the WHO Regional Office for South-East Asia aims to sustain, accelerate and innovate the work towards the achieving the WHO Triple Billion goals as well as 2030 Sustainable Development Goals for health and well-being of our people and the planet, "leaving no one behind". NCDs are one of the flagship programmes of the Region. The NCD unit covers the areas of multisectoral plans for prevention, NCD management and surveillance. Most of the Member States adopted these goals in their respective National Multisectoral Action Plans as well. WHO Package of Essential Noncommunicable Disease (PEN) has been promoted as a model of approach for integration of NCD service in the Region since 2010 with Bhutan and Sri Lanka piloting the initiative. The Package of Essential Noncommunicable Disease (PEN) and Healthy Lifestyle Intervention training modules for primary health care workers were introduced in 2018.

All countries of the Region were oriented on the Regional PEN training package at a three-day meeting in October 2018 in Dhaka. In 2020, the WHO SEARO Online Course for delivery of people-centred NCD services was developed to enable capacity-building during the COVID-19 pandemic.

The Colombo Declaration on strengthening health systems to accelerate delivery of NCD services at the primary health care level highlights renewed commitment by Member States to accelerate NCD service delivery through a people-centred primary health care approach to realize the Global and Regional Voluntary Targets for NCD prevention and control, which includes achieving 80% availability of essential NCD medicines and technologies in health facilities and ensuring that 50% of high-risk populations receive drug and counselling therapies to prevent heart attacks and strokes by 2025.

1.2 Objectives

While the progress across all Member States is encouraging, there is need to improve coverage of screening and effective treatment services. For example, the hypertension control coverage rates in most countries are below 10%[7]. This indicates that NCD services need both scale-up of services and improvements in quality.

Efforts have been underway especially in the past decade but have not been assessed at the regional level bringing together country case stories and other relevant reports and perspectives. It will be important to evaluate the real improvements, innovations, challenges and bottlenecks in integrating NCD services at the PHC using the WHO PEN approach. "best buys" - are primarily on population-based interventions: this evaluation focussed on individual clinical interventions in primary health care. These interventions include those in WHO PEN and combine behavioural counselling and clinical management.

A thematic evaluation on "adoption of people centred NCD service delivery within primary health care" in WHO South-East Asia Region countries (2014–2021) was undertaken to document regional progress in adopting and expanding access to people centred NCD service delivery within primary health care and to make recommendations on the way forward. The objectives of the evaluation were:

(1) To document regional progress in adopting and expanding access to people centred NCD service delivery within primary health care by:

- identifying achievements, success stories including innovations, best practices, key challenges encountered in expanding the access to people centred NCD services in Member States including gender and other equity domains.
- highlighting the options for reducing the gap in the care cascade of selected NCDs such as hypertension and diabetes.

(2) To make recommendations on how we may sustain the gains, accelerate action, and innovate where needed at country and regional level to achieve the impact targets of GPW13 and Sustainable Development Goals (mainly reduction in NCD-related premature mortality by 1/3 by 2030), aligned to the South-East Asia Regional guidance on PHC.

2. Methods

The evaluation employed a sequential mixed methods design, carried out in 2023. At the outset of the evaluation, it was decided that we would place emphasis on tracer conditions of diabetes, hypertension and cervical cancer given the high levels of prevalence of risk factors for these conditions in relative terms and the priority given to them in global NCD programming. We were interested in overall PHC-level programming for NCDs, our emphasis was placed on NCD services focused on the risk factors and/or conditions, as well as care cascades that would have to be in place correspondingly.

2. 1 Evaluation framework and questions

In our planning and initiation phase, we developed a conceptual framework for the study, presenting our overall evaluation design to a reference group, and placed emphasis on orienting and seeking permissions for the evaluation from country counterparts. We also sought institutional ethical approval from the George Institute for Global Health. The evaluation was aligned with the United Nations Evaluation Group Ethical Guidelines for Evaluation (2020), which foreground integrity, accountability, respect and beneficence.[8]

In planning and initiation, the evaluation team was composed and in early meetings with the Regional Office, we adapted the World Health Organization's Integrated People-Centred Health Services Framework,[9] the Primary Health Care Operational Framework,[10] the Health Systems Building Blocks Framework,[11] as well as a Health Systems Strengthening Evaluation framework[12] to arrive at a broad conceptual framework(see Fig. 2a), as well as domains of inquiry based on which this evaluation was structured (see Fig. 2b).

A meeting with the Regional Evaluation Management Group followed and refined our methods and lay the groundwork for subsequent phases (explained below).

2.2 Data collection

Data collection comprised a range of methods and findings, which were triangulated through weekly group discussions. Every few months, analytic outputs and/or draft reports were submitted to WHO SE Asia Region collaborators for joint discussion and review as well as consultation, as necessary, with the Evaluation Management Group, on the basis of which further decisions on information gaps and strategies to obtain information or to triangulate findings were made.

Fig. 2a. Conceptual framework of evaluation on people-centredness of NCD care in SE Asia Region

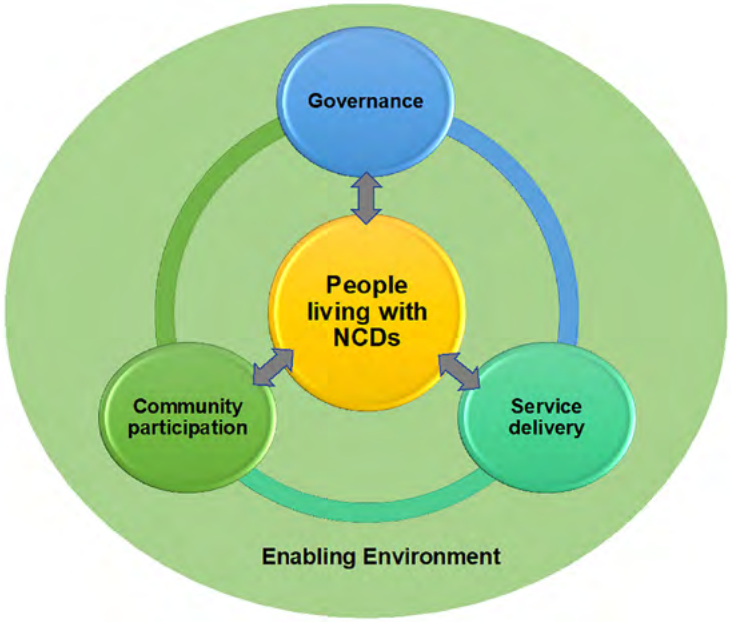


Fig. 2b. Conceptual framework and domains of inquiry for evaluation

Governance *standards, allocating resources, role clarity and stewardship*	•Government standards and specified service model •Adequate allocation, dedicated budget •Delegation, role clarity and convergence •Champions and sustained leadership
Service delivery *counseling, protocols, medicines & technology, risk-based management, team care, monitoring (HEARTS)*	•Healthy lifestyle counseling •Evidence-based protocols •Access to essential medicines and technology •Risk-based management •Team-based care and human resources •Systems for monitoring
Community participation *Co-production, awareness & literacy, satisfaction, inclusion, equity*	•Co-production of policy or services involving people living with NCDs •Mass awareness of risk and services •Feedback on satisfaction and quality of care •Special provisions for inclusion of populations facing disadvantage, across sex, gender, age, socio-economic status, geography and other dimensions •Reductions in inequalities and inequities across groups

Furthermore, prior to seeking WHO Country Office concurrence and support for qualitative primary data collection, initial findings were shared. In other cases, additional findings and write-ups were shared for review/reaction. We matched subdomains of inquiry with at least two sources each, which in most cases was achieved. We created templates for extraction of data and attempted to use a process tracing approach as well SE Asia Region as create cascades of care (particularly for diabetes and hypertension care). Findings were consolidated using the structure recommended in the WHO Evaluation Practical Guide for consolidation of findings.[13] To begin with, two scholars carried out independent assessments of regional level

actions by WHO pertaining to NCD services through *documentary review*, including, but not limited to: technical guidance, reports consultations, information related to training courses, as well as other communication and/or advocacy. sourced from multilateral agency and government websites. Information was extracted by two scholars and reviewed by two others to list out key developments focused around the construction of timelines using Microsoft powerpoint depicting the 15 domain areas of inquiry as well as a category focused on WHO contributions and developments. These were used as a base to be updated, revised and written up in narrative format.

Concurrently, two quantitative research scholars carried out a data source mapping exercise followed by *analysis and compilation of secondary data and indicators* related to people-centred NCD care. This involved identifying publicly available datasets (including on the NCD dashboard) as well as published reports, indexing these data against criteria in our conceptual framework. Data were included in multiple rounds of early narrative report writing, and cascades constructed for diabetes, hypertension and cervical cancer care for countries where data allowed it. We attempted to look at coverage data over time although this was only possible for Bhutan.

A *rapid evidence review* was also conducted by a team of four scholars, with search criteria developed and executed for each country (strategy and details available upon request), and country data indexed in Microsoft Excel focusing on bibliometric information, scope, key findings pertaining to NCDs and the three areas of interest in our conceptual framework. These findings were shared with country office colleagues as part of initial orientation and interactions and for their feedback. Eventually, some of these data – especially those referring to findings from nationally representative surveys like STEPS- were included in the analysis, but not all data could be, because of considerations of external generalizability of findings.

Stakeholder mapping was carried out in early stages of the project as well, for review by the Regional Office, South-East Asia, as well as country offices and Ministry of Health counterparts. Nominations were sought from Country Office personnel, focal points from Ministries of Health for consultation and primary data collection. As part of this, missions were planned in seven of the SE Asia Region countries, namely Bangladesh, Bhutan, India, Indonesia, Nepal, Sri Lanka and Thailand. These countries were chosen by the Regional Office and evaluation team so as to represent a diversity of contexts and burdens, but also potential achievements and exemplars with particular relevance to people centredness. Missions were undertaken to all countries but Thailand, where participants expressed a preference for virtual interviewing.

Semi-structured topic guides were developed, and pilot tested internally to refine the primary data collection procedure and tools involving *consultations* and *key informant interviews*. These guides incorporated open-ended questions and relevant probes to elicit responses from stakeholders, based on broad questions as well as data gaps identified from earlier analyses. For interviews, informed consent procedures were followed in compliance with Institutional Ethical Committee requirements (Approval Number 16/2023).

2.3 Data synthesis, analysis and triangulation

Information was obtained from over 100 individuals (N=103) across the 11 countries. Of these groups were almost equally divided by representation across categories of WHO country office representatives (WCO), Ministry of Health, Health Department or Directorate (DOH) officials, Primary Health Care Centre staff (PHC), and representatives of community-based organizations, academia, and civil society (COM). In each country, however, representation across each group varied, based on availability and interest.

Interview data were transcribed by a professional agency with transcribers signing confidentiality agreements. Researchers also detailed missions and/or interviews in summary note form and updated others in routine meetings organized through a Microsoft Teams channel and via WhatsApp. Emerging findings were discussed in weekly meetings and a coding strategy developed and refined.

Employing the framework method[14], *a priori* codes were first indexed, meaning that data corresponding to each of the fifteen domains as well as research objectives was manually coded. Codes and interpretation were arranged by five scholars under domain areas in narrative format in the findings section of the report, with population and program related quantitative data also added where appropriate to indicate the level of achievement with consideration of its distribution across population subgroups. It was noted quite early in the analysis period that content may not be forthcoming on all subdomains. Where data on a subdomain is not available (this is particularly the case with the Community domain), it is not listed or included in this report. Further, data that emerged but was beyond the purview of the domains or not quite nesting in them were encoded as emergent were agreed upon by consensus by individuals performing coding and indexing. The lead researcher reviewed multiple rounds of coding, indexing, and interpretation, as well as the laying out of findings in narrative format, which was carried out collaboratively by seven team members with varying levels of contribution. All findings were reviewed by multiple researchers, at least one who had done the fieldwork and one who had not.

Four large group analysis meetings in addition to country specific meetings were held to discuss emerging findings and to consolidate themes. Evaluation questions proposed in the inception report were reviewed and considered in the compilation of analysis. The recommendations were developed using data triangulation ensuring that they were supported by multiple data sources and perspectives ensuring analytic generalisability. In many cases, participants made recommendations; in other cases, we relied on our interpretations, and made multiple review and iterations of draft recommendations were made with the SE Asia Region team's reflection on feasibility and relevance as well as presentation of findings and recommendations.

A living report existed from the early phases of the study, and was continuously updated, expanded, reduced, written and re-written, based on which a final narrative format was arrived at for the evaluation.

Limitations

Given our time constraints, we were unable to directly ascertain experiences of care seeking or of unmet need from the perspective of residents and citizens of countries in the Region. Even our conceptual framework was developed based on our perspective as academic and technical experts rather than as service users and rights holders. Follow-on evaluations would require a formative phase where even the conceptualization of people-centredness, is based on perspectives on the ground. We did explore definitions of people-centredness, which forms the basis for some of the recommendations, however.

Another limitation is that we were not able to visit all countries of the Region and see first-hand the types of service delivery that were undertaken; even countries that were visited involved short single missions and would have benefited for longer term engagement to understand the variations in and changes in time pertaining to service delivery and community engagement.

Further, our interactions with serving functionaries in many contexts may not have allowed us to capture the range of experiences and strategies adopted in the period concerned as persons directly involved with these developments were often not serving in the positions any longer, owing to postings, transfers, superannuation and other reasons. As such, given our time constraints, we were unable to capture the richness of such developments. It is recommended that more country focused analyses be carried out to understand these with the required granularity and depth.

Finally, with COVID-19 placing some pressure on health systems overall in the period 2020–2021, and a number of changes being introduced in the period 2022–2023, our time-frame did not allow us to fully assess the impact of the pandemic on service delivery on health systems on the one hand, while also not allowing us to ascertain in detail more recent developments and "build back better" efforts that may have been underway in the previous biennium. Further research would be necessary to capture this with some nuance and detail.

3. Findings

3.1 Governance of people-centred NCDs service delivery

Regional adoption of people-centred NCDs service delivery is underway. By 2021, or immediately following it, the policy landscape definitively moved towards this end. Whether "building down" NCD service delivery at higher levels of care, or "building in" NCD services as part of primary health care, both strategies were observed. In yet other countries, both strategies are in simultaneous use.

WHO tools (like PEN) have been a reference point across the Region for developing standards and service models. National health strategies or plans that specifically cater to or refer to NCDs exist. Screening guidelines are present, but other elements of the service model were less apparent in many parts of the Region.

Most countries in the Region have increased their budgetary allocations to NCD programming in the previous decade. For some, the specific amounts were not publicly available (Bhutan, DPR Korea and Maldives). For others, the feedback received was that funding was underutilised (Bangladesh). In others, a clear need for further allocations (Indonesia and Maldives) was clarified. A number of countries (Bangladesh, Bhutan and the Maldives) were co-funded on a pilot or an extended basis by multilateral institutions.

In most countries, national level units are set up at the highest levels of administration, with delegation of responsibilities down to the community and sub-provincial levels. In Bangladesh, Nepal and Thailand, implementation of NCD programming is part of the remit of local governance structures. The supportive role of WHO has been noted alongside key agencies like UNICEF, GAVI, and the World Bank Group. NCD multisectoral action plans that outline aspirations for convergence exist, but are not quite at scale in the Region. In tobacco control, important collaborative efforts are present. In most countries of the Region, the involvement of sectors such as education, finance, urban planning and agriculture is observed.

3.1.1 Government standards and specified service model

Bangladesh

Bangladesh launched its Strategic Plan for Surveillance and Prevention of Non-Communicable Diseases 2011–2015 (SPSPNCD 2011)[15], building on the achievements of the Strategic Plan for Surveillance and Prevention of NCDs 2007–2010. The 2011 SPSPNCD aimed to reduce

NCD-related deaths by 2% annually by focusing on the surveillance of NCDs and their risk factors, health promotion, prevention, and improving health-care services for NCDs. The Health, Population and Nutrition Sector Development Program (HPNSDP) (2011–2016) [16] proposed programme integration to improve the socioeconomic conditions of the population as a strategy for NCD control. The 4th Health, Nutrition and Population Strategic Investment Plan (HNPSIP) (2016–2021)[17] recognized NCD control as a priority area, and the 7th Five Year Plan of Bangladesh imbibed the strategies proposed in HNPSIP and stressed improving health promotion for NCD control. In 2017, the National Strategy for Prevention and Control of Cervical Cancer[18] introduced the HPV vaccination program for adolescent girls through the Expanded Programme on Immunization (EPI). It implemented population-based cervical cancer screening and treatment through the public delivery system.

The 2018 Multisectoral Action Plan for Prevention and Control of Noncommunicable Diseases (MSAPNCD 2018)[19]. envisages adapting the WHO PEN disease interventions in primary care institutions of the country. The Dhaka Declaration (2022) endorsing 32 action areas to address prevailing challenges and gaps provided an added fillip to accelerate progress towards NCD control, management and prevention.

Bhutan

The Multisectoral National Action Plan for the Control of Noncommunicable Diseases (2015–2020) drew on multisectoral collaboration at the national, regional and community levels[20]. Breast cancer, oral cancer, and gestational diabetes screening protocols and programs were introduced.[21]The Service with Compassion and Care Initiative (SCCI) launched in 2018 put people-centredness in the heart of service delivery with clearly defined roles of health-care workers. [21]It also aimed to address a wide range of NCDs. The Bhutan Cancer Control Strategy (2019–2025) called for the review of national medicines list as well as expanding health promotion to include sexual and reproductive factors associated with cancer[22]. The Guidelines for Cervical Cancer Programme in Bhutan (2019–2023), Guidelines for Screening of Gastric Cancer, Cervical Cancer and Breast Cancer (2020–2023) expanded the role of health workers. All policy documents outlined measurable indicators to track progress. Plans for periodic audits of progress and data collection were also often outlined.

Democratic People's Republic of Korea

In 2014, the Democratic People's Republic of Korea (DPR Korea) introduced the National Strategic Plan for the Prevention and Control of Noncommunicable Diseases (2014–2020)[23]. The WHO Country Strategic Plan (2014–2019) aimed to build capacity for the implementation of the National Strategic Plan and other multisectoral NCD policies and programmes[24]. In 2017, the UN Strategic Framework for Cooperation between the United Nations and the Democratic People's Republic of Korea (2017–2021) aimed to address NCDs particularly cardiovascular diseases, hypertension, and cancer through improved social determinants of health, such as food security, as well as environmental and institutional sustainability[25].

India

India's policies and programmes on noncommunicable diseases (NCDs) have evolved to address the prevention and control of major NCDs such as cancer, diabetes, cardiovascular diseases, stroke and more. The National Programme for prevention & Control of Cancer, Diabetes, Cardiovascular Diseases & stroke (NPCDCS), launched in 2010, laid the groundwork for NCD policies in India. In 2013, the operational guidelines decentralized NCD activities and expanded screening and early detection efforts. A task force on comprehensive primary health care (CPHC) in 2014 paved the way for further decentralization which also included population-based screening and Ayushman Bharat Health and Wellness Centres (AB- HWC).

From opportunistic screening at NCD clinics, the programme has moved on to intentional screening, at the doorsteps, with clear pathways to diagnosis, referrals and treatment initiation and sustenance. The policy landscape expanded further to engage various stakeholders, including separate ministries of the central government, state and union territory bodies, civil society, and international partners and advises use of technology for effective implementation. In May 2023 the programme was revamped to include wider range of NCD conditions and was renamed as National Programme of prevention and control of Noncommunicable Diseases (NP-NCD).

Additionally, the National Monitoring Framework laid down a process of accountability through collecting and storing data on 10 targets and 21 indicators on mortality, risk factors, and health systems response to NCDs. In 2017, the National Health Policy emphasized people-centred care and introduced the concept of health and wellness centres (HWCs) at the primary health care level.[a] This was described as a paradigm shift by a DOH KI:

> ***If you have a hospital-based approach... any health centre-based approach, we could not achieve the population... we could not grab the population... could not provide the kind of message we would like to say in the community. After this paradigm shift parallelly, establishment of HWCs .... we could shift from hospital to community-based approach. (DOH KI)***

Indonesia

Indonesia's National Action Plan on Prevention and Control of NCDs (2015–2019) had the precedent of existing reforms in primary care service delivery – such as Posbindu and village level Posyandu integrated health posts created as early as 2011, and linkages to the community

a Primary health care strengthening was concretized with decentralization being the pivot of NCD programming around this time, with expanded screening for oral, breast, cervical cancer, chronic obstructive pulmonary disease (COPD), hypertension, and diabetes. In 2023, the programme was renamed as the National Programme for Prevention and Control of Non-Communicable Diseases and included scope to cover NCD conditions such as chronic obstructive pulmonary disease and asthma, chronic kidney disease, and non-alcoholic fatty liver disease.

health centre model of Puskesmas introduced in the 1960s. The Rencana Pencegahan dan Penanggulangan Penyakit Tidak Menular Tahun 2010–2014" (Noncommunicable Disease Prevention and Mitigation 2010–2014) was also being operationalized at this time, with express linkages to the Ministry of Human Rights. This was congruent with the 2014-released WHO Country Cooperation Strategy which had an emphasis on health systems, uptake of the PEN model and linkages to UHC. In 2018 Cervical Cancer management guidelines followed.[26]

While formulating a policy or guideline, due care was taken to consider multiple inputs: global guidelines (such as that of the WHO), field experts, clinical and public health professionals, health associations, and primary-level physicians within the community. Regional leaders adapted and tailored these guidelines to suit the highly variable contexts across the country.

Certain global guidelines proved impractical. Country specific guidelines were devised: USGs were adopted in the country due to the unavailability of mammograms in all hospitals.

> ***About 100 hospitals among 4000–5000 have mammography in the hospital. We cannot invite all women to check with this mammography so the scope will be lower. In the beginning we used the breast examination but then coincidently we could make more than [physical] breast examination, by using USG and find cyst below 2cm by using it. Then it would be accurate. We know that USG cannot have diagnosis for cancer, but we still do a screening and if there is a cyst refer them to hospital for screening. (DOH KI)***

Maldives

The National Health Master Plan (HMP) (2006–2015) prioritized the prevention of noncommunicable diseases (NCDs), recommending integrated health promotion and preventive health services across all levels of care and the establishment of primary health facilities equipped with trained staff and equipment to provide comprehensive primary health care[27]. The national strategic plan for NCDs (2008–2010) made progress in NCD prevention and control by implementing STEPS surveys, strengthening tobacco laws, piloting PEN interventions, and raising awareness among political bodies[28]. The Health Master Plan HMP (2016–2025) included interventions focused on preventing and controlling NCDs through health promotion, early detection, and management using standard treatment guidelines[29]. The HMP 2016 plan also called for delivering primary care through the public sector in all islands. The Multisectoral Action Plan (MSAP) for Prevention and Control of Noncommunicable Diseases (2016–2020) identified the following strategic action areas: building partnerships across sectors, improving advocacy for NCD prevention, strengthening legislative measures for risk factor reduction, scaling up PEN interventions, and continuing ongoing STEPS surveillance.

Much of the reform in Maldives was put in place after 2021, including the Faafu Atoll PHC Demonstration project, the 2023 National Multisectoral Action Plan for the Prevention

and Control of Noncommunicable Diseases in Maldives (2023–2031),[30] and the revision of the National Cancer Control Plan (NCCP) from (2022–2026).

Myanmar

Since the early 2000s, as the burden of NCDs began to increase, Myanmar consistently maintained a focus on addressing NCDs: the Myanmar Tobacco Free Initiative was launched in 2000 and in 2005, it become a party to the WHO Framework Convention on Tobacco Control (FCTC), signing the protocol to eliminate illicit trade in Tobacco products in January 2010.[31] The Tobacco Control Law was passed in 2006.

The formulation of the National Health Plan 2011–2016 set the stage for subsequent health plans and policies in the country after decades of isolation.[32] In May 2013, WHO developed the Global Action Plan for the Prevention and Control of NCDs, and Myanmar endorsed it. WHO CCS for Myanmar (2014–2018) targets NCDs as one of the strategy priorities aiming to strengthen the health system, multisectoral support to expand national efforts for preventing and enhancing the achievement of NCDs targets and calls for a cancer registry to be established.

In early 2015, a dedicated NCD Unit was established under the Department of Public Health. Myanmar National Health Plan (2017–2021) recognizes NCDs as a major public health challenge. It takes a multisectoral approach with strategies to strengthen primary health care, promote healthy lifestyles, improve access to essential medicines, and strengthen health Information systems and partnerships.[32b]

Myanmar is one of the countries committing itself to achieve the goal of the WHO Global Initiative for Childhood Cancer. Since May 2020, it has participated as a focus country and the Ministry of Health nominated Yangon Children's Hospital to represent health institutions from Myanmar in South-East Asia Region Childhood Cancer Network (SEAR-CCN).[33,34]

Nepal

The policy precedent for primary care level intervention on NCDs in Nepal was set by prevention and control activities underway prior to 2014, but with specific mention of integration of the WHO PEN package in Village Development Committees (VDCs) and Primary Health Centres (PHCs), in alignment with the SE Asia Region Action Plan under its Multisectoral Action Plan (2014–2020).[35] In 2016, the Health Ministry launched the WHO PEN in two districts. To strengthen the PEN intervention, the Ministry of Health and Population (Primary Health Care Revitalization Division and National Health Training Center) and WHO built a pool of national trainers in 2016 and early 2017. The Nepal Health sector strategy plan of 2017 further expanded the role of primary health care in NCD prevention and control by proposing referral protocols between primary, secondary and tertiary care,

b The Myanmar National Comprehensive Cancer Control Plan (2017–2021) and Myanmar National Strategy Plan for Prevention and Control of NCDs (2017–2021) were developed through a consultative process involving various stakeholders including government agencies, civil society organizations and international partners.[33,34] It provides a framework for coordinated action across sectors and stakeholders to address the NCD burden in Myanmar.

and through scaling up PEN implementation in all the districts[36]. The PEN programme was scaled up in 51 districts by 2021 and aimed to cover all 77 districts by 2022. The national plan expanded screening to integrate gestational diabetes; screening and treatment of cervical cancer was also mentioned. In addition to community health volunteers in health promotion in the 2014 national action plan, capacity-building and sanctioning of doctors in primary health centres was included in the 2017 strategic plan. The Multisectoral Action Plan for the prevention and control of NCD (2021–2025) has been recently launched with the goal of strengthening the NCD prevention and control in the country. The priority of NCDs was highlighted by a COM KI:

> ***Previously we had multisectoral action plan which was from 2014–2020. Now we have from MSAP from 2021–2025 and we have Nepal National Health policy, 2014, this is the latest of our health policy which also addresses NCDs, the previous health policies did not address NCDs. Now it is being addressed. Now we are in the third Nepal health sector plan which is from 2015–2020. Now we need to update this health sector plan, so all these government plan, policies are now geared up to address the NCDs. (COM KI)***

A DOH KI put it thus:

> ***Regarding noncommunicable disease and mental health, I have to say that till before 6 years there was no such community-based activities in the country. Yeah, we did have a clinical and hospital-based service through the non-communicable disease (program). it is developed with in reference to the guiding document that is the multispectral action plans and, NCD's in 2014. It is the MSAP and in vision of these documents it is stated there would be the one focal point in ministry of health and population.(DOH KI)***

These developments had knock on effects beyond the period of focus in this evaluation. For instance, in 2023, Ministry of Health and Population, and WHO Nepal supported the launch of Hypertension Care Cascade Initiative in Dhulikhel Bagmati Province (BHCCI). The programme aims to improve hypertension detection and management at the primary health care level.[37]

Sri Lanka

In 2010, the National Policy and Strategic Framework for Prevention and Control of Chronic Noncommunicable Diseases aimed to cut premature mortality caused by NCDs by 2% annually over 10 years. This policy emphasized the promotion of health and well-being, as well as ensuring the provision of acute and long-term care for those with NCDs[38].

The National Policy & Strategic Framework on Cancer Prevention & Control (2014)[39] decentralized cancer control services.Provincial ministries of health with district cancer control committees were made accountable to implement cancer services. The national multisectoral action plan in 2016 proposed integrating NCD prevention, management and control in the primary health care (PHC) along with plans for engaging different ministries for promotion of healthy lifestyle.[40] [c]

Sri Lanka's Health Master Plan (2016–2025) reflected this emphasis[41]. In 2018, the WHO Country Cooperation Strategy underlined the need for a responsive, people-centred PHC model with referral linkages to higher levels of care[42]. Cancer diagnosis and screening transitioned from the district level of health care to primary health care units (PHCU) with the launch of the 2020 National Strategic Plan on Prevention and Control of Cancer in Sri Lanka[43]. The plan bolstered the referral system for cervical cancer by mapping and linking colposcopy clinics and histopathology labs to each other.

Thailand

Thailand achieved UHC through its National Health Security Act of 2002. The Civil Servant Medical Benefit Scheme (CSMBS), the social health insurance (SHI) and the universal coverage scheme (UCS) all provide outpatient and in-patient treatment coverage, positively addressing the population's health-care needs[44]. Weaknesses in urban areas with specific reference to Chronic NCD care at the primary level were noted by some of our key informants as well as in the Asia Pacific Observatory on Health Systems and Policies Review 2015, calling for improved infrastructure and proposing contracting-in approaches[45]. The National Health Security Office (NHSO) requested that all contracted health providers register all NCD patients for better data management and support the formation of a disease registry for NCDs. The 5-Year National NCDs Prevention and Control Plan (2017–2021)[46] aimed to reduce the harm of NCDs through collaborative efforts at all levels and improve public health and economic development by 2021. A new 5-year NCD Action Plan was submitted for endorsement to the Cabinet in 2023. A Strategic Technical Advisory Group on Hypertension was also established.

Timor-Leste

The National Health Strategic Plan (2011–2030) focused on strengthening primary health care services[47]. In 2015, the National Strategy for Prevention and Control of Noncommunicable Diseases, Injuries, Disabilities and Care of the Elderly, and the NCD National Action Plan (2014–2018) were also introduced.[48] The WHO Country Cooperation Strategy (2015–2019) and 2021–2025 also supported federal actions addressing NCDs through technical assistance.[49,50] Further, in 2021, United Nations Sustainable Development Cooperation Framework (2021–2025) aimed support for primary health care services and the reduction of NCDs[51]. According to a WCO key

c This was updated in the 2023-2027 plan

informant "the National Health Strategic Plan had a major revision in 2021 providing a basic plan for the overarching health sector and within that there is an NCD strategy for 2021–2030".

3.1.2 Budget and allocations

Bangladesh

The Bangladesh National Health Accounts 2017 reported that the government's contribution to the health sector had increased. However, its contribution to Total Health Expenditure (THE) is on the decline: Bangladeshi households contributed 67% (Taka 302 billion) of THE. Drugs and medical products contributing to 64.49% to this out-of-pocket expenditure[52d,50].

In 2017, the government started the pilot for a social security scheme "Shasthyo Surokhsha Karmasuchi" (SSK) a pro poor heath protection scheme. This has been piloted in one district with plan for scaleup. A WCO KI stated: "The utilization rate is very low. In the past, underutilized fund was about 5% but in recent years, it increased to 22% of the fund returned back. So, this becomes a challenge to the health ministry to argue with the finance ministry to ask for more." (WCO KI)

NCD services are covered by the government revenue budget and development funds (a funding pool from development partners). A WCO KI reported that NCD budgets may be underutilized since these monies are meant for training and guideline development. The NCD management model is being rolled out across the country with NCD corners being established with screening being done at community clinics -- over 230 corners are already established.

Bhutan

Most policy documents do not outline a specific budget.[e] Furthermore, beyond mentioning the need to ensure cost-effectiveness, policies rarely outlined specific strategies to ensure long-term sustainability of programmes. Information is not provided in all policy documents regarding best practices, programme enablers and barriers, the perceived quality of care by the community, and the steps taken to ensure community involvement in the policy process.

Democratic People's Republic of Korea

DPRK's UN Strategic Framework for Cooperation aimed to further NCD efforts through collaboration with the national government, as well as UN and international partner agencies, such as UNICEF, FAO and WHO. Regarding financing, the Framework acknowledged the relative

d This was reiterated in 2019: a World Bank brief reported that the share of the NCD control budget in Bangladesh -- 4.2% of the health sector – was low compared to its high NCD burden. High out-of-pocket expenditures are entailed by citizens for NCD care.

e Our analysis of policy documents and guidelines found that while Guidelines for Cervical Cancer Program, Guidelines for Screening of Gastric Cancer, Cervical Cancer and Breast Cancer, and the Health Flagship Blueprint specify the amount of funds available for policy implementation, specifics are not present.

uncertainty regarding the financial resources available to the UN in DPRK[25]. Moreover, the Ministry of Health also led the implementation of the national strategic plan for NCDs along with partner ministries, drawing on financial resources from the state budget, donations of institutes, enterprises and social organizations, and the support of international organizations and donors.

India

Commitments to NCD services in India have been substantial and growing, albeit not at a pace that may match burden. The official National Health Mission website reports that the total expenditure of the NCD control programme from 2012–2017 was Rs. 80.96 million INR. Of this amount, the Government of India contributed Rs. 65 350 million INR, and state governments contributed Rs. 15 610 million INRs[53]. Under the Health and Wellness Centre upgradation plans, dedicated budgets have been earmarked for drugs and supplies, lab equipment, IEC, infrastructure, referral transport, diagnostics, training and incentives for ASHA. Building on this, the 2023 guidelines see the integration of the Fifteenth Finance Commission support for diagnostic infrastructure in rural and urban areas based on the mandate to achieve universal health coverage. It also emphasizes the role of Pradhan Mantri- Ayushman Bharat Health Infrastructure Mission (PM-ABHIM) to develop the capacities of institutions including critical care blocks and integrated public health laboratories) across the continuum of care at all levels of the health system.

Indonesia

In 2015, NCD services were integrated within Posbindu, alongside a 200% increase in budgetary allocation for NCD programming. A representative from DOH commented: "From the NHA [National Health Account], the budgeting for NCDs is quite big- almost 60% of the total health care budgeting in 2021 and this is our source for making decision for following year." Another KI stated that despite a substantial budget allocation for NCDs, the majority is directed towards universal health coverage (UHC) for diabetes. More attention is needed for its risk factors.

Maldives

From 2014, the "Aasandha" health insurance scheme guarantees free health care for nearly all Maldivians, covering hospitalization, outpatient care, medication, and even emergency evacuations abroad. Public health-care facilities provide services at no cost to Aasandha beneficiaries. Empanelled private hospitals and clinics offer subsidized care. This has significantly improved access to quality health care for Maldivians, reducing financial barriers and promoting overall health outcomes.

Maldives' current national health budget allocation to the preventive sector is under 1% of that. A WCO KI pointed out resources need to be augmented and focusing for long-term cost savings. The geographical challenges inherent in an archipelago of 1200 islands are obvious. Efficient referral pathways for successful PHCs are key:

> *Currently, the NHA says [the] primary health care or preventive sector gets less than one percent of the national health budget, gradually, this will have to be increased, and from a curative or tertiary-focused model, once you divert funding to [the] primary health centre model in the long run, it will be cost-saving for the Maldives, but the long run means a couple of years or one decade later. Therefore, the government buy-in and financing part will [also] have [to] be taken up. (WCO KI)*

Myanmar

Myanmar's National Strategy Plan for NCDs 2017–2021 calls for increased allocation of human and financial resources. The potential source includes the World Bank, the Ministry and WHO. Its National Comprehensive Cancer Control Plan 2017–2021 documents detailed allocations across primary prevention, detection, diagnosis and treatment, documentation, surveillance and radiation safety. Furthermore, UNDAF identifies a general budget for health-related priorities, including addressing NCDs. No specific dedicated budget for NCDs is mentioned. According to a WCO key informant, and Myanmar National Health Accounts[54], cardiovascular disease care accounted for 22% of health-care expenditures, with out-patient and in-patient services being covered mostly as out-of-pocket expenses. NCD funding support from donor organizations could not be tracked in this exercise.

Nepal

Increased funding for NCDs has been supported through tax funds from tobacco and alcohol. The PEN package for NCD control was piloted in 2016. Policy-makers decided to scale up the programme and allocated financial resources from the national budget. The National Health Insurance program (NHIP) implemented by the Health Insurance Board of Nepal covers around 5.6 million Nepali citizens alleviating strains due to out-of-pocket expenditure[55], and in receiving NCD medicines not available in public hospitals. A WCO KI narrated an experience:

> *when I visited one off health facilities in the southern part of Nepal, one of the remote health facilities, I saw a patient who is insured under health insurance there and he needed some cardiovascular drugs which are not available in the (public) health facility. But it was available through health insurance, and it was delivered at the health facility. So the health insurance do[es] cover NCD medicines. (WCO KI)*

Sri Lanka

The NCD action plan is sourced from Government of Sri Lanka (GOSL) funds, including a loan provided by the World Bank for health system improvement (2013–2018) with a proposed loan from Japan International Cooperation Agency (JICA) to improve tertiary care. Within this programme, 75% of funds were allocated for health system strengthening for early detection and management of NCDs. A DOH KI shared how the budgeting process worked:

> ***Each activity is costed, you know the estimates, we put a little bit., maybe more than the actual because with time the price can change. We make the plan, we make the whole plan for World Bank funding, for the WHO, GOSL, We know traditionally the work taken up by WHO, by World Bank. So whatever is left we put for GOSL funding, then we do the costing and we send it. Normally our budget gets approved, you know, whatever we request. (DOH KI)***

Sri Lanka has established a robust public health system which has a dedicated public health wing and medical officers for NCD monitoring (MO NCD) in each district. A COM KI put it thus:

> ***The health system from the central to the provincial and district divisional levels at all levels the preventive aspect is supported. Though we say the government allocation and the funding is less for the preventive sector. The support is there, you know, not in terms of funding. For the supervision or the guidelines, and you know that that support is there. So we have a prevention-focused health-care system. So that is something that I think that we can teach the rest of the countries as well. (COM KI)***

Thailand

Health-care financing in Thailand is primarily funded by general tax revenue with household contributions lowering as UHC coverage expands. The National NCD Prevention and Control plan 2017 suggests that to reduce the risk of NCDs, the Ministry of Public Health should work with local administration, Thai health, businesses, and education-related agencies and other key actors to create a long-term prevention plan. The Health Promotion Department and Consumer Protection Section coordinate in the central and provincial zones. Local governments are key partners in financing the NCD programme at the community level and the MoPH provides technical guidance to these governments to help them in health planning. A government official spoke about their collaboration with local administration as follows :

We try to connect with the local administration, to give them knowledge, give them a connection, to make a plan, to collaborate with them.They will depend on us for knowledge only. They do not depend on us for financing or governance; we have only the knowledge that we can share with them and make them work closely with us because family health care is a big part, an important part of Thailand. (DOH KI)

Timor-Leste

Budgets were not specified, but the NCD National Action Plan (2014–2018) called for an increased allocation of funds in the regular budget for health, ad for NCD prevention and control through primary health care services. A key informant noted that "there has been a funding allocation increase of 50% since the previous strategy plan including external funds with the support of WHO with up to 1/3 of funding coming from external agencies which mostly goes towards operational health-care costs such as training". The National Health Strategic Plan (2011–2030) includes consideration of ensure cost-effectiveness of the strategy as well.

3.1.3 Delegation, role clarity and convergence

Bangladesh

NCD prevention and control is a policy priority; the implementation of MSAPNCD 2018 is supervised by the National Multisectoral NCD Coordination Committee (NMNCC), a high-level committee appointed by the Prime Minister and led by the the Ministry of Health and Family Welfare (MoHFW). The Directorate's NCD control unit acts as the Secretariat for the NMNCC and arranges for biannual NMNCC meetings. Coordination efforts also involve bilateral sectoral coordination mechanisms.

Health services include both the public and private systems. At the apex of the public system, the MoHFW coordinates and regulates NCD services. The Directorate General of Family Planning (DGFP) provides lifestyle education alongside reproductive health and family planning services at maternal and child health centres, union health and family welfare centers, and community clinics. NCD care for rural populations is provided through the public system of district hospitals, Upazila health complexes (UZHC), union subcenters and community clinics under MoHFW. City corporations and municipalities provide primary health care in urban areas. NGOs provide NCD services through a public-private partnership mechanism.

Bhutan

Multiple stakeholder collaboration is the common factor across NCD policies and programmes. The Multisectoral National Action Plan for the Control of Noncommunicable

Diseases (2015–2020) clearly defined roles for a National Steering Committee on NCDs as well as other implementation subcommittees, the Ministry of Health, Lifestyle Related Disease Programme (LRDP), local and district governments and health-care organizations, and several departments and agencies. [f]

The Royal Bhutan government is committed to NCD management. The joint action supported by WHO is supporting Bhutan's NCD response, which has the ambition of placing 50 000 patients in hypertension and diabetes protocol-based management by 2025:

> ***We had this national NCD workshop, and we have arrived how many people should we put on hypertension drugs in each district. We have set targets for each district, now we have to do action tracking. So that workshop was in one way a turning point because we had the leadership of the Ministry of Health, we had support from university, support from WHO." (WCO KI)***

Democratic People's Republic of Korea

Under the WHO Country Strategic Plan (2014–2019), the Ministry of Health (MoH) was assigned to lead action on strategic objectives with support from WHO Country Office and international organizations including GAVI, UNICEF, and FAO[24]. The Strategic Plan aimed to support governments in identifying the financial resources needed to implement NCD policies and programmes, such as the National Strategic Plan for the Prevention and Control of Noncommunicable Diseases (2014–2020)[23].

India

The Department of Health & Family Welfare provides technical and financial support to the Indian states underthe NPNCD Programme. Under Indian's federal system, health is a state subject. NPNCD programme allocates financial support under NHM for awareness generation (IEC) activities for NCDs to be undertaken by the states as per their Programme Implementation Plans; state-level NCD cells are responsible for overall planning, implementation, monitoring and evaluation.

Since 2017, more comprehensive and quality primary health care packages are being pushed, and selected PHCs and subhealth centres were upgraded to HWCs, intended to become the hub of delivery of a comprehensive package of NCD services. In the ministry, health human resource nodal officers and the NHM Mission Director are responsible for HRH

f The Bhutan Cancer Control Strategy (2019–2025) was guided by a National Technical Advisory Body (TAB) to advise the National Cancer Control Program (NCCP), a dedicated programme at the Ministry of Health staffed with full-time employees. The Guidelines for Screening of Gastric Cancer, Cervical Cancer and Breast Cancer (2020–2023) and Health Flagship Blueprint (2020–2023) were both led by Project Management Units within the Ministry of Health, along with support from Project Steering Committees and Technical Working Groups comprised of medical experts.

recruitment and management. Monitoring happens at the level of the Prime Minister, as a Department official relayed to us:

> ***NCDs needs political and administrative will. NCDs like tobacco control is beyond health sector alone, for this to happen you need to monitor at the highest level. PM monitors the NCD Indicators (DOH KI)***

Maldives

In Maldives, the health-care delivery system operates on a tiered structure. Primary health centres are on all the islands, while atoll-level health facilities offer secondary care and are equipped with range of specialities and diagnostics facilities. Tertiary care is offered at regional hospitals and central level. Private sector offers tertiary care facilities at central level along with civil society organizations (CSOs) providing preventive and rehabilitation services. Urban areas like Greater Malé area has a mix of state run primary care and tertiary care facilities along with private clinics and tertiary hospitals. Primary care services, including medicines, are provided free of cost to Maldivian citizens.

Myanmar

Myanmar's National Health Committee formed in 1989 and recognized in April 2011 takes leadership for implementing health programmes systematically across multiple levels of NCD coordinating committees. Convergence for NCDs involves the coordination and integration of efforts across the health, education, agriculture, finance, and urban planning sectors. The National Strategic Plan for Prevention and Control of NCDs (2017–2021) emphasizes the importance of a multisectoral approach to address the NCD burden in the country and draw on intersectoral collaboration to implement NCD prevention, detection, and treatment initiatives. A new economic policy was launched in 2016 to support a people-centred approach.

Nepal

In Nepal, a WCO KI felt that the governance structure in place with multilevel stakeholder involvement and high-level committees was a key factor behind its implementation.

> ***When we had the first High-Level Committee, the Chief Secretary who chaired this committee, recognised that PEN was very important to have supported two districts. He directed the (Health) secretary that they should expand it. So immediately in the same year, 8 districts were taken in from the government funds. It was documented, mediated and further the government took it as their in their annual work plan budget. (WCO KI).***

A COM KI we interacted with mentioned about the need for focusing more on preventive care in service delivery model of Nepal

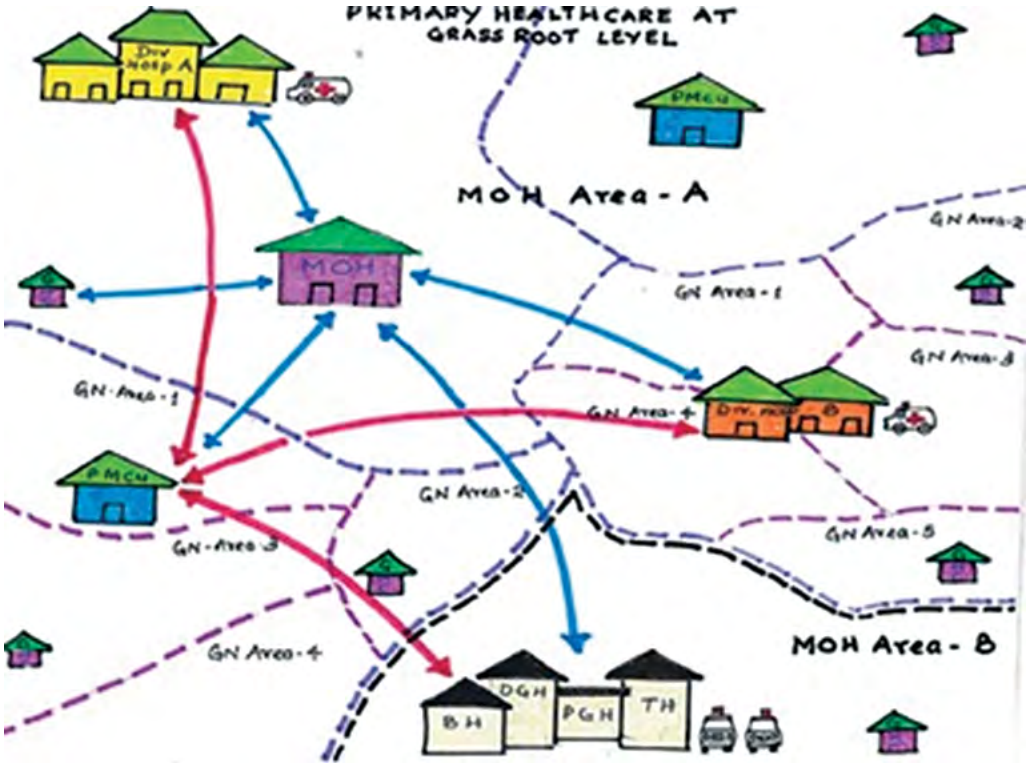
> ***Curative service is there, preventive service is also there. But preventive service is a very young, it is scanty, see, the more focus of these , NCD service in Nepal is now in diagnostic and curative, these are the most focussed area, but the preventive has less focus but it should be more focused. (COM KI)***

The delegation of role and responsibility is clearly laid out for higher levels of governance but not for those at the primary health care level and this was associated with a lack of coordination across levels. As regards to human resources, the development of referral guidelines from the primary to secondary care was underlined but we did not get a sense of the steps involved or the specific cadre of health workforce engaged in the process, which a 2018 report indicated was a gap.[56]

Sri Lanka

A national level NCD unit and provincial and district level multi sectoral committees were governance structures established to monitor implementation of the NCD programme, aligned with the referral structure already existing in the country (see Fig. 3).

Fig. 3. Design of primary health care services with structured referral in Sri Lanka



Source: Sri Lanka Ministry of Health, 2017

Thailand

A well-functioning primary health care system, backed by a strong workforce, has paved the way for Thailand to achieve universal health coverage. District hospitals have 30 to 150 beds; each district hospital has physicians, nurses, pharmacists, dentists, and paramedics. Each hospital is connected to 8–12 Health centres covering 3000 to 5000 persons. The health centre team comprises 3–5 nurses, paramedics and 10 village health volunteers. A clear referral pathway is established, allowing for referrals and back referrals from health centres at the subdistrict district level to district and regional hospitals. The well-trained health work distributed across rural and urban areas, from community volunteers to specialist physicians, ensures continuity of care, although gaps in awareness of protocols have been noted.

Timor-Leste

The Ministry of Health led both the National Health Strategic Plan (2011–2030), the National Strategy for Prevention and Control of Noncommunicable Diseases, Injuries, Disabilities and Care of the Elderly as well as the NCD National Action Plan (2014–2018), with clearly defined roles for management and responsibilities of various stakeholders within the plans. Increased budgets for NCD control and prevention have been advocated by the state.[g]

3.1.4 Sustained leadership and champions

Bhutan

Our field research highlighted how the the Queen Mother of Bhutan championed cervical cancer screening and control. Advocacy by multiple levels of public "influencers" may well open up innovative means of reaching entire populations with key health messages.

3.2 Delivery of people-centred NCD services within primary health care

A very clear pivot to NCD service delivery has been seen in the past two decades in some countries (three countries), in the past decade or so in other countries (three countries), and post pandemic in others (five countries).

Within this, efforts to bring in awareness of risk factors is seen in most countries of the Region. This includes counselling by trained professionals at primary health facility levels,

g For example, the Multisectoral NCD Action Plan (2018-2021) and United Nations Sustainable Development Cooperation Framework (2023-2027) also advocated for an increased budget for NCD control and prevention. The WHO Country Cooperation Strategies (2015-2019 and 2021-2025) was led by the WHO Country Office for Timor-Leste, involving partnerships with key stakeholders including the Ministry of Health, and non-health developmental partners.

awareness raising, as well as physical interventions to address risk factors, such as workplace interventions (Thailand and India), introduction of gyms and promotion of physical activity (Bhutan, India, Maldives, Myanmar and Thailand), as well as other innovations like the use of social media and partnerships with civil society organizations.

The use of evidence-based protocols for hypertension, diabetes, and cervical cancer was being attempted across the Region, with some countries refining their approach while others in early stages of adopting and developing guidelines. In a number of countries, particularly for hypertension and diabetes screening and management, there are clear programme workflows or cascades as well as referral pathways. In some countries, integration of NCD services is being phased in on a pilot basis. In addition, a great deal of emphasis is being placed on orientation and training of frontline workers, although it is not specifically clear if this is based on evidence-based practice or global guidelines.

Major strides in NCD programming have taken place where access to diabetes and hypertension medication is made available as part of essential medicines list, with dispensing at the primary care level. In addition to this, local availability to glucometers, strips, lancets as well as blood pressure machines are being introduced across the Region. All countries are facing challenges of supply chain management and access to medicines. In addition, access to diagnostics has also proven challenging. Price regulation is another area where intervention is proposed, along with expansions in access to telehealth services, intended to leverage technology in support of the care continuum (particularly in pandemic contexts).

For cervical cancer screening across the region, a platform that is commonly used is women's clinics – aiming in most countries to surpass 40% of eligible women (aged 30 and older or 40 and older). A variety of inspection approaches have been attempted. A major challenge is treatment access for those with positive symptomatology; this is a key area to develop referral linkages, as needed, to higher levels of care. Similarly, for diabetes and hypertension management, the use of NCD clinics is a commonly used institutional design, and risk assessments, administered by frontline staff have been attempted in some countries, while a blend of population and opportunistic screening approaches were seen.

Team-based care has been the dominant model in the Region, with medical officers working closely with nurses and frontline workers and even community volunteers to deliver NCD care at the primary level. This was seen as being associated with shared ownership and high commitment, with non-physician providers playing an increasingly prominent role. This approach is mired by human resource gaps; these were observed in almost all countries and cadres. Challenges in being able to provide appropriate and timely training was also reported in some countries of the Region.

Systems to gather data on NCD service delivery, epidemiology, and consequences or financial impact are a major innovation. The adoption of the District Health Information System characterises the central approach in some countries, but in as many, there are bespoke systems being used. Many countries have attempted using digital health records or individual identifiers to collect and track cohorts of data. Data entry requirements are challenges. The multiplicity of

apps and features to monitor or support service delivery have allowed for innovation on the one hand, but present challenges for scale-up, interoperability and harmonization within and across countries in the Region.

3.2.1 Healthy lifestyle counselling

Bangladesh

Health education and counselling are provided by health workers, midwives, nurses, and doctors. KIs from all categories noted that health education and counselling need to be provided at both CC and NCD corner but this area is currently weak. Shortage of human resources, lack of time, and lack of motivation contributes to limited healthy lifestyle counselling. KIs opined that a separate counsellor post should be created in the NCD corner. No documentation of the impact of PEN training has been done, although an assessment is underway. A KI from a CSO recommended monitoring and follow-up of trainees and providing refresher training periodically.

The Bangladesh Diabetic Association (BADAS) provides healthy lifestyle education and screening through diabetic care centres in roughly 100 mosques. Trained religious leaders provide education; screening is provided by a nurse. This approach may well be extended to involve churches and temples. A COM KI associated with BADAS spoke about the initiative:

> ***Along with the Islamic Foundation and the Minister of Religious Affairs - we started 100 diabetes corners inside the mosque. This is called as Diabetes prevention through Religious Leaders. And all the diabetes corners are equipped with glucometer, and the blood pressure machine, height and weight - all the facilities (COM KI)***

Bhutan

A range of policies and programmes focused on promotion of health through behavioural modifications[h]. Notably, the SCCI policy aimed to support physical activity through the introduction of open-air gym facilities across the country. The Guidelines for Screening of Breast Cancer, Cervical Cancer and Breast Cancer, as well as the Health Flagship Blueprint (2020–2023 placed additional emphasis on raising awareness on cancer prevention through

h The Multisectoral National Action Plan for the Control of Non-Communicable Diseases (2015-2020), Service with Care and Compassion Initiative, Bhutan Cancer Control Strategy (2019-2025) prioritized education on nutrition, physical activity and avoidance of unhealthy substances such as tobacco and alcohol.The United Nations Development Assistance Framework Bhutan One Program (2014-2018) had a particular emphasis on educating women, youth, and at-risk populations on practices for improved nutrition and well-being.

behaviours such as breast feeding for breast cancer, detecting the early signs and symptoms of cancer, as well as the diagnostic and treatment services available.

Democratic People's Republic Of Korea

Under the National Strategic Plan for NCDs (2014–2020), there is a component of health education programming to contribute towards NCD-related health promotion.

India

At every level of the primary health care system, lifestyle counselling is intended to be incorporated in service provision. Counselling to help modify behavioural risk factors is done by ASHA and ANM at the community level, and by doctors, nurses, counselors and community health officers at the PHC and CHC level.

Indonesia

Health promotion stood as a key strategy employed by the government to mitigate risk factors associated with NCDs. Collaborating with health associations and universities, efforts were directed towards community outreach to enhance awareness regarding the prevention and management of NCDs. Being widespread, social media is used for health promotion with webinars for the public.

> ***The first pillar is to do the promotion related to hypertension especially. When we promoted it to the public through the social media like Instagram, Facebook, Twitter and also the YouTube channels also give some education and some of the contents, health content related to hypertension, the risk factor of hypertension. (DOH KI)***

Maldives

The National Policy on Physical Activity for Healthier Living 2022 highlights the government's dedication to enhancing physical activity and fostering positive health within communities. The policy aims to achieve a 10% decrease in the prevalence of insufficient physical activity by 2030, through a societal shift in attitude towards physical activity, political commitment, health system responses, and partnership building[57]. Tobacco cessation activities have been reinforced since 2016 through a tobacco cessation toolkit for doctors and health professionals.

Myanmar

Since 2012, health professionals have been providing counselling to people to help them quit smoking in some pilot townships[58]. A broader programme of counselling is intended to be part of the primary health care offering; implementation has been variable.

Nepal

Health counselling is not offered at the primary care level; lifestyle health counselors and counseling units are slated for district hospitals, regional and zonal hospitals. The Health Sector Strategy of 2017 also prioritizes the development of lifestyle counselling curriculum.

Sri Lanka

Healthy Lifestyle Centres (HLCs), tasked with identifying risk factors and helping reduce NCD risk for persons aged 40–65 years was introduced in 2011, with the number of centres crossing 1000 in 2021. In 2020, the Minister of Health, Nutrition and Indigenous Medicine have placed emphasis on workplace-based programming. The Sri Lanka HLC model has been the basis for regional recommendations for counseling, owing to its early adoption and relative success.

Thailand

Since 2005, Thailand has organized national mass media campaigns to promote physical activity and combat obesity[i]. These campaigns include "Fatless belly Thais" (2011–2019) targeting the working age population, "Run for new life" (2012–2018) and "National step challenge (2020–2021)." Thailand National Sports development plan aimed to increase exercise and sports awareness and participation. Over 1800 running events were organized in 2019 before the pandemic. A medical officer in charge of implementing the NCD control programme mentioned a challenge faced by communities in adhering to the guidelines and lifestyle advice prescribed by the programme. A KI stated: "We have differences, we live in different contexts. Let's say some people are living in poverty; they cannot afford this and that, so they cannot just all of a sudden change their lifestyle." (PHC KI)

A medical officer suggested that implementors should have a better understanding of the community and the circumstances they live in. Health workers need to act as mentors and empower the community to make behavioral changes for a healthier and localized solution relevant to the context would be more appropriate than strictly adhering to the implementation

i The Thai government is dedicated to encouraging a healthy lifestyle for its citizens. Following the Seventy-fifth World Health Assembly's (WHA 75) recommendation to prevent and manage obesity over life course and acceleration plan to STOP Obesity Thailand was among the 28 countries globally which committed to be front runners in leading country actions.59 It launched the National Plan to Promote Physical Activity (2018–2030). The Thai Health Promotion Foundation (Thai Health), a government agency established in 2001, supports civil society and promotes physical activity. The Department of Public Works and Town and Country Planning strives to create safe and accessible public open spaces to help achieve SDG 11.7. The Bureau of Noncommunicable Diseases and the Office of Healthy Lifestyle Management are responsible for implementing the national strategic plan for preventing and controlling NCDs.

of centralized programme guidelines. A WCO KI said, "Another good initiative by the Thai Health, NCD Alliance, MOPH and industries association is the "Healthy Organization" promoting health and well-being in workplaces." (WCO KI)

Timor-Leste

The NCD National Action Plan (2014–2018) and the Multisectoral NCD Action Plan (2018–2021) focused on health promotion on tobacco and alcohol use, healthy eating, physical activity and reduction of household pollution through strategies such as mass media use and legislation.

3.2.2 Formal Protocols and Guidelines

Bangladesh

Clinical Guidelines were developed for managing hypertension, diabetes, heart disease, stroke and cancer. These complied with the policies and international regulatory frameworks for NCDs. In 2018 the MSAPNCD proposed to adapt WHO PEN disease interventions and create guidelines, protocols, and tools to implement essential health services package in primary health care facilities.

According to a KI from a CSO, clinical management is done through the PEN protocol in all NCD corners but there is no standardized protocol in the private health sector. The health assistant motivates the community to access CC where screening for hypertension and diabetes is done but no medication is prescribed, for which patients have to visit NCD corner where they are diagnosed and provided medicines. Upward referrals from NCD corner is limited due to distance.

Bhutan

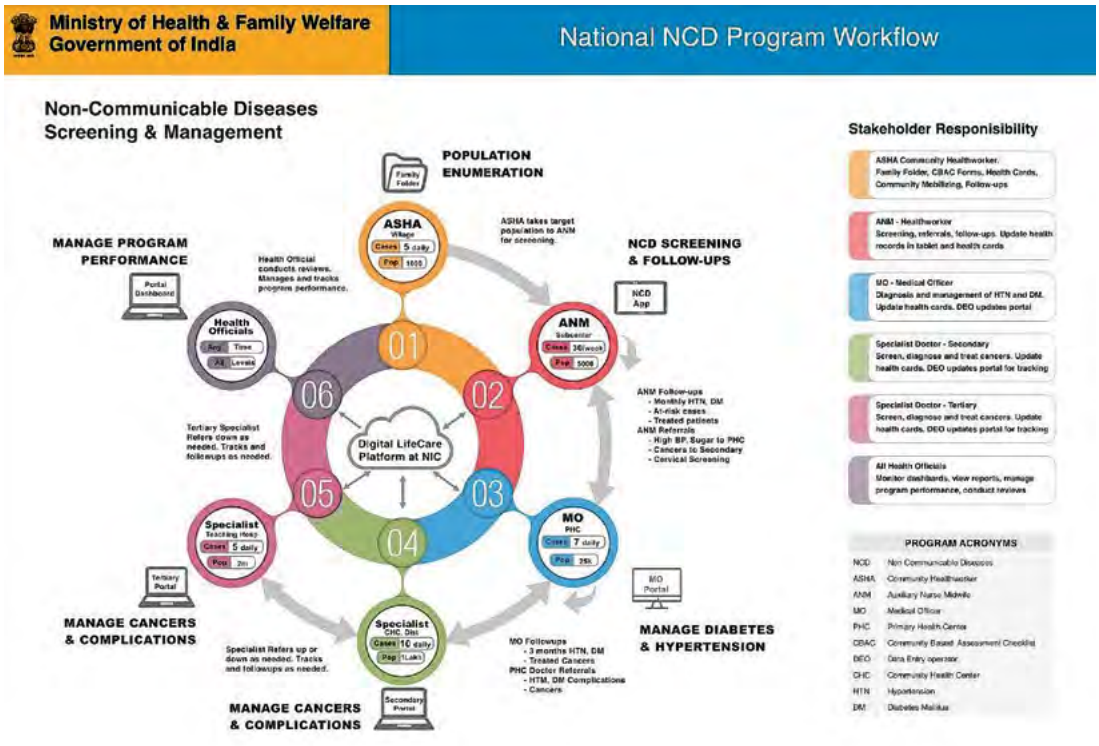
Under the Multisectoral National Action Plan for the Control of Noncommunicable Diseases (2015–2020), key strategic priorities included NCD awareness, early detection and management of NCDs and their risk factors, as well as strengthening of surveillance and monitoring systems.[j] The Guidelines for Cervical Cancer Programme in Bhutan (2019–2023) began to set out roles and responsibilities for cancer detection and treatment at the national, regional and district hospital level, as well as at the level of satellite clinics and community organizations, with a major focus on HPV vaccination for prevention services. The Health Flagship Blueprint (2020–2023) further built on cancer prevention and detection by laying out clear screening guidelines for adults.

j The Bhutan Cancer Control Strategy (2019–2025) prioritized developing a national technical guideline for cancer screening, healthy lifestyle promotion, implementing screening programmes, enhancing the monitoring and supervision of existing screening programmes, and providing people-centred cancer treatment at national and regional hospitals. Through the WHO Country Cooperation Strategy (2020–2024), PEN-HEARTS initiatives expanded to all districts, and improving the availability of diagnostic services and human resources at primary care facilities.

India

NCDs are part of the 12 essential service packages meant to be delivered through health and wellness centres (HWCs) including health education, screening, referral, dispensing medicines, teleconsultation and maintaining electronic health records. Auxiliary Nurse Midwives (ANM), staff nurses, community health officers are trained on oral, breast and cervical cancer screening. Diagnosis, treatment initiation, and management is intended to be done at the primary health centre (PHC) and the community health center (CHC). The CHC can offer colposcopy, wherever possible, for those that are VIA positive and cannot be managed by cryotherapy at the level of the PHC. Complicated cases are to be referred to the district hospital. Follow-up and risk management is provided at the HWC-PHC. All PHCs conducting deliveries are envisaged to be converted to HWC that offer preventive and promotive health interventions and functions, including those related to NCDs (see Fig. 4).

Fig. 4. India's national NCD programme workflow



Source: Ministry of Health and Family Welfare, Government of India

The first point of referral for many disease conditions for the HWCs is the primary health centre (PHC) that is linked to a cluster of subcentres (SC/SHC). The patients referred from the subcentre-HWC to the PHC or PHC-HWC must have confirmatory tests prescribed by the medical officer who is supported by the staff nurse and lab technician. Health education and monitoring of records is also done at the PHC. In case of cancerous lesions, the CHC is to

offer cryotherapy and for complicated cases, further management must be done at the district hospital. This was a base upon which customizations would have to be laid, as described by a ministry KI:

> ***We have limited resources, guidelines are considering all challenges, it is minimum benchmark, if states are capable and are able to provide services beyond the guidelines they are always welcome. (DOH KI)***

Indonesia

NCD packages were introduced into the Jaminan Kesehatan Nasional (JKN) as early as 2014 with guidelines and training of trainer modules following by 2016. The main activities in the Posbindu PTM and Posbindu Lansia include anthropometry, blood pressure measurements, blood glucose and cholesterol testing, health counselling and education and promotion of physical activity and exercise[60]. The widespread implementation of screening and early detection for NCDs and its risk factors encompass workplaces, schools, and communities.

Maldives

The HMP 2016 recommends using standard treatment guidelines health-care providers were trained to detect and manage NCDs and those with comorbidities; this process is receiving WHO country office support. The 2016 MSAP for NCD control recommends capturing data of patients with noncommunicable diseases (NCD) treated and counselled according to NCD protocol, using clinical audit reports occurring every three years.

Maldives

Maldives implemented the WHO Package of Essential Noncommunicable (PEN) Disease based on a 2017 report. Interventions for primary health care in two regions exist, with plans for expansion[61]. Curative services for chronic diseases and cancer are available in all major hospitals. Treatment, including medicines, is covered under "Aasandha", the national health insurance scheme. The MSAP for NCDs 2016 proposed establishing NCD clinics offering diabetes care and built a referral network connecting health facilities within and outside the country. Delivering necessary medical supplies and services to remote islands is challenging. Private sector involvement is limited in smaller islands.

Myanmar

Integrated guidelines for the management of hypertension and diabetes with specific medicines indicated were launched in 2014, followed by manuals for training of trainers and additional manuals for screening and treatment in 2017. The National Strategic Plan for NCDs (2017–2021)

aims at the strengthening of the capacity of primary health care providers to deliver essential NCD services including screening, diagnosis, treatment, and follow-up care. NCD services are integrated with routine primary health care with a focus on providing patient-centred and community-based care.

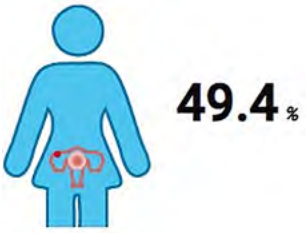
PEN interventions were included in primary health care services in 2017; by 2020, 232 of 330 townships were covered. The services includes screening, treatment and referral for diabetes, hypertension, chronic respiratory diseases as well as screening for breast, cervical and oral cancers. A recent reported found that 9518 of the total 11 004 health facilities including RHC, urban health centres MCH clinics and subcentres provided PEN services by April 2020 through Wednesday NCD clinics[62]. Human Papilloma Virus vaccination activity was launched in October 2020. The two-doses regime was administered to 9-year-old girls in 2020 which achieved 96% coverage. The second dose provision was able to reach 37% in 2022 due to multiple factors. After the 2021 military coup, many health-care staff left government employment to join the civil disobedience movement. Currently the health system in Myanmar is under immense pressure due to political tensions, the aftermath of COVID-19, and difficulties receiving humanitarian aid, leading to further challenges for access to essential medicines, and interruptions to various NCD-related activities.

Humanitarian response plans (HRP) have been put in place since 2021 due to the protracted political crisis. Multiple attacks on health care infrastructure and providers, as well as ongoing conflict, bureaucratic obstacles and underfunding has meant that access to health care is limited with only critical services are prioritized.[63]

Nepal

The Nepal Health Sector Strategy Implementation Plan of 2017 sought to expand the coverage of unreached urban populations and increased the NCD service package. Screening camps were extended to hard-to-reach areas, and included the development and implementation of referral guides for primary, middle and tertiary levels. Development of screening protocols for breast cancer, development of oral cancer screening programmes in the community, and integration of mental health and NCD screening in the infectious disease screening programme for Nepali migrants are other key targeted milestones. In 2019, STEPS data suggest that only 5.4% of women aged 15–69 had ever been tested for cervical cancer. 20% of them said this was part of routine examination; another 49% said they experienced symptoms. This suggests women are not being identified early enough. (Fig. 5) The introduction of protocols and tools for the management of NCD has standardized the treatment for hypertension and diabetes at the primary health care level.

Fig. 5. Proportion of those screened for cervical cancer who got tested after experiencing symptoms, Nepal (2019)



Source: Regional NCD Dashboard (STEPS 2019)

Sri Lanka

Clinical guidelines on the control and management of cancer, cardiovascular disease, diabetes and chronic respiratory disease were launched in 2016 which furthered a patient centred cancer care protocol for a multi-disciplinary team using evidence-based cost-effective treatment pathways. Diabetes guidelines strengthened the role of PHC health providers. Inclusion of palliative care, survivorship and cancer rehabilitation are part of cancer care guidelines.

Integration of NCD management at primary care levels through healthy lifestyle centres (HLCs) had been introduced at the outset of the period examined. Early evaluations found gaps. All NCDs were not included; there were gaps in protocol adherence and human resource shortages. The national multisectoral action plan sought to address these issues[64]. "Well Woman Clinics" at the primary care level were proposed. Screening for cervical cancer at the primary health care took centre stage in the latest cancer policy guideline by expanding the Well Woman services for cervical cancer screening and piloting of HPV vaccination.

Comprehensive cancer screening services exist but readiness is a function of the centres themselves. Policies propose the mapping of colposcopy clinics and histopathology labs in each district to link and facilitate referrals. A key challenge identified by multiple KIs was that public sector clinics are mostly attended by women mostly due to timing of the clinic which often is barrier for the working classes. Workplace screenings, Saturday clinics and mobile clinics, evening clinics (after 4 pm) in selected places have been introduced to tackle this issue. A COM KI briefed us about the role of private clinics run by government doctors in NCD service delivery in Sri Lanka

> ***I would say most patients are still being diagnosed as incidental at these General Practitioner Points. We don't have a developed GP system. Our GP system is that the doctors who are working in the government sector, they do part time work in the private sector after the (official) work hours. So that is the first contact point for many, that is where they are being diagnosed. (COM KI)***

The 2016 Action Plan and the National Strategic Plan on management of cancer of 2020 proposed the establishment of strong referral systems from the primary health care level to tertiary treatment centre levels. While identifying, training and capacity-building of primary care providers was stressed, the WHO CCS emphasized the need for retooling and reskilling of frontline health care functionaries. An evaluation of the national strategic plan on NCD (2010–2020) conducted by the Ministry of Health, Sri Lanka, found that securing available and trained primary health care workers was a major challenge in implementation[65].

3.2.3 Access to essential medicines and technology

Bangladesh

A KI from the Health Directorate reported the continued supply of medicines as the primary challenge in NCD care. It is mandatory for DGHS to buy medicines from the Essential Drug Company Limited (EDCL), which produces (or procures) generic medicines. However, due to lack of forecasting, medicine supplies often fall short. Stocks get depleted in the NCD corners. A DOH KI shared the challenge with drug forecasting:

> ***Our problem is that we need information. How many people are there (with NCDs) and how many doctors are there (at health centres) the this kind of information is not available right now. So what we've done is, you know, just having some sort of calculation that these are the busy areas (facilities with high OPD numbers) sitting around, give them more medicine and where there's not too much busy area, we give them less medicine (DOH KI)***

Drug prices are reportedly high even in the market. This is a major contributory factor for out-of-pocket expenditure among poor patients.[k] While 10-20 crore BDT is available for UzHC currently for NCD management, this is significantly low. The projected need for fifth sector plan is 6000 crore BDT in NCD corners with atleast half of it earmarked for drugs, as conveyed by Kis. Diagnostic service gaps do not help: a health facility survey conducted in 2017 reported that only 54% of facilities offering diabetic services in Bangladesh had the necessary equipment to perform blood glucose testing.[66] Beyond clinical matters, the fifth sectoral plan has prioritized a more systematic forecasting mechanism with enhanced digitalization. EDCL also plans to increase the number of manufacturing factories with a larger capacity for stocking medicines. The need for training on indenting and forecasting principles was shared by one DOH KI.

Bhutan

Access to medicines and health technology across the country needs to be addressed by more policies and programmed. The SCCI policy aimed to ensure ease of access to medication at the community level, while the Bhutan Cancer Control Strategy (2019-2025) called for a review of the national medicines list to ensure alignment with WHO EMLC (Essential Medicines List for Children) 2019 and clarifying medicines registered and procured based on treatment capacity. Marked increases in HPV vaccination coverage are evident, with at least one dose delivered to 97% of adolescent girls.[67]

k

"Once all of a sudden the whole country didn't have Metoprolol, then we had to change to Atenolol…but we cannot define it as a challenge" (PHC KI)

Democratic People's Republic Of Korea

The National Strategic Plan for NCDs (2014-2020) aimed to improve the supply of and access to the essential drugs and equipment needed to diagnose, treat, and manage main noncommunicable diseases. Specific plans to ensure sustainability of the policies and access to medicines and testing were not specifically addressed in policy documents.

India

Long term dispensing of drugs (for one to three months) to patients for the management of chronic illnesses such as diabetes and hypertension has been initiated, building on lessons and developments in the period 2014-2021. The most recent NPNCD guidelines require regular updating of drug inventory along with buffer stocks.[l] Stores have been set up to provide affordable generic medicines including insulin. Further, integration with the Affordable Medicines and Reliable Implants for Treatment program is intended to widen access to affordable medicines for treatment of cancer, cardiovascular disease and other NCDs.

Focus now is on point-of-care technologies… for assessments, screening and diagnosis… example, spirometry was available only at district hospitals, now through make in India initiative, spirometry is done at doorstep and telemedicine helps start the treatment immediately. (DOH KI)

Tele-consultation services at the primary health care level with specialists by way of a cloud-based offering (e-Sanjeevani) comprise a provider-to-provider platform to deliver assisted teleconsultations for HWC patients. They also get access to specialists, in addition to an OPD platform that gives citizens to access health information and services at home through smartphones and laptops.[68,69] Disaggregated data from the national NCD monitoring survey revealed gaps in awareness and access to medicines: data suggest that for diabetes, essential medicines were available in one fifth of PHCs and in half of CHCs in 2018.

l Glucometers, glucose strips and lancets are also ensured for screening. Essential diagnostics such as of Glycosylated haemoglobin (HbA1C), semi-autoanalyzer to conduct serum creatinine, serum urea, total cholesterol, triglycerides, Multiparameter urine strip (dipstick) for urine ketones, proteins may well improve the management of CVD and diabetes at primary heath centres. Diagnostics such as common blood examinations, spirometry, X- Ray, ECG, USG is recommended to be provided at CHC

Indonesia

While attempts have been in place to ensure continuous supply of drugs at lower levels of care, supply chain issues were a reported challenge at Puskesmas and within the households. Notably, within coverage for diabetes, the cost of insulin is not covered for many patients diagnosed with type 1 diabetes. Another KI, who is a clinician and academician, shed light on the distinctive trajectory of diabetic progression in children compared to adults, particularly focusing on Type 1 diabetes.

> ***I'm sharing you an example of a friend of mine who live in the remote island. Yes. She stored her insulin in the well, because it's much cooler in the well. So what she did was she put her insulin in a bucket and put it under the well every night to store the insulin. 'If you talk about in insulin storage, it will be also another issue, because, in some islands they also having difficulty in electricity access as well. Especially for people with diabetes who are using insulin therapy. It will be another challenge. (COM KI)***

Maldives

The HMP 2006 proposed setting up pharmacies on every inhabited island with private and community partnerships to provide affordable essential medicines. The policy also suggested introducing legislation to ensure the accessibility of essential medicines permissible under the pre-WTO TRIPS Agreements. HMP 2016 proposed creating a centralised supply chain of essential medicines and supplies as well as maintenance of medical equipment. The policy recommended improving the quality control mechanism of drugs and control of essential medicine costs by including generic medicines in public drug supply and covering the cost through social health insurance.

Myanmar

The WHO Essential Medicine List was adopted, and an Essential Medicine List was published in 2016. The National Strategic Plan for Prevention and Control of NCDs (2017-2021) made the call to establish a technical working group for NCDs. To improve the quality of life of cancer patients, the National Comprehensive Cancer Control Plan (2017-2021) aims to ensure the availability of the required essential drugs for palliative care services. No specific policies or procedures to address access to essential medicines and technologies related to NCDs are evident. NCD drug supply has since been hampered due to the Covid pandemic and political instability.[62] In 2019-2020 basic health staff in primary care facilities were able to prescribe NCD prevention and control medicines including anti-diabetic medication (metformin, sulfonyl urea), anti-hypertensive drugs (ACE inhibitors, ARBs, calcium channel blockers, beta blockers),

cardiovascular drugs (Aspirin, statins), bronchodilator, benzathine penicillin injection, HPV vaccination.

Nepal

PEN implementation has led to better availability of essential medicines and basic diagnostics in primary health facilities. Provision of essential drugs for CVD, COPD, diabetes and cancer is ensured free of cost at all levels. Procurement of supplies for urine testing for glucose and glucometer for testing blood sugar is ensured at all health posts. This is starkly manifest in STEPS data rounds which suggest that from 0% in 2013, 41.9% of those with raised blood pressure had taken medication (see Fig. 6). The case of those taking medication to control blood glucose similarly rose from 0% in 2013 to 70% of those with raised blood glucose in 2019.

Essential drug price control is proposed. Reviewing and expanding the role of community health volunteers (CHV) to NCD education is another strategy outlined in the 2014 action plan. The creation of health counselor positions and counselling units in the middle tier health care level are documented, while at the primary care level, development of incentive levels and pay packages based on qualification and specialties for PHC workers are described. A 2014 policy ensured the free provision of essential drugs through price regulation. Funding levels laid out for NCDs are unclear. Multiple studies as well as the 2018 Lancet NCDI Poverty Commission of Nepal and the WHO Country Cooperation Strategy suggest that drug and commodity supplies are hampered in the country at present and warrant further attention.[56,70–72]

Fig. 6. Proportion of those with Raised Blood Pressure taking Medication, Nepal (2013, 2019)

Source: Regional NCD Dashboard (STEPS 2013,2019)

Sri Lanka

Policy reforms from 2011 resulted in the inclusion of 16 essential drugs with allocated funding and a priority drug circular.[41] Further, the state committed to provide necessary drugs, technology, and equipment according to the essential drug list at all levels of care. [41] In 2015, the STEPS survey found that 57.7% coverage of those with raised blood pressure were on treatment (see Fig. 7). Diabetes medicine coverage included 69.5% of those with elevated blood sugar levels.

Sex differences in medicine coverage were evident – hypertension medication coverage was greater among men. Diabetes medication coverage was greater among women in the period assessed. Meanwhile, this same survey found that only 15.2% of women aged 18 to 69 had ever undergone cervical cancer screening.

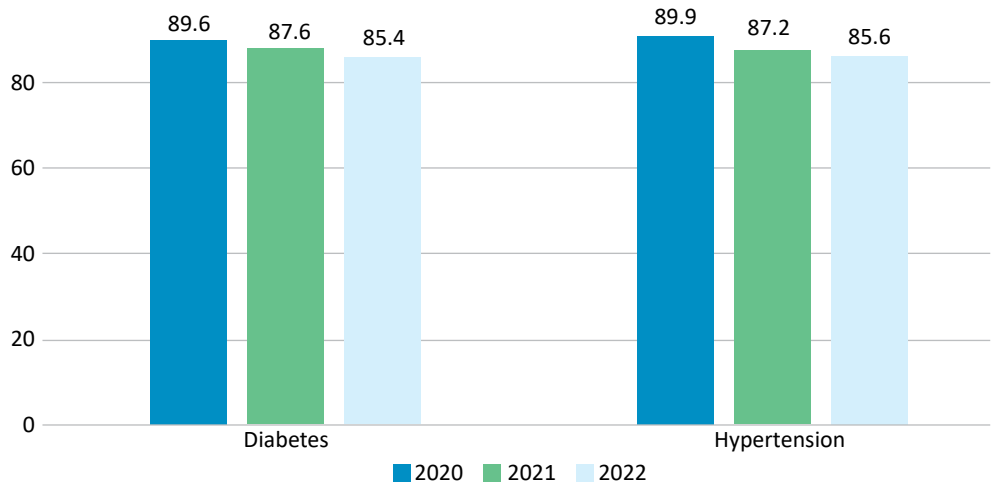
Fig. 7. Proportion of those with raised blood pressure and raised blood sugar on treatment in Sri Lanka (2015)

Source: Regional NCD Dashboard (STEPS, 2015)

Thailand

Four out of five (80%) of facilities in Thailand are equipped with essential medicines and technologies to treat NCDs. [73] At least half of the population eligible for drug therapy to attain glycaemic control and prevent CVD and stroke receives it. [73] Recent data on this was presented suggesting that the peak of controlled hypertension was attained in 2021 with a minor decline in the past year (see Fig. 8). Overall, however, over half of those on medication have controlled hypertension, which is an encouraging outcome.

Fig. 8. Proportion aged 35 and above screened for Diabetes Mellitus (DM) and Hypertension (HT) in Thailand (2020, 2021, 2022)



Source: Thailand Country Presentation, Workshop for implementing South-East Asia Regional NCD Roadmap, 2022-2030 Dhaka, Bangladesh (June 2023). Used with permission.

According to a PHC KI, Primary care units in Thailand are equipped with diagnostic kits and basic medicines to manage NCDs, and that advanced care is available at provincial hospitals. A provider stated:

> ***HT measurement machines and finger pricking supplies are available in every village. So each village would have some 300-400 population we have basic supplies. Some PCUs would have ultrasound machines to conduct preliminary cancer screening for liver cancer... Metformin and medicines like that are available at the PCU. Now the more complicated medication for instance, the one with a higher price range, would be available at the provincial-level hospital. (PHC KI)***

Timor-Leste

The National NCD Action Plan (2014-2018) aimed to universalize access to essential drugs and basic technologies, including essential medicines and technologies for NCDs in national essential medicine lists. It also aimed to improve efficiency in procurement, supply management of generic drugs and technologies. Specific plans to ensure sustainability of the policies and access to medicines and testing were rarely addressed.

3.2.4 Risk-based management

Bangladesh

Bangladesh has been gradually developing cervical cancer screening facilities since 2005 and has expanded the program to Upazila since 2012. The program uses Visual Inspection of the Cervix with Acetic Acid (VIA) for women 30 years and above at around 400 centers. The strategy aims to achieve 40% coverage of the target population by offering screening to all married women between 30-60 years old every five years. [18] The VIA-based screening is in place. The strategy is for all screen-positive cases to be counselled, evaluated by colposcopy or mini-colposcopy and treated as needed.

According to KIs, in NCD corners run by the Bangladesh University of Health Sciences (BUHS), screening for diabetes and hypertension is for adults above 18. In facilities run under RESOLVE to save Lives Initiative managed the National Heart Foundation, screening is for those aged 18 and above. However, before this screening protocol is provided across the country, the immediate need is to increase coverage of those above 40 and ensure that they are receiving adequate care, according to a DOH KI the decision to keep the screening age for those above 40 was a calculated decision due to challenges in estimating the need of medicine and supplies for the program in the country.

We are not sure how much drugs we need to have, to determine the eligibility for NCD screening program. We thought that if we can first cover the above 40 population in the country, we'll reduce the screening age of the population to above 30, and then after 2025 we can go for above 18 years for Universal screening (DOH KI)

There is limited follow up of cervical cancer patients, and the majority are detected at a late stage. HPV vaccination coverage is only in a few districts, according to a COM KI. A WCO KI reported that due to vaccine shortage, the HPV vaccination programme was stalled at the time of interview (2023)and was proposed to restart the following year. The HPV vaccination campaign targets girls aged 10-14 years and there are school based programmes. However, it is challenging to reach 30-40% of girls under 18 years due to school drop out rates. They primarily join the garment factories for work which are difficult to target as most of the girls are illegally employed. Another challenge is in the linkage to treatment if screened positive. One KI recommended including HPV vaccination in screening centers in the hospitals. WHO Bangladesh offered to provide training to the nursing staff on HPV vaccination. Cervical cancer is a priority and focus area for the Obstetrical and Gynaecological Society of Bangladesh (OGSB) which has done much advocacy work with the government.

Bhutan

According to STEPS 2019 data, blood pressure screening rates were 83.3% of persons aged 15-69, and a fourth of those with raised levels had ever taken medication. With regard to blood glucose, we found low screening rates with men missing out on screening. Sex inequalities were common. Inequalities connected to education were observed with regard to accessing medication and receiving drugs. This needs further attention. In comparison to blood pressure, about a fourth of persons had controlled blood glucose (more so among women and more so in rural areas). From KI interviews, we learned that NCD screening is integrated with every routine field visits of healthcare staff in the community and opportunistic screening and awareness sessions were conducted regularly in the community. A PHC KI stated, "the (PHC) team moves to community for monthly vaccination programme, after carrying out the vaccination session, they start the screening of old aged peoples and whoever comes through the clinic ".

Great strides have been made in increasing access to cervical cancer screening. According to STEPS data, from 0% in 2014, 45.6% of women aged 15-69 had been tested for cancer in the previous five years (see Fig. 9). Screening coverage was greater in rural areas as compared to urban areas.

Fig. 9. Proportion of women aged 15–69 tested for cervical cancer in the previous five years in Bhutan (2014, 2019)

Source: Regional NCD Dashboard (STEPS, 2014, 2019)

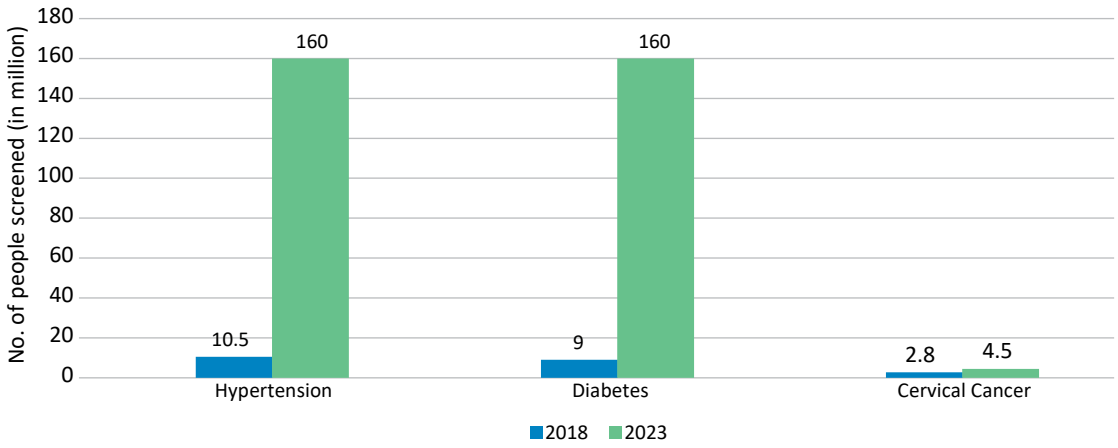
Democratic People's Republic Of Korea

The National Strategic Plan for NCDs (2014-2020) commits the aimed to strengthening and improving preventive health care, to carry out actively periodical screening and registration of and medical service delivery for patients with chronic diseases including cardiovascular diseases, cancer and diabetes. Under this plan, the DPRK aimed to reach 90% coverage in cancer screening for adults above 40 years by 2025.

India

Population-based screening in India begins with family enumeration[m] done by ASHA workers, followed up with the individual's risk for NCDs assessed through a community-based assessment checklist (CBAC). The population at higher risk, is prioritised for screening for hypertension, diabetes and cancers at SC-HWC. For all adults 30 years and above, screenings are repeated for cancers once in five years and for HT and Diabetes annually for hypertension and diabetes. While hypertension, diabetes, oral and breast cancer screening is ensured at the village, subcenter and outreach efforts, cervical cancer screening is done at HWCs. Community level centres or district hospitals, where speculum examinations and visualization with acetic acid can be done, including facilities for sterilization of equipment. Some encouraging increases in coverage have been seen (see Fig. 10) over the last five years.

Fig. 10. Screening Coverage for Hypertension, Diabetes Mellitus and Cervical Cancer in India (2018, 2023)



Source: India Country Presentation. Workshop for implementing South-East Asia Regional NCD Roadmap, 2022-2030, Dhaka, Bangladesh. Used with permission.

To augment the efforts of screening programme, The India Hypertension Control Initiative (IHCI), was launched in 2018-19, with primary aim to strengthen Hypertension management. The initiative's five core strategies included; deploying standard treatment protocol, improve

m This information is validated through individual health cards, the National Population Register (NPR), or the Socio-Economic Caste Census (SECC) or any other Government-issued or otherwise officially valid identity card.

logistics pertaining to supply of free antihypertensive drugs, team-based care, patient-centered care and a robust platform to track individual level blood pressure control. By March 2020 of 7,21,675 patients were registered on the system, of the patients put on treatment, clinical-level blood pressure control achieved was 43% (range 22-79%). The programme also demonstrated that 38.4% of the patients had drugs home-delivered through HWC/SCs during lockdown, underlining the potential benefits of scaling-up such initiatives.

Maldives

The MSAP 2016 for NCDs suggests strengthening the primary care system as a crucial strategic action area. A WCO KI noted that the current screening practices for eliminating cervical cancer are not fully integrated into the health services, functioning more as ad-hoc screening across the Maldives. Nevertheless, the KI expressed optimism that in the future, these screenings would be more seamlessly integrated into the healthcare system and the services provided at the island level.

> ***We are actually working on a plan for cervical cancer elimination in the country. We have had a program for cervical and breast cancer screening [that] was under revision for some …The issue is that the cancer screening is not integrated into the health services as of now, so it is kind of an ad hoc screening that is happening in the country, but I think in the future, it will be more integrated into the health system and the services that are being provided at the island level. (WCO KI)***

Myanmar

National Cancer Control Programme aims to increase the percentage of women between 30 and 49 screened for cervical cancer. National screening for cervical cancer and precancerous lesions was in place and ready to implement before recent political crises. This hampered timely implementation. However, opportunistic screening is an effective approach for identifying individuals with hypertension because it leverages existing healthcare services and does not require significant additional resources or infrastructure where access to health care services is limited and where there is a shortage of healthcare providers. There is currently no national screening program in Myanmar for cervical cancer. Small pilot programs are conducted by NGOs in certain hospitals. In 2019, 1.67 million people were screened for NCD risk factors with 205,495 people treated for diabetes along with 429,400 being treated for hypertension.

Nepal

STEPS data indicate that 55.9% respondents aged 15-69 reported having their blood pressure measured by a medical provider at some point of time among all respondents in 2019, which

has slightly reduced from 57.3% in 2013. Expansion of screening program for cervical cancer, breast cancer, and oral cancer is specified in the action plan. The integration and expansion of screening for gestational diabetes fasting and PP blood sugar at 24 weeks and 28 weeks of pregnancy are present in reproductive health care service standards.

Sri Lanka

HLCs were set up in 2011 for health education, screening, basic management and referrals of NCDs[n]. The eligible age of screening was initially above 35. This was widened in 2019 to include those between 20-34 having any one of the risk factors as per guidelines. HLCs screen patients and provide essential health service package of UHC. Screening protocols for breast cancer, development of oral cancer screening programmes in the community, and integration of mental health and NCD screening in the infectious disease screening programme for Nepali migrants are other key milestones.

The introduction of protocols and tools for the management of NCD has standardized the treatment for hypertension and diabetes at the primary health care level

Nurses and health volunteers organize annual screenings for adults over 35 not diagnosed with hypertension or diabetes. Village Health Volunteers (VHV) mentored by health professionals perform initial screening of population in villages and record NCD risk factors. A medical officer in PHC summarized the role of VHVs:

The Village Health volunteers screen DM patients, and they can interpret the results as well. Secondly, they do HT screening, for those who have a high risk of developing HT, they would work on those patients. They would also conduct BMI screening HLCs screen patients from 8AM – 4 PM on all days; patients are either referred by field level volunterrs or are walk-ins.The Primary Health Care System Strengthening Project (PSSP) and "RESOLVE to save lives" hypertension control project is operational in selected centres in the country have strengthened the NCD control efforts in the country. [74]..... *And they would also screen those who have been consuming alcohol and also those who are smoking and also screen those who usually have high sodium intake (PHC KI)*

Clinical practice guidelines and protocols exist for annual diabetes screening of those above 35 for diabetic retinopathy, kidney disease, and foot lesions for those with diagnoses. Screening of hypertension and risk assessment for cardiovascular disease (CVD) is done for all adults visiting hospitals by licensed medical doctors, with treatment and follow-up care in accordance with Thai hypertension guidelines. The diagnosis and treatment initiation for NCDs is solely assigned to a physician in Thailand. A medical officer explained the service delivery model: "Village Health Volunteers serve as our screeners, and they would do some preliminary interpretation for us, but in the end, it's the clinicians who diagnose and make decisions on patient care."(PHC KI)

n These were based on recommendations from The National Policy and Strategic Framework for Prevention and Control of Chronic Non-Communicable Diseases

A medical officer pointed out the absence of interventions targeted towards the at risk population in NCD care provision. The current system has laid out a robust path for patients who are diagnosed but little focus was given to the at-risk population. She added:

> ***So just get the screening done, but what happens once they are screened? … for example, they may have high-risk factors like being a little obese. I mean overweight. So at-risk-people, basically, there's nothing… There are no programs for these people…we ask them to come back next year and get screened again; that has been a big gap for us. So, the program (NCD) is all about screening, but there's nothing we can do with them until we diagnose. Once they're diagnosed, then they get good care. (PHC KI)***

National health security schemes cover the cost of drug therapy and counseling provided at health facilities. Pap smear screening for woman aged 35-60 years and Visual Inspection with Acetic acid (VIA) screening for women between 35-45 years is state-funded[o]. Some coverage ground has been lost for both blood glucose and blood pressure screening, which needs to be caught up (see Figure 8).

Timor-Leste

Opportunistic screening for selected NCDs, such as hypertension and diabetes was conducted under the NCD National Action Plan (2014-2018). Community health facilities (secondary care) also provided laboratory services and screening for common NCDs. Under the Multisectoral NCD Action Plan (2018-2021), community- and family-based health promotion and screening programmes were scaled up, including follow-up and treatment for hypertension, common cancers, and diabetes mellitus. One KI shared that "there has been a campaign over the last 1-2 years to reduce cervical cancer rates. Colposcopy centres have been opened with staff being trained to do cancer screening and treatment. In addition, the cervical cancer vaccination will be rolled out which should increase public awareness".

3.2.5 Team-based Care and human resources

Bangladesh

Most of the KIs reported that a team based approach had improved the NCD service delivery in the country. NCD corners at UHCs have at least two Medical Officers, a staff nurse and a pharmacist and statistician to enter data. At the community clinic, the SACMO conducts screening while the health assistant and family welfare assistant motivates people from the community to access care and provides health information. Staff shortages are common,

o The Thai national cervical cancer screening program provides for this.

affecting NCD services in the Chittagong hill tracts. One COM KI suggested providing added incentives to healthcare providers in remote areas, noting the common challenge of retaining staff:

> ***We have sites from Chittagong Hill Tracts and in those three districts we found that they do not like access services…so these areas are hard to reach. They always suffer from a scarcity of healthcare providers, because when doctors and nurses are posted there, they usually try to get a transfer from that area as soon as possible. (COM KI)***

Another challenge reported was this. Staff whose work was supported by projects funded by by development partners would leave once the project was over. Bangladesh's formal health system still faces a significant shortage of qualified practitioners and paramedical staff, forcing many patients to seek the services of unqualified and formally unrecognised allopathic providers and homoeopaths as the first point of contact.

Bhutan

The SCCI policy has clearly defined roles of healthcare workers involved in community based primary heath care practice and NCD screening services. The Guidelines for Screening of Gastric Cancer, Cervical Cancer and Breast Cancer further laid out the healthcare workers needed for prevention, detection and treatment services of cancer across the national, regional, district, and community levels. A KI involved with medical education in Bhutan spoke to us about the role of team building exercises and designated roles of health workers as part of SCCI which ensured people centred care

> ***Why is people-centered getting the momentum? It was because the training was designed to not just focus on the service delivery alone. Rather, it was on the holistic process of team engagement…. therefore everybody (Health workers) started taking that ownership and that oneness and felt that "I have a role here." (COM KI)***

Migration-driven human resource shortages have hampered the delivery of NCD services at the national level. "At the town level, (having just) one person is an issue. So we are training alternative NCD focal person. if even one leaves, the other will work. this is to ensure that our services are continuing" (COM KI).

On a more forward-looking note, academics from teaching hospitals visited health facilities delivering NCD care to better understand the job competencies required to effectively carry out the duties. Their findings were summarised, resulting in revisions to the curriculum of medical doctors more appropriately tailored to meet the country's needs.

India

At lower levels, a team of ASHAs, midwives and MPWs and Community Health Officer are the core "team" handling NCD primary and secondary prevention. A lab technician and pharmacist are also available. The additional skill requirements for staff include being able to screen hypertension, diabetes, cervix, breast and oral cancer, timely referral and provisions for follow-up care. This team is provided a five-day training with all of them needing to be together to understand the team aspects of this function. Gaps were evident based on the 2018 NNMS data: nearly 15% of PHCs (similar among urban and rural), 8% CHCs and 7% DHs had no MBBS duty doctor. States have introduced variations to suit local needs.

Indonesia

Each Posyandu has a 6-8 community members who volunteer part time ("Kader") through outreach activities, the effect of which is to promote better health promotion and screening activities for NCDs. Geographical variation is a challenge in the distribution and accessibility of medicines, the availability of healthcare practitioners. Jakarta was the distribution centre for all regions in Indonesia and the medicines were distributed to all regions.

> ***Now the issue at hand is that PHC is not ready... because they can't work on their own. This is a bit of criticism about the availability of medicines in the regions. especially the eastern part of Indonesia there are significant lack of medicines in these areas, even in Java availability of medicine to provide proper treatment is sometimes incomplete. So the result of that is that what the PHC can give is not much. (COM KI)***

Maldives

Maldives faces acute human resource shortages. HMP 2016 mandates increasing incentives, creating a safe working environment, providing appropriate training, and establishing additional medical education facilities for local communities. Maldives has a fairly good distribution of health workers. In 2016, the country was dependent on expatriate health professionals, with only 23% of doctors and 50% of nurses being locals. Since 2021 there has been a surge in the number of local doctors to 41%, and an increase in the number of local nurses to 62.3%.[75]

Myanmar

Myanmar National Comprehensive Cancer Control Plan (2017-2021) proposes the establishment of Palliative care clinics in tertiary hospitals to improve the quality of life for cancer patients. However, there is no clear justification for the roles and responsibilities specific to NCDs.

Treatment, follow up, and monitoring of diabetes and hypertension is facilitated at the primary health care level. In 2019, 700,000 sought care from primary health providers for hypertension, and 290,000 received care for diabetes.[76] A WCO KI stated that Basic Health Staff are the main service providers particularly at the township level. At the RHC, midwives are the main service providers. During busy times task shifting takes place where the midwives workload is taken up by Health Assistants in the area. The health facility to which patient referral is done depends on the feasibility of available transport. This makes referral systems challenging to engage.

Midwives play an integral part in the NCD healthcare system. They screen patients according to risk behaviours. If needed, they are referred to a primary healthcare centre, then to the township hospital if need be. They can prescribe medicines for straightforward cases. PEN services have decreased due to recent political crises. Some NGOs have been trying to fill the gap in NCD service delivery.

PEN training was conducted by the MOH up to 2019. PEN training guidelines were established for BHS and Medical Officers to implement at the township level, as well as at the grassroots Rural Health Centre and health centre levels. In 2019 PEN guidelines were updated to include preventive cardiology guidelines for medical officers and BHSs. Refresher courses were conducted for the BHS and MOs in 2019 and 2020.Townships in five out of seventeen region have completed the training prior to the onset of COVID19 and then the military coup resulted in the stalling the preventive cardiology program.

Sri Lanka

A PHC KI shared how human resources were distributed in PHCs that offered NCD care

> ***I am in charge and there are two more MBBS doctors… I have 4 nurses, 1 HLC nurse and two development officers. They do….our chief staff is a development officer. Developmental officers (DO) help with projects. patient records. And I have 1-2 attendants… when the nursing officer draws blood, the midwife will educate on NCD and the DO will enter the data, like that.. then height and waist measurement is done by the HA. We have a team actually in the hospital. (PHC KI)***

The National Action Plan of 2016 and the National Strategic Plan of 2020 has very little information on the other health care providers at the entry point of higher levels of care and their corresponding duties. The NCD unit at the district level is responsible for the implementation and management of the NCD programme.

Thailand

Thailand's density of healthcare workers slightly surpasses the WHO's benchmark of 2.28 per 1000 persons benchmark for doctors, nurses, and midwives. "Primary Care Act in Thailand is a mandate now… every single patient has access to three health workers assigned to them.. one, is a village health volunteer, one is a public health nurse and one is a family physician leading that team". (PHC KI) Students from rural areas are recruited with the integration of rural health issues into the curriculum, and mandating rural services for healthcare practitioners. National licensing exams and continuing education requirements are in place to maintain quality.

Timor-Leste

Little information was provided on the roles and capacities of those responsible to implement NCD policies and programmes. One KI reflected that in 2014-2018 there was a shortage of health care staff, with predominantly nurses leading NCD care at the community level. It was also noted that "nurses and midwives play a very important role in NCD health delivery as they are trusted by the community and are able to bridge cultural sensitivities and provide cervical and breast cancer screening and treatment. Nurses are also tasked with public awareness and education at the community level" (WCO KI).

Government strategy hired newly graduated medical doctors (from Cuba) to work at the primary health care level so that at least one medical doctor was present at each health post. In 2020 there were 0.8 physicians per 1,000 population,[77] and 1.7 nurses and midwives per 1,000 population. Doctor to population ratios vary broadly dependant on region with ratios of 1:630 in Dili , 1:1239 in Manatuto, and 1:3000 in Ermera in 2014, with similar issues pertaining to nursing ratios.[78]

Few specialists are available but with the hiring of doctors trained abroad, there is an increase in specialists. District health officers are responsible for NCD risk factor prevention relating to diet and physical activity. The PEN program is implemented at the community health centres with one health professional identified to take on the responsibility of NCD health service delivery, often a nurse at the centre. A challenge with this system is staff turnover issues affect NCD care.

> ***There is a current program called Timor-Leste Hearts for preventing and managing NCDs that aims to put 50,000 people on standard care for diabetes and hypertension by 2025 with the guidance of WHO. Currently standardisation of operational procedures for healthcare workers to promote team-based care to ensure medicines and equipment are available at all levels of the health care system is in progress. Starting with one municipality as a pilot project, the program will then aim to extend to other municipalities as improvements are seen. (WCO KI)***

3.2.6 Systems for monitoring

Bangladesh

BanNet was established to strengthen NCD surveillance and knowledge dissemination as a collaborative effort to gather, analyse and disseminate NCD-related information. Our KIs state that BanNet has been inactive for many years. The NCD prevention and control monitoring framework adheres to the WHO Comprehensive Global Monitoring Framework's 25 indicators and ten regional targets. MSAPNCD 2018 recommends that surveys such as NCD STEPs, GATS, and GYTS are to be regularly carried out. The national cancer registry is meant to be based on hospital and population registries.

According to a WCO KI, the programme's monitoring lacks cohort-based monitoring, resulting in inadequate follow-up for diagnosed patients. The system is burdened on account of a lack of "gate-keeping" – patients may walk in to any facility, including tertiary care facilities. Whilst Bangladesh is an early adaptor of digital health records for NCDs, paper based reporting is still followed mostly.

> ***I think getting the information system going will be the biggest challenge because now it is all episodic- You come, I treat you, I give you drugs. You don't come, I don't bother you till the next time you come… same challenges in most places- no appointment system, no gate-keeping. So anybody can walk into any place (WCO KI)***

Data from the digital MIS for NCDs from NCD corners is sent to the District Health Information Systems (DHIS). KIs share a key problem that this system has: non-segregation of NCD data from general health condition data (in the current MIS system). Human resource shortages and high footfall of OPD patients in NCD Corners make data entry difficult despite a statistician being available. Data integration into the DHIS is difficult since development partners use different software for their data collection purposes. One KI with direct experience shared how this is problematic:

> ***We collect some individual data (patient) also from NCD corner, especially from primary healthcare centre in the NCD corner. The challenge is that we collect data with different apps and that is not aligned with our systems. So, they have data but it's not integrated with our central system (DOH KI)***

Nevertheless, in RESOLVE areas of the National Heart Foundation, a simple app is used which is currently being encouraged by the government to be taken up by all development

partners, as it is interoperable with DHIS. Private health facilities do not provide any data. A KI from the DGHS reported that the plan for introducing a unique ID for each patient will be piloted in a few UZHCs for a month or two, after which it will be scaled up and facilitate integration of data in the next implementation phase. Data systems are poor in urban areas. In Cox's Bazaar, a WHO KI reported that the data system was still being developed. Apart from the coverage data, BRAC is introducing another digital application that records behavioral risk factors which are currently absent from MIS.

Bhutan

To track progress, all policy documents outlined measurable indicators relating to health outcomes and service use. Audits of progress and data collection were outlined. The Multisectoral National Action Plan for the Control of Non-Communicable Diseases (2015-2020) had a Brief External Review conducted by a third-party consultant were planned for the end of 2016, 2017 and 2019 with a more thorough mid-term and whole-plan review in 2018 and 2020.

Some programs, such as the Guidelines for Cervical Cancer Program (2019-2025) called for strengthening of monitoring and evaluation efforts by improving a newly established national cancer registry. Most data systems had manually entered data, with segregation by program, though some consideration was being given to developing real time, digitized data systems by adapting DHIS and nascent efforts to develop an electronic patient information system (This was operational only at higher level facilities, as at the time of our field research).

Democratic People's Republic Of Korea

For the WHO Country Cooperation Strategy (2014-2019), the WHO will monitor programme implementation via mid-term and final evaluations. The National Plan for NCDs (2014-2019) aimed to strengthen research and evaluation on NCDs and the Ministry of Public Health was assigned to report to the Ministry of Health on data collected. Indicators to track progress were outlined for both the WHO Country Cooperation Strategy (2014-2019) (2) and the National Plan for NCDs (2014-2019). Under the UN Strategic Framework for Cooperation (2017-2021), the government agreed to provide timely access to relevant and accurate NCD data. Data was planned to be disaggregated by sex and age, and any other variable necessary to identify the most vulnerable groups.

India

India was the first country to adopt a national NCD monitoring framework with 10 targets and 21 indicators on mortality, risk factors, and health systems' response to NCDs. India committed to the Global monitoring framework. But gaps in the data on these indicators became evident, so the National Non-Communicable Disease Monitoring Survey (NNMS) was conducted in 2018-19 to measure and arrive at national estimates for the identified indicators for prioritization of actions (see Figure 11). [79]

The national NCD portal is used at HWCs to generate Ayushman Bharat-Health Account (ABHA) IDs for population-based statistics. ABHA helps to digitize health records and eliminate physical copies. ABHA numbers identify, authenticate and link individual health records across systems. Digitization of the data from physical registers is done at multiple levels; entry of data on screening and management of NCDs is done on the NCD portal. Moreover, Ayushman Bharat Digital Mission (ABDM) is also providing other facilities through ABHA such as hospital discovery, faster appointment booking, and so on[80]. The national NCD portal offers a comprehensive dashboard of the NP-NCD programme allowing detailed programme insights on screening, diagnosis, treatment and control. The NP-NCD programme continues to collect from the NCD clinics through the State nodal offices on quarterly basis that provides insights on NCD care from PHCs and above.

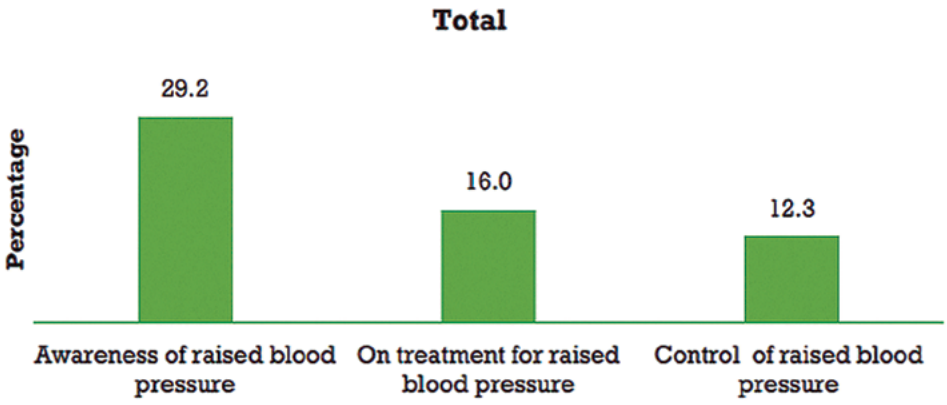
The Hypertension control Initiative provides key insights to treatment related data pertaining to Hypertension at individual levels. The coverage of NCD portal over time is high:

> ***NCD-portal is a success story, 500 million people are enrolled in the system... tracking of screening of persons can be followed-up using the portal...earlier we were not able to get numbers, now this portal has brought all states on to a common plane. (DOH KI)***

Digitization of records has been gradually integrated into the monitoring system between 2013 and 2020. It is the first comprehensive fully digitalized national level survey that provides key estimates on NCD risk factors according to the National NCD framework and action plan of India. [79]

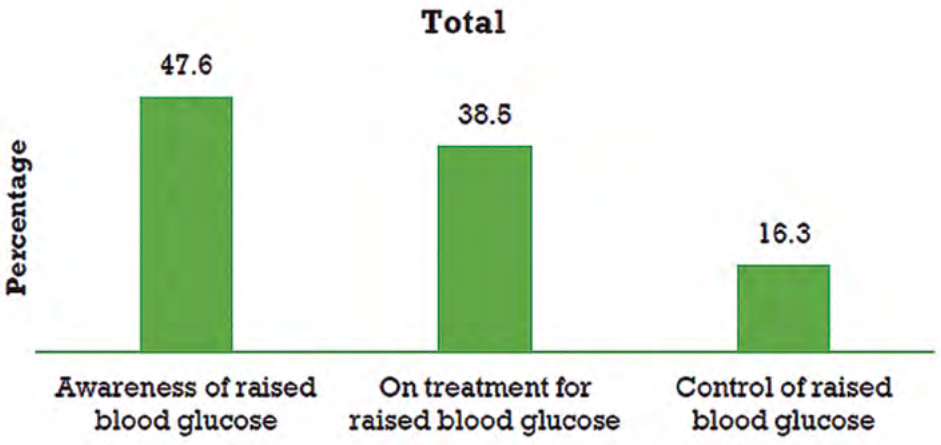
Fig. 11. Treatment Cascades as per India's National Noncommunicable Disease Monitoring Survey

Hypertension Treatment Cascade, India (2018)



Source: NNMS, 2018

Diabetes Treatment Cascade, India (2018)



Source: NNMS, 2018

The NNMS has revealed that of those with raised blood pressure under a third were aware of their status, 16% were on treatment and only 12% had controlled blood pressure. The overall pattern was similar for diabetes although awareness, treatment and effective coverage for raised blood sugar was higher. One difference in the pattern was that blood pressure coverage was greater among women and blood glucose coverage was greater among men. There was a rural coverage gap in both cascades.

Indonesia

Indonesia used to have separate STEPS surveys which were then integrated with ongoing surveys such as Riskesdas 2018 with NCD risk factor data and Sirkenas 2016, which has data on cervical cancer screening. Monitoring of global NCD indicators is underway through the Puskesmas and Posbindu systems. Puskesmas is managed by regional governments, with varying levels of digitisation of records at different stages [p].

Data are gathered monthly, reported quarterly and assessed annually. The mix of digital and non-digital reporting has created a challenge for integration with the Ayo Sehat IndonesiaKu (ASIK) national level application used to monitor primary facility screenings for NCDs. KIs from a Puskesmas they were still adapting their own systems in place which did not per se align with ASIK. Further, since ASIK data was inaccessible to the healthcare workers within the same Puskesmas, it could not be used for follow up. KI noted that since patients maintained record books, from the patient perspective, they were able to keep continuous records.

p One informant shared the following: "For Puskesmas, because it is under the regional government, it is the regional government who monitor them and considers the population of the respective region... the monitoring is done through recording and reporting it can be monitored everytime. The assessment is done every once a year... The reporting is done quarterly and the assessment is done at the end of the year. And it is monitored by the ministry of health and the ministry of home affairs." (PHC)

Maldives

Data availability and quality are major goals of MSAP 2016. Population-based surveys like STEPS and the Global School-Based Student Health Survey (GSHS) are in place to improve evidence-based policies and NCD programming. The policy recommended monitoring tobacco rules, additional staff for NCD surveillance, monitoring food content, establishing a cancer registry, and conducting a mid-term evaluation in 2017 to assess the progress of the first stage of MSAP implementation with an end-term evaluation in 2020.

Myanmar

The National Strategic Plan for Prevention and Control of NCDs (2017-2021) aimed to incorporate the data needs of NCD programs into existing health management information system and develop a web-based system for reporting and compiling all facilities and called for strengthening of monitoring and evaluation efforts by improving a newly established national cancer registry.

According to a WCO KI, NCD health data is collected by health assistants and midwives using a tablet. The data is then sent to the office of Township medical officer, on to the District Medical Officer, to State and Regional levels and finally to the Ministry of Health, where three different departments collect data; different interpretations of indicators is an issue.

Only data for two indicators are collected including prevalence of hypertension and smoking. Data from the HMIS and paper-based data from the rural health centres exist, but there is a challenge with lag time in the collection of data through each step of the system and in its compilation. It is difficult to get accurate data on the number of people screened and undergoing care for NCDs.

Although the WHO STEPS survey is critical for monitoring NCDs, due to COVID19, it was put on hold in 2020 with no implementation date set at this stage. A national Digital Architecture was developed in 2018. Under Health Management Information Division under Department of Public Health, all the programs including NCD will be integrated and used in common platform of DHIS2, and whilst factoring in interoperability issues.

Nepal

Operationalization of Nepal's NCD Action Plan involves an action framework and a five yearly STEPS survey to assess progress. Data and information on NCD are to be integrated in the HMIS. The 2015 strategy highlights the development of reporting tools for NCD and incorporating urban health reporting format to HMIS. All healthcare staff are provided training in data management.

Reporting and recording systems do need more attention. Screening coverage for blood pressure appears to have declined (2013: 57.3%, 2019: 55.9% of respondents aged 15-69

reported having their blood pressure measured by a medical provider), diagnostics (2013: 84.2%, 2019: 67.9% of respondents aged 16-69 with blood pressure measurement reported a diagnosis), and access to medicines (2013: 53%, 2019: 32.8% of those with raised BP reported being on anti-hypertensive treatment) in the periods assessed by STEPS. For those with diabetes, the proportion of those with raised blood sugar on insulin was only 55% in 2019 as compared to 63.4% in 2013.

Sri Lanka

Sri Lanka's 2016 action plan set up a monitoring framework for four strategic areas. Each has outcome indicators outlined with corresponding indicators and activities, the responsible entities to implement activities and the time frame to accomplish the activities. For monitoring and evaluation, the action plan envisaged setting up a national surveillance and monitoring framework for NCD prevention and control, to initiate a Web-based data collection on morbidity, and to develop an IT system for OPD data as a pilot project. It also proposed conducting the STEPS survey every 4-5 years.

The NCD program is reviewed every three months with the hospital staff at the regional level and the central level, district Medical officer NCDs are reviewed every month. The Resolve to Save Lives program for hypertension is reviewed every three months.

Thailand

The National Statistical Office conducts regular national household surveys to monitor the impact of health policies on households and estimate capitation fees to support Universal Coverage Scheme. Identity cards, family folders, patient booklets, and referral forms ensure robust data capture. Digital health records ensure smooth patient information management**.** For hypertension care, a unique ID is assigned to each individual, and the Thai health system maintains family health records at health centers. A Health Data Centre that records and stores health information using a unique ID number in a standardised format called the "43 folders" system. Healthcare facilities provide disaggregated and individualised raw data to the provincial level via the same system for easy accessibility and organisation. Key Performance Indicators are closely tracked [81]. While the data of people who use the public system is available, the data of people using private facilities are not integrated with the government system. This is a challenge especially in urban areas. A senior MoPH official spoke about this challenge: "We (MoPH) have just the data from the people using government health system. But yeah, in urban areas we have many private hospitals that do not incorporate the data into our system. There's just a big gap"(DOH KI)

Timor-Leste

Timor-Leste has a Health Information System (HIS) called DHIS2, which has been in place for 7-8 years, focused largely on MCH indicators. For NCDs, over the last 2 years a paper-based

reporting system has been used up to the national level [q]. Essential equipment and internet access to use the electronic platform at the ground level are real limitations. An ongoing NCD survey requires tablets and is tracked digitally. Ideally when the patient is identified then information is entered into the HIS on tablets or phones. According to a WCO key informant, "2014 a national survey for NCD risk factors was undertaken and published in 2015. Using this data, we review and also do some analysis, we can use to develop strategic plan …secondly. We collect field data to analyse changes in NCD risk factors."

3.3 Community participation for people centred NCD services within primary health care

Almost all countries had policies with provisions to include civil society organizations and community members in the policy development or implementation process. Some had clear examples of community-engagement in Policy-making. Thailand, for example, reported stewardship by the National Health Security Office (NHSO) of health insurance coordinating centers, patient groups, and community health funds. In some countries myriad existing mechanisms of 'communitization,' community engagement or local self government institutions were increasingly being relied on to expand their focus from reproductive, maternal and child health to NCDs. Reliance on people with lived experience for awareness raising was observed. In many countries, patient welfare groups were active, playing roles like supporting treatment access and generating awareness.

Mass awareness at the population level was summarily low in the region and an admitted area of weakness. This was clear in most cases from STEPS surveys as well as population based surveys that had been underway in the period studied. Awareness of diagnosis ranged was generally low, at or around 35% in many countries of the region, going as high as 50-65% among those with high blood pressure or high blood glucose, for example. This was also seen with cervical cancer screening, although there had been a definite improvement over the period studied. Efforts to raise awareness included online and offline communication campaigns and celebration of various thematic days; in some countries, patient associations and civil society groups played a substantial role in this. It was admitted that in some cases this was inadequate as commercial determinants often encouraged risky behaviours like sugar and salt consumption. Further, universal screening and treatment access once mass awareness was raised, was another challenge identified by countries, but one that was being actively addressed.

q The NCD National Action Plan (2014-2018) aimed to establish a National NCD Monitoring Framework including monitoring indicators and conduct a Nationally representative NCDs Risk Factor Survey to generate baseline data and repeat it every five years. WHO Country Cooperation Strategy (2015-2019) includes results framework that closely monitors, access to medicines for NCDs and mortality pertaining to NCDs, the results framework also identifies STEPS survey and monitor the prevalence of Tobacco use. Finally, strategic action areas for Multisectoral NCD Action Plan (2018-2021) include to identify an NCD focal point in the existing Department of Surveillance and train the person in NCD surveillance and conduct the WHO STEPS survey for risk factors.

Most countries in the region had mechanisms to monitor and enhance quality of care, although these did not necessarily draw on feedback or involvement of patients, service users and non-users. A great deal of the emphasis was on facility and service accreditation, aligned with the development of national service delivery standards for primary care. In some countries, the PEN protocol had helped jumpstart the creation of standards for quality assurance. Another key area was licensing and registration of healthcare workers. In some countries, access to and continuous training of human resources was seen as the cornerstone of assuring quality, while in some countries the lack of dedicated human resources was seen as a barrier to enhancing quality of care.

Special provisions for left behind groups were seen in many countries – bespoke programmes for this and identification of various groups facing vulnerability, was also seen. Quite often this was a long list of groups facing vulnerability, migrant and mobile populations, the elderly (those requiring home-based delivery of care), persons living with disabilities, women and children, and urban slum-dwelling and poor populations, rural/remote island dwelling, those in risky occupations like sex work, sanitation was seen, as well as those using drugs. Broadly though, the efforts were articulated in policy documents and operationalised at fairly small scales. Broader operational efforts to address "left behind" groups had not yet been prioritised. While it was not directly mentioned, a tacit assumption in the rollout of NCD services was to create a kind of base programme, and then enhance it with modifications to reach the "unreached."

Most countries in the region had reduction of inequalities articulated in national policies and goals. Tracking of these inequalities was only starting to be monitored through disaggregated data – usually by sex, but less often by other dimensions of inequality; sample sizes of STEPS and other surveys did not necessarily lend themselves to analysis of inequality. Further down the care cascade (eg. Looking at those with hypertension on treatment, for example), denominator or average figures were so low, that examining inequalities was not yet feasible. Separate datasets on various other groups identified as being left behind were not being routinely generated either. This will be an important area to track to be able to speak to, monitor, and plan for universal NCD care access at the primary level.

3.3.1 Co-production of policy or services (involving people living with NCDs)

Bangladesh

The Strategic Plan for Surveillance and Prevention of Non-Communicable Diseases in 2011-2015 was developed based on the guiding principles of people-centeredness, cultural relevance, focus on reducing inequity, ensuring care continuum and involvement of the whole of the community, which reflect the thrust and importance on the people centeredness given by the policy.

Community engagement in the NCD programme was reportedly minimal and highly variant. In some areas with strong community leaders, communities were involved in the

implementation of the programme, although, in most areas, engagement was absent. There was a lack of community representation in policy development. Community organisations, like development and academic partners, had a minimal role in policy making, but heavy involvement in implementation of the programme. A KI from a Bangladesh diabetic association mentioned about their unique role as service providers:

> ***if you compare with the other Diabetes Associations, like India or the other parts of the world, they are mainly involved in advocacy. But this is the only association who are not involved in advocacy. We give care, the diabetes care, and the non-diabetes care through our own institutes. At this moment we have 110 in the care facilities throughout Bangladesh. These act as the secondary and the tertiary and the primary care providers. (COM KI)***

Bhutan

Furthermore, several policies made provisions to include civil society organizations and community members in either the policy development or implementation process. The Bhutan Cancer Control Strategy (2019-2025) implemented a National Technical Advisory Body, partly comprised of civil society organizations to guide the program. The United Nations Development Assistance Framework Bhutan One Programme (2012) was developed using consultative processes with equity-deserving groups and civil society organizations. Furthermore, the Guidelines for the Cervical Cancer Program (2019-2023) included community participation as a guiding principle. In particular, promoted community mobilization and community involvement in knowledge dissemination efforts. While collaborative production of policies is a key area for ensuring people centered care, our KI interviews revealed an important aspect: the role of cultural sensitivity. A COM KI said

> ***We are not like western countries, so developed, and people can openly say. But in many instances, not many actually, majority of the instances, people may not speak, they say you decide, you're the expert, we are fine. (COM KI)***

The KI further added that currently a pilot project is operational in a district where a senior person affected with diabetes or hypertension from a community is invited to health centre conducting NCD clinic and speak to people gathered there about the lived experience of navigating though diagnosis and treatment and acts as change agent to improve NCD awareness in the community.

Moreover, while some policies, such as the Bhutan One Programme, the Bhutan Cancer Control Strategy, the WHO Country Cooperation Strategy and the Guidelines for Cervical

Cancer Program in Bhutan recognized the need to ensure hard-to-reach groups have access to services introduced under the policies, they did not outline specific steps on their approach to achieving this objective. There was also little information on specific plans to reduce inequality across the population.

India

At local levels, the mechanisms of Jan Arogya Samitis (JAS) and Mahila Arogya Samitis (MAS – in urban areas), as well as Village Health, Sanitation, and Nutrition Committees have financial allocations and are empowered to expand their focus from reproductive, maternal and child health to NCDs. As a KI from a government agency informed us, "JAS is not only a link between healthcare workers and community, it is there for getting inputs of community needs…some things are needed to make them actually effective and efficient, we are now trying to see what is really involved." In addition to these, Rogi Kalyan Samitis place particular attention on facility level improvements and provide inputs on functioning, while in many states, Self Help Groups are also involved alongside Panchayati Raj (local governance) Institutions and Urban Local Bodies whose capacity is being strengthened to spend the allocations now being awarded to them. That said, the specific involvement of communities and civil society organisations in NCD programming (as compared to HIV/AIDS, for example), has been limited, as another KI indicated:

> ***[The] involvement of community and civil societies in NCD programme design is minimal unlike other programmes…but, we know that this is important, as it will help us understand the plight to accessing services and improve patient centredness. (DOH KI)***

Indonesia

Efforts to engage civil society have been underway in 2016 and include major players like patient welfare groups like Lembaga Kesehatan Nahdlatul Ulama (LKNU), family welfare organisations like Pembinaan Kesejahateraan Keluarga (PKK), and development organisations like Yayasan Peduli Kemanusiaan (YPU) and other women's organisations. The specific nature and impact of engagement warrants further study. Efforts in 2017 were revitalised to implement Law 23/2014, calling for local government guidance or clearly defined services at the community level.

Civil society organisations highlighted that through their advocacy they were successful in bringing changes for the benefit of the community. For example, the policy earlier was to provide diabetic patients with medicines for one month. During COVID, where regular access to the hospital was a challenge, there were demands to provide medicines for a longer period. This was later accepted by the government and since then medicines are provided for three months after each visit.

Maldives

The MSAP 2016 identifies community-based organisations as a stakeholder in preventing non-communicable diseases. They are tasked with promoting NCD services and providing health education.

Robust community mobilization efforts were undertaken in the Faafu Atoll demonstration site by conducting house-to-house outreach, resulting in high participation rates. Approximately 90% of the population in the Atoll were enrolled in PHC registry, and more than 90% underwent screening. The high level of community involvement proved highly successful, attributed to engaging individuals at their homes, addressing concerns, and highlighting the benefits of participation. A WCO KI highlighted the vital support of island councils and government officials in Faafu Atoll's successful program.

> ***The mobilisation Is quite high [on] all 5 islands. It is required that we get into their homes, talk to them, and could remove their fears, answer their questions, and let them know the benefits that they will have [from] getting involved and being screened and what they should expect in return when they get to the facility. [This] really changed a lot of things. … Government officials and politicians are very keen [on] the success of the program that we have in Faafu Atoll, both at the island and at the atoll. (WCO KI)***

Key NGOs (Diabetic Society of Maldives, Cancer Society of Maldives, and Tiny Heart) collaboratively focused on combating NCDs through advocacy, island-based screenings, and their partial involvement in clinical management practices *vis a vis* NCDs.

Furthermore, A WCO KI highlighted the lack of integration between NGO initiative and government programs, characterizing them as standalone initiatives. Integrating NGO activities into governmental framework is crucial for better alignment with official guidelines and systems. Challenges in data integration emerged due to non-alignment of some screening programs with government protocols. This hindered their incorporation with healthcare data systems. One KI noted:

> ***Right now we don't have a mode of integration. Actually, what they are doing is quite separate from the government programs, it's kind of standalone programs but what we are trying to do is [bring] them together, so that we could have collaborative programs so that some of the efforts are not duplicated as well, some of the funds are not duplicated and it could be more efficient because some of the screening programs are also not as per the government guidelines so there are some issues with the data, [which are] not integrate-able into the system that we have right now. (WCO KI)***

Nepal

Community participation is envisioned through mobilizing women's groups, consumer forums, ward citizen forums and citizen awareness centers for awareness campaigns. It is not how this is going to be achieved. Provision for poor and marginalized populations is not mentioned in the plan although the 2017 health strategy takes care of this by expanding the coverage of unreached urban populations for NCD intervention and extending screening camps in hard to reach areas. It further aimed to strengthen the development and implementation of referral guides for primary, middle and tertiary levels, thus reinforcing enhanced access to NCD treatment and care. Steps to ensure quality of care are also absent from the policy, and can be given greater emphasis going forward.

Thailand

The NHSO has created various initiatives to encourage participation, including health insurance coordinating centers, patient groups, and community health funds. Civil society groups oversee implementation through the National and Regional Health Security Committees. The impact of these structures and processes remains to be assessed. The NCD alliance a global collective that leads civil society movements for NCD, is active in Thailand and works closely with MoPH. A WHO official explained the role of patient associations in the country and how the UHC Act ensures that decision-makers hear the community's voices.

> ***In Thailand, the patient with kidney disease, the diabetes patient, they get together and they form an association… they have a strong voice…. there is the decision for the health service under the universal health coverage Act to establish committee, Representatives of these organisations and NCD patients are also the member of the committee when making a decision about the service package. (WCO KI)***

The National Health Commission Office (NHCO) coordinates and facilitates National Health Assembly in developing policy proposals for implementation, evaluation, and policy revision. National health assemblies serve as a platform to hear community voice and are organized in the national, provincial, and district levels. The NCD guidelines developed by MoPH has a strong component on patient empowerment, and health workers try to make care more patient-centric by empowering communities a MoPH official mentioned

> ***The guideline for the NCD clinic, one of the items is patient empowerment – to make the mechanism to support the management for patients. We know that health issues are not just about the health sector. It belongs to the community as well. So we try to encourage people, try to enter a community to work together. (DOH KI)***

3.3.2 Mass awareness of risk and services

Bangladesh

All KIs concur that awareness of NCDs is lacking in the population. Only 35% were aware of diabetes and of those diagnosed, approximately only 10% were concerned about seeking treatment, reportedly. No mass awareness campaigns on NCDs exist except for tobacco control campaigns. In private facilities, prevention is reportedly not a priority. In urban areas, lack of awareness was cited by a KI as a major reason for non- utilization of service, high salt diets and lack of dietary diversity. Some efforts were reportedly underway to advocate for and begin to modify food environments.

Bhutan

Several policies, such as United Nations Development Assistance Framework Bhutan One Programme (2014-2018), Multisectoral NCD Action Plan (2015), Guideline for Cervical Cancer Program in Bhutan (2019-2023), Guideline for Screening of Gastric Cancer, Cervical Cancer and Breast Cancer, and Health Flagship Blueprint (2020-2023) aimed to run education campaigns in collaboration with media to enhance information access about healthy lifestyle behaviours, health services, and promote community participation in NCD programs.

Notwithstanding this, STEPS 2019 data reveal some gaps: mass awareness of blood pressure status appeared to be low. There also appears to be lack of awareness of status among those with high blood pressure with 65.1% not being aware of their diagnosis and only 5.7% of those with raised blood pressure being aware and on treatment with control. As in the case of blood pressure, mass awareness, particularly among men appears to be low as more than half of those with raised blood sugar did not know their diagnosis and 2 out of five persons no longer on medication said they were not necessary.

Emphasis had been placed on youth advocacy and outreach for cancer control – across all 20 districts of the country, as a WCO KI informed us. This had support at the highest level of the Queen Mother.

Democratic People's Republic Of Korea

The National Strategic Plan for NCDs (2014-2020) focused on enhancing the prevention and control of noncommunicable diseases and risk factors through mass media and public health reference books. Information was unavailable in all policy documents regarding best practices, program enablers and barriers, the perceived quality of care by the community, and the steps taken to ensure community involvement in the policy process.

India

According to India's National Noncommunicable Disease Monitoring Survey, conducted in 2017-18, 45.8% of persons with Diabetes Mellitus were aware of their condition, with greater

awareness among older adults.[82] Overall, even for those with high blood pressure, awareness levels approximate this level indicating a need to sensitise the general population. The intention of population based screening with frontline health workers carrying out risk assessment and supporting health promotion activities – including sharing of IEC on cervical cancer, is intended to address this.

Indonesia

Low awareness in communities about NCD risk factors and service availability are realities that KIs highlighted. The uptake of cervical cancer screening was very low as women were hesitant to seek it.

> ***The challenge is that because it depends on the willingness of patients. Some of the patients feel a bit less comfortable for these checks. Hence for VIA it is little bit of a challenge... We still conduct education, we still conduct checks [after which] some of the patients are willing to go through the test. (PHC KI)***

KIs with CSOs stated despite concerted efforts to enhance healthcare accessibility, service users still avoiding visits to Puskesmas due to prolonged waiting times and dissatisfaction with the services offered.

Maldives

In line with the objectives outlined in HMP 2016, primary care centres were anticipated to establish connections with every family within their respective island or neighbourhood. This initiative aimed to enhance public health awareness and broaden service coverage across communities.

Simultaneously, the policy aims to empower these communities by enabling them to demand quality assurance measures for both drinking water and food products. Creating opportunities to educate and empower families about healthy practices was considered crucial for sustaining healthier living standards. The integration of modern Information Communication Technologies (ICT) emerged as a powerful tool in inducing behavioural changes within these communities. Additionally, the policy emphasizes the significance of collaborative initiatives with schools and higher education institutions to promote health awareness among younger demographics.

Over the past three to four years, Maldives has elevated public awareness through communication campaigns (Web stories and documents). Dependence on imports for food products makes promoting healthy eating practices a challenge.

Myanmar

Although WHO Country Cooperation for Myanmar (2014-2018), United Nations Development Assistance Framework Myanmar (2014-2018) and National Health Plan (2017-2021) calls for the need to run education campaigns, only National Strategic Plan for Prevention and Control of NCDs (2017-2021), Myanmar National Comprehensive Cancer Control Plan (2017-2021) provide their aims and plan to run education campaigns in collaboration with media to enhance information access about healthy lifestyle behaviours, health services, and promotion. Raising awareness raising on early warning signs of childhood cancer was conducted through training to BHS at some selected townships in 2019 aiming to strengthen early identification and referral.

A WCO KI informed that a sticker campaign was launched to raise awareness of NCDs at the community level. Messages on hypertension, diabetes, tobacco, nutrition and physical activity were covered. Volunteers put the stickers in prominent areas in villages so that the community members could see them and learn more about risk factors and how to avoid NCDs. A number of additional efforts were also put in place beyond the period studied in the evaluation, and included the use of websites and social media.

Nepal

The 2014 action plan outlines the structured media campaign strategy based on dose, medium, and timing of NCD messages. The plan aims to mobilize women's groups, female community health volunteers (FCHV), celebrities and community people for awareness campaigns. The creation of health information and education campaigns among consumer forums, ward citizens forums, patient groups, schools and the creation of citizen awareness centers is envisaged. National media campaigns in Nepal are devised by the the National Health Education Information Communication Center in Nepal. Campaigns are aired in the media and social media and disseminated as announcements during public events. The agency coordinates campaigns in line with observation of special days such as World Tobacco Day, World Cancer Day and World Cancer Day. A WCO KI noted that room for improvement in improving the mass media awareness campaigns exists to make it more nation-wide and consistent, especially on improving awareness about screening and treatment for hypertension and diabetes.

Sri Lanka

Mass media campaigns were proposed to create awareness and encourage the public to utilize screening services. Guidelines to facilitate screening for diabetes targeting those above 35 and those between 20 and 35 with high-risk indicators were introduced. Community support for public health facilities is strong (initiatives such as Friends of Hospital Committees and Hospital Developmental Committees). Friends of hospitals are constituted by respected members of community like retired government servants who can mobilize communities to better utilize

NCD service coverage. The hospital development committee receives generous financial support from communities and non-residents, and has helped build ward complexes for public hospitals. A health department official shared this:

> ***At the hospital that I was working, the community were making these packets to dispense drugI.there was a group of ladies, they at their houses during their spare time, they make those packets and they deliver it to the hospital. So we never ran out of those. (DOH KI)***

The national strategy and plan for control of cancer aims to involve patient groups actively in the implementation and evaluation of the plan. However, the steps to be taken to initiate this activity are undefined.

Timor-Leste

The NCD National Action Plan (2014-2018) drew on mass media to engage in health promotion activities. The Multisectoral NCD Action Plan (2018-2021) further recognized the need to strengthen the capacity of the health promotion unit within the MoH and of other stakeholders by developing training modules and programmes for them. KIs shared that the Ministry of Health has a health promotion department to produce educational materials on diabetes, hypertension, and cervical cancer. This is is disseminated through social media channels, supported at district levels by Health Promotion Bureaux. They work closely with community radio to promote messages and encourage people to get screening or tests done. Print media is not utilised for health promotion or infographics, but more for Ministry announcements. WHO has been actively working with the Health Promotion Bureau and the media to encourage more discussions on health issues to build more awareness and understanding. It has been challenging to build awareness around screening. The first cervical cancer screening centre only opened in May 2022 and approximately 320 women have been screened. WCO noted that they had begun work in the desired direction, though there was a long way to go.

3.3.3 Feedback on satisfaction and quality of care

Bangladesh

To maintain high standards of care in service delivery, MOHFW has established national committees on Quality -- the National Steering Committee (NSC), the National Technical Committee (NTC), and the Quality Assurance Task Group (QATG) under the Directorate General of Health Services (DGHS). The 2011 HPNSPD suggested implementing Total Quality Management for hospital services. Accreditation would depend on factors such as accessibility,

adequate logistics, the information provided to clients, the technical competence of providers, interpersonal relations, responsiveness, continuity of services, and appropriate service options. The lack of adequate human resources to monitor and supervise the NCD program was reported by a DOH KI as a major challenge and the plans to recruit more staff has been put forwarded in the 5th sector development plan : "We need at least one monitoring officer at the district level... monitoring for Upazilla health complex and one NCD corner" (DOH KI)

KI interviews reveal that there is a lack of separate regulatory mechanism for assessing the quality of care in NCD corners and community clinics. Additionally, there is no patient satisfaction feedback mechanism introduced yet.

India

The Indian Public Health Standards (IPHS) for Primary Health Centres (PHCs), most recently revised in 2022, are the standards for public health facilities to deliver quality services to citizens at varied levels from infrastructure to governance and leadership. IPHS 2022 identifies NP-NCDs as a key programme to be delivered at all levels. With the launch of the National Quality Assurance Programme (NQAP), National Quality Assurance Standards (NQUAS) have been developed keeping in mind the specific requirements for public health facilities and best practices. NQAS are currently available for District Hospitals, CHCs, PHCs and Urban PHCs. Standards are primarily meant for providers to assess their own quality for improvements and to bring up their facilities for certification.

To ensure provision of quality care at the primary level, standards of care for HWCs have been framed. For a facility to apply for the state and national certification it is mandatory to apply for at least 7 packages of the Comprehensive Primary Health Care Packages. One package includes screening, prevention, control and management of NCDs.

Maldives

In 2016, the HMP emphasized the importance of prioritizing the quality of healthcare services in the Maldives. To ensure this, legislation has been put in place regarding the licensing of healthcare institutions and the professional registration of healthcare workers. The Ministry of Health has also developed quality standards for institutions and protocols for clinical care delivery.

Myanmar

A Key Informant stated that some quality assessment tools and checklists had been developed with the NCD team and WHO including feedback mechanisms and patient satisfaction data. These were supposed to come from the hospital level but is yet to be operationalized.

Nepal

PEN protocols improved the quality of screening services and referrals. A WCO KI spoke of the improvements in the NCD service delivery system after PEN protocol implementation:

> ***One thing that PEN emphasised is to improve the care cascade. It introduced the protocols, it brought about, I mean, at least for diabetes and hypertension it brought about the protocol-based management and it got the medicines in place or at least advocated for the medicines. It was also supposed to look at the referrals and coordination, but what we found was that the referral pathways and coordination was not fully optimised even with PEN. (WCO KI)***

Sri Lanka

A Key Informant stated that the quality and commitment of human resource in the Sri Lankan health sector was one of the best in the region and felt that the government investments universalizing primary education and medical education had helped the country in developing such a quality workforce.

> ***One thing is the staff commitment is high… it's a committed staff, , and very good human resource. That is something we should appreciate. Probably the reason behind it could be the free education. Free education policy or medical, paramedical….not only basic level education even the, tertiary care education. One of the things probably people feel that we should serve the state or the people, because of the free education and they have the opportunity. anyone can become a specialist as far as you have the capacity, irrespective of your financial status or background. (COM KI)***

3.3.4 Special provisions for inclusion of populations facing disadvantages

Bangladesh

In 2011, the HPNSDP identified hard-to-reach populations and those facing vulnerabilities. Ethnic minorities, tribal communities, people with disabilities, professionally marginalized and socially excluded groups were identified: sweepers, sex workers, the elderly and those in remote geographic areas. Interventions to target these populations and provide necessary assistance with NGOs and other departments were planned.

For example, NCD screening work in Cox's Bazar includes a refugee camp for 884,000 Rohingyas. 175 healthcare facilities operated by government and NGOs are present here. These facilities serve the Rohingya refugees and the 472,000 Bangladeshi population in surrounding areas. However, in 2019, a WHO assessment found that only 25% of healthcare workers in Cox's Bazar received NCD prevention and management training the year before, and 25% of the health facilities had printed Guidelines for NCD management.

The Directorate General of Health Services in Bangladesh, with WHO assistance, created and implemented national protocols for integrated hypertension and diabetes (also named the Cox Bazar model of Integrative NCD care). This emphasised training primary health care staff and community health workers to promote health and prevent risk factors for NCDs through screening and surveillance. Equipment and supplies for detecting and managing NCDs were made available. Educational material regarding NCD risks and health lifestyle was developed in Bangla and English.

NCD Screening services were introduced for all the Rohingya population aged 40 years and above. The "Bangladesh PEN" training was a collaborative effort between the Directorate General of Health Services, WHO Bangladesh, and BRAC James P Grant School of Public Health. It successfully trained 68 government health staff facilities and 361 community health workers from the Rohingya community. A WCO KI remarked about the role of Rohingya community health workers in the program and strategy adopted to customise the training according to the preferences of a foreign population.

> ***When we started the NCD operations in 2019, we trained all community workers and, uh, to you developed an NCD flip chart, uh, which are in English and Bengali language. We did not go for Burmese because the Rohingya refugees, there is evidence that they don't understand Burmese or they can't read very well... But features are basically pictorial. uh, we put pictures. Let's do so. So the flip charts are with community health workers. They do their door to door visit (WCO KI)***

Essential medication and supplies for NCD management to 123 healthcare facilities in Cox's Bazar has been provided, and these efforts led to increased utilisation of NCD services among Rohingya refugees. One WCO KI noted that staff retention was a major challenge. Either emergency response mission trained staff are transferred or once their contract period ends, trained human resource shortages affect the quality of care. Data management is another challenge, for the data system still needs to be developed and health staff find it difficult to monitor the progress of the program. Finally, the duration of funding is a challenge. NCDs require long-term management and uninterrupted supplies of medicines. Since emergency responses are largely donor funded, they tend to be usually short term.

Bhutan

Gaps in treatment, medicine availability and follow-up through a 2016 PEN clinical audit led Bhutan to adopt WHO PEN interventions in 2018. The global HEARTS technical package was used, also known as SCCI [r] mandates that all visitors to healthcare facilities undergo NCD screenings. Home care, medication refills, treatment reminders, follow-ups, efficient referrals, and real-time monitoring are also included.[21] A WCO KI briefed us about the initiative showing the transformation in people's experiences:

> ***In the past people struggled to get their (NCD medicine) refills. they had to come to the district hospital and if the district hospital didn't have stock for it was a huge inconvenience. With SCCI now they can get the same medicine at the primary health centre because the health assistant at the primary health centre has a good connection with the district hospital and if the district hospital doesn't have the medicine, then the district hospital pharmacist has a good connection with regional hospitals so they proper link developed across. Now we assume that people have more confidence and trust (WCO KI)***

One PHC KI further explained the process of SCCI and the model of NCD care in the country. At the PHC level, a Health Assistant (HA) trained in hypertension and diabetes management conducts the initial screening and does the diagnosis, contacts the medical officer and using WhatsApp or Telegram, shares further details. Treatment is initiated according to the PEN protocol. If the HA feels the need for further assistance, a referral is booked for the patient at the district hospital for the full panel of tests and by consulting the medical officer. After tests and consultation, the patient is again referred back to the HA through social media. If there are complicated cases or cardiovascular disease, or stroke, the patient is referred to the regional referral hospital for specialised care. HAs are trained in PEN protocol and are authorised to prescribe medicines from the essential drug list for NCDs. A PHC KI stated: "We have an essential medical list, and there are some basic medicines like let's say Losartan, metformin,.. All those medicines are available at primary healthcare centre, so they are allowed to prescribe that".(PHC KI)

Democratic People's Republic Of Korea

The UN Strategic Framework for Cooperation (2017-2021) aimed to apply a human-rights, people-centred approach, as well as support gender equality Despite this, specific steps to achieve this were not outlined. However, the framework did take steps toward identifying

r The package consisted of the 7 Rs: robust team building; reach out to home-bound services; refill of medicines; recall and reminders; responsive referrals; reliable and people-centred lab diagnosis; real-time monitoring and supportive supervision and the 3 Cs comprehensive, collaborative and continuum of care. This model has become an integral part of the primary and district health services.

the groups most vulnerable to NCDs by entering into an agreement with the government, to provide NCD data disaggregated by sex, gender, and other relevant variables. Little information on specific plans in policy documents to reduce inequality across the population was provided.

Indonesia

The Nusantara Sehat plan, introduced in 2014 to specifically target remote and border islands, places special emphasis on equity. This plan specifically targets remote and border islands, with a special emphasis on equity.[83] The Program Indonesia Sehat dengan Pendekatan Keluarga (PIS-PK) (2015-2019) builds on the Puskesmas network and seeks to foreground preventive and promotive care, optimize referral and ensure community empowerment. Hypertension therapy, mental illness monitoring and smoking cessation are monitored.

Operational linkages between these schemes, programs and NCD-related services and the coverage of these programs warrant further exploration. Women were double burdened among diabetic patients for their vulnerability due to both the disease and their gender.

One KI highlighted that despite the coverage of service costs, communities often incurred transportation expenses. Such prohibitive costs deterred those at a distance from the healthcare facility (as well as even follow-ups) challenging. Frequent power cuts were common, especially in remote areas.

Myanmar

Myanmar's National Health Plan (2017-2021) includes strategies to reduce health inequalities, including those related to NCDs. The plan prioritizes improving health services in rural and remote areas, strengthening primary healthcare systems, and increasing access to essential medicines. UNDAF for Myanmar acknowledged the need to expand coverage of health services, including for NCDs, to the most disadvantaged populations. Childhood cancer services are brought closer to patients by networking with hospitals that have a paediatrician. Such collaborations in the context of the pandemic and political crises have been valuable.

The WHO have worked with the government on matters relating to the health of immigrants but there is currently no cross-border collaboration to address this issue apart from intermittent communications between offices in Bangladesh and the Ministry. While some policies recognized the need to ensure hard-to-reach groups have access to services introduced under the policies, they did not outline specific steps for this objective.

Sri Lanka

For equitable access, the action plan proposed establishing community groups in NCD activities and build the capacities of patient groups. Clinical oncology outreach activities increase

accessibility for vulnerable populations. Developing cancer management plans based on the literacy level of the patient will help achieve equity goals.

Gaps in screening coverage of young and working people, mostly men, have been noted [65] A One DOH KI stated that estate laborers, the elderly and disabled populations do face difficulties in accessing NCD care from health facilities. A COM KI identified the urban poor as a vulnerable population largely due to factors such as unhealthy dietary habits and the lack of physical activity:

> ***One of the high risk categories that we see are the urban slums. Uh, especially the females. The obesity levels are very high. It's almost, uh, 50% if you take the obesity, overweight in the urban slums. Of course, their lifestyle is such that , unhealthy eating and lack of physical activity, obviously are the main reasons. And I think their carb intake is very high. (COM KI)***

Timor-Leste

The National Health Strategic Plan (2011-2030) seeks to mainstream gender issues in health sector planning, in line with the National Gender Policy. Ensuring equal access to health services for all people with the same health conditions and building a culturally sensitive health system are key emphases. It was acknowledged that the government needed to ensure equal access to quality care according to needs of individuals with the same medical conditions. The NCD National Action Plan (2018-2018) also emphasized the value of equity by acknowledging that the The United Nations Sustainable Development Cooperation Framework (2021-2025) aimed to improve the quality of primary health care services and health coverage with a particular focus on the needs of the poor, less educated, rural communities, women and children, persons with disabilities, migrant and mobile populations and other marginalized groups, by drawing on best practices.

3.3.5 Reductions in inequalities and inequities across groups

Bangladesh

In 2016, HNPSIP highlighted the unequal access to healthcare for vulnerable people. Making services available was framed as a critical strategy for the sector development plan. Disaggregated data to monitor progress was suggested. MSAPNCD 2018 proposed a targeted intervention by tertiary health facilities to provide health services to hard-to-reach populations like urban slums and other marginalised communities with the support of MoHFW.

One KI from a CSO reported that although services exist in hard to reach areas, the lack of roads and transport makes it difficult to access services. Ethnic minorities prefers traditional

healers. A new medical college in Rangamati catering largely to the tribal population of Santhals and Orans has been recently established. The urban poor were also reported by a KI to be underserved by NCD services: almost 70% of the urban poor reportedly accessed the nearest pharmacy for health problems and visit private facilities for something like cancer. Without financial risk protection, catastrophic health expenditures are very likely to keep them below the poverty level.

India

India's NCD policy emphasised inclusivity and reduced inequality. The National Health Policy of 2017 prioritizes healthcare among urban, tribal and vulnerable populations by allotting higher cost inclusion in these areas to address NCDs. 2023 Operational guidelines aim to make access to quality healthcare for NCDs equitable amongst the urban poor. Affordable medicines and treatment are sought to be made widely available via AMRIT and PM-JAY under Universal Health Coverage. In tribal and remote areas, membership of JAS is intended to include historically under-served communities.

Indonesia

Indonesia in 2015-2017 carried out a detailed assessment of inequality through the launch of a State of Inequality report.[84] As part of this effort, a country-specific Public Health Development Index, developed following a legal decree in 2010, was utilized for analysis, revealing a lower level of subnational inequalities in NCD related outcomes (in comparison to service delivery sub-indices). [85] Longer term, however, the service delivery indices – which reflect inequalities in access to PHC, will likely affect the ability of the system to tackle NCD care. The broader pattern of inequality, moreover, where eastern provinces showed poorer outcomes (South Kalimantan, East Nusa Tengara, and Papua), also suggest entrypoints for action to lower disparities.

Maldives

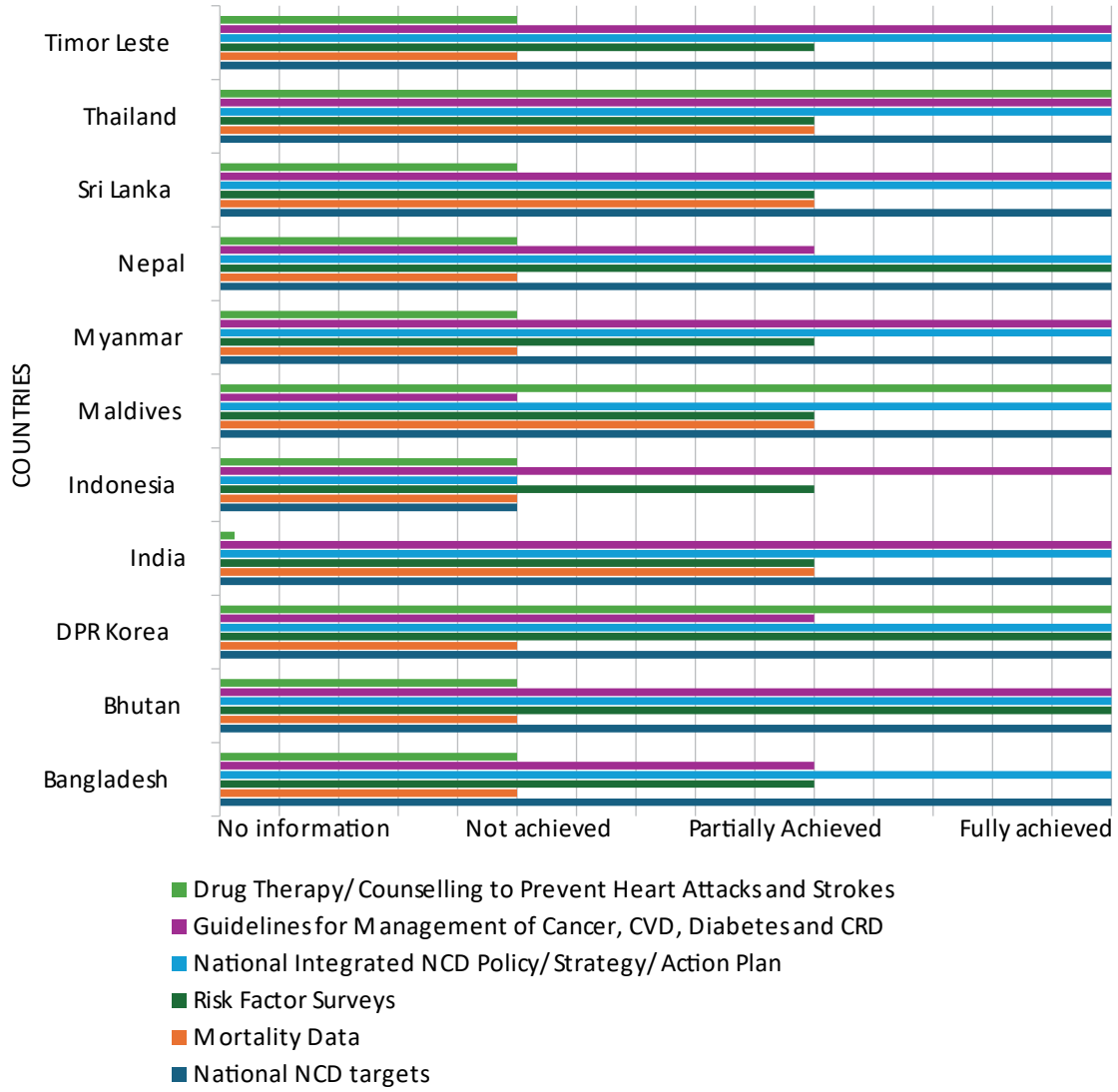
In 2006, the HMP recommended a health insurance scheme to provide social security for the poor. This scheme was launched in 2011. The HMP 2016 emphasised vulnerable groups, such as pregnant women, children, migrant workers, adolescents, and people with disabilities and the need to ensure preventive and curative services for at-risk groups, such as drug users, while tackling the associated stigma and legal issues. It was noted that while welfare schemes, allowances, subsidies, and old-age pensions could add to the country's fiscal deficit. The MSAP for NCD Prevention and control 2016 has equity as a guiding principle. It proposes approaches to reduce inequalities due to the burdens placed by NCDs due to socioeconomic determinants (gender and economic status). Universal access to essential health services, diagnostics and medicines, is re recommended especially for vulnerable groups, without causing financial hardship.

4. Conclusions

4.1 Status of Adoption of people centred NCD service delivery within primary health care in the South-East Asia Region

While there is great variation across the 11 countries of the SE Asia Region, some noteworthy achievements have been made (see Fig. 12).

Fig. 12. Progress in implementation of NCD policies and regulatory actions across countries in SEA Region in 2022



Source: Adapted from [86,87]

It was observed that 10 countries (Bangladesh, Bhutan, DPR Korea, India, Maldives, Myanmar, Nepal, Sri Lanka, Thailand, and Timor-Leste) fully achieved the setting of national NCD targets and drafting a national integrated NCD policy/action/strategy plan. Seven countries (Bhutan, India, Indonesia, Myanmar, Sri Lanka, Thailand, and Timor-Leste) had fully achieved progress in creating guidelines for the management of cancer, CVD, diabetes, and Chronic Renal Disease (CRD).

The 2013 NCD Global Action Plan has (GAP) contributed to raising the profile of NCDs internationally;[88] this is certainly the case in the SE Asia Region. All but one country in the region has national NCD targets and national integrated action plans as of 2022 (see Figure 1). However, our country analysis suggests, as does the mid-point global evaluation of the global plan, that domestic protocols, plans, human resources financing and commodities have to be more actively marshalled towards these targets. [89] For instance only three countries, DPRK, the Maldives and Thailand have reported fully achieving drug therapy and counselling for heart attacks and strokes. Moreover, no country in the region has fully attained all the recommended actions under the GAP.

A major milestone for the region in this regard was the regional consultation held in Colombo, Sri Lanka in 2016 leading to the issuing of the Strengthening Health Systems Response to Address Noncommunicable Diseases in the South-East Asia Region or Colombo Declaration[1]. The SEA region faces a combined NCD burden of cancers, chronic respiratory diseases, and cardiovascular diseases resulting in 8.5 million deaths annually[1]. Accordingly, this report prioritized the prevention and control of NCDs through clinical interventions and health system-level changes. The Member States of this region agreed to meet the following targets: "80% coverage of essential NCD medicines and technologies in PHC" (p. 3), drug therapy and counseling for 1 in 2 persons at high risk for cardiovascular disease, and a 25% decrease in NCD-related premature mortality by 2025. In order to meet these targets, Member States were given recommendations including: combine NCD services with PHC, strengthen policies surrounding health system building blocks to address NCDs, and monitor NCD service delivery.

Apart from socialising key regional consensus documents, the WHO regional office released many critical resources in the period 2021 to 2023, intended to strengthen capacities, offer technical and normative guidance, and also tools to plan, document and monitor progress on NCD management at the PHC level in the region.

The overall impression is, therefore, that regional adoption of people-centred NCD service delivery is underway, although many countries in the region are not at the stage of expansion of such efforts, given that the fundamentals are still being put in place (see Figure 12). In some countries, therefore, while the Roadmap calls for "sustaining" progress, in others, establishing basic PHC systems that include NCD services will be essential, particularly in cases where NCD services remain in pilot mode. In fact, , there is great variation within the region and even within countries of the region with respect to primary health care reform, although a very clear pivot to NCD service delivery has been seen in the past two decades in some countries (like Thailand, Sri Lanka Lanka and India), in the past decade or so in other countries (like Bangladesh, Bhutan, and Indonesia), and post pandemic in others (like the Maldives, Timor-Leste, Nepal, DPRK

and Myanmar). Given that the progress has been more gradual than aspired, there may exist opportunities for innovation, cross learning, and context-specific features of programming that can be given greater attention in forums focused on NCDs, as well as on PHC. These elements are strongly aligned with the SEA Regional Roadmap and may be given greater emphasis using WHO support and guidance.

Country summaries

Overall in Bangladesh, governance frameworks were shaped by WHO normative guidance and showed a commitment to NCD programming as part of PHC. However, allocations and fund utilisation had yet to match the mandate. Core health system design and recent improvements in human resourcing were starting to set a base for NCD service delivery although challenges of human resource maldistribution and skilling remained. Systems to capture information on drugs and service utilisation required focus. Public awareness was considered another area requiring emphasis with community organisations not playing a role in policy formulation, but certainly in programme design. This would perhaps give them unique insights on how policy (re)formulation ought to take place, addressing gaps like geographic accessibility, training, and human resource shortages.

Bhutan showed great commitment and alignment to WHO norms and guidance, having implemented PEN early on, carrying out STEPS surveys as recently as 2019, and aligning with many of the offerings and frameworks of this and other development partners. In addition, a bespoke model of service delivery was being developed in the country, based on an ethos of compassion – which reflects a Bhutanese cultural perspective on people-centredness. A collectivist approach is being pursued, one that affects even training of health providers as well as the nature of support offered, and while there is a need to impart greater information on NCD risk and provide opportunities for counselling etc., the country is on track to use its own cultural model as a base, bringing in WHO and other elements and good practices into the design. Cervical cancer programming is a model in this country and has support and funding at the highest levels; this kind of support may be parlayed for other NCDs.

DPRK introduced a focal document in 2014 that covered many of the aspects assessed with WHO tools appearing to be cross referenced. Information on details of program design, spending and coverage is required to ascertain more nuanced information on progress with service delivery and to have an indication on the community-related dimensions of people-centred NCD care.

India has focused in the 2014-2021 period on building system level reforms – in terms of human resources, outreach, and creation of data capture and use mechanisms, which has seen massive gains in screening coverage. These are being consolidated and refined in the post COVID context with major PHC reform measures; de-verticalisation of NCD and other programming under a PHC umbrella, supported by infrastructure enhancements, as well as drug and diagnostics availability will certainly help universalise access. Community outreach

mechanisms and local decision-making mechanisms, empowered by recent financial reforms may help enhance participation and voice in decision-making, although tracking and addressing gaps in coverage (for left behind populations, urban areas, remote geographies, etc.) will require constant vigilance. Backstopping support from WHO, in addition to support on research and monitoring, may help enhance achievements.

Broadly, primary health service delivery reforms in Indonesia have been in place as early as 2011 and were harnessed for NCD service delivery, adapting and modifying global guidelines to country needs. With early investments providing fillip in 2015, NCD packages were brought into primary care facilities with telemedicine services being added on by 2017 and training following and local data systems being developed to capture and monitor progress. Gaps in medicine availability and costs incurred by communities are a challenge, particularly in remote island locales, although demonstration projects have shown the way in terms of possible service design for inclusion. Gaps in awareness remain the country and uptake of services, particularly for cancer screening, is being given more emphasis of late.

In the Maldives, while various policy moves were made in the period under evaluation in relation to health in general and NCDs in particular, 2022 was a watershed year for implementation with the Faafu Atoll PHC Demonstration Project being launched with embedded NCD packages. With long term investments being prioritised at this juncture for this demonstration and its scale-up nationwide, directives and legislation have paved the way for substantial expansion of secondary prevention and service cascades. The country is helped by favourable distribution of health workers and early steps to establish a cancer registry. At risk and left behind groups will require additional investments, and, like other countries in the region, there is a need to leverage technology and outreach to enhance this. NGO and civil society partners may support this although integration is also sorely needed between their and state programming.

Myanmar's policy momentum around NCD service delivery in PHCs was enhanced significantly in 2017 onwards, with a number of strategies following soon after. Near a quarter of health care expenditure is on NCDs and financial constraints are a significant hurdle in expanding and universalizing services. In 2021, the humanitarian response plans have attempted to retain continuity of the country's three tiered system with Wednesday clinics focused on NCDs and the use of midwives in service delivery. Access to essential medicines is another admitted challenge. Still PEN training continues to skill teams and notwithstanding technological hurdles, political challenges and COVID disruptions, efforts have been made in earnest to skill and assess progress in the country. Greater emphasis on service operationalisation and optimising given the current scenario was advised with community outreach needing to be a key component of reforms going forward.

Momentum in Nepal around NCDs has grown following PEN pilots in 2016 (which are now scaled up) as well as health insurance reforms, where emphasis was now turning on engaging with decentralised local government leaders, as by 2021 an integrated NCD care project has been introduced. Screening coverage remains low but is expected to increase given adoption of standard tools and protocols, and efforts to enhance drug access, which have been raised

by multiple high level actors as a bottleneck. Mass awareness is being seen as another area requiring focus, drawing on the many contributions to date of development actors, including WHO. The creation of express linkages between NCD and other health strategies, i.e. greater promotion of NCDs as part of core PHC reforms will help streamline and steer the reform process.

Sri Lanka has a robust health provision system in the public sector with strong emphasis on prevention through Healthy Lifestyle Centres and Well Women Clinic services. The other major strength of programming in the country is the strong emphasis on free drug access, reforms to procurement, such that NCD treatment access and coverage attainment is among the highest in the region. There are strong and committed teams delivering care although their skilling and orientation could be enhanced. Data systems are being enhanced to support service delivery as well. These reforms are supported by community participation mechanisms like hospital development committees. The system is also well apprised of left behind groups and their risk factors with community efforts also directed towards enhancing service delivery components. Gaps in screening however, remain with emerging challenges of reaching urban poor and other excluded populations.

Thailand has been a lodestar for the region in terms of primary health care reform and while a 2015 review noted some gaps in urban service delivery and national care cascades, the country has been investing substantially 2017 onwards in reducing NCD burden and consequences, demonstrating early successes in partnering with local government to advance NCD programming. A value based ethos guides service design, buttressed by strong foundations of human resource distribution, clear referral pathways although even with strong population based screening coverage (upwards of 85% even during COVID), relatively low diagnostic rates are an identified challenge. Legislative reform in the form of the Primary Care Act with strong linkages between volunteer and clinical staff has created a strong foundation, with emphasis on a number of elements of counseling, addressal of upstream determinants. Data systems – including the 43 folders system in a model where service provision is mostly in the public sector- capture the actual care cascade in the country – another exemplar for the region – with appreciably high drug and technology access with respect to NCDs. Patient advocacy is high and various institutionalised for a exist for community and civil society contributions including national health assemblies, but also local outreach mechanisms to help people engage in the health sector, not just for their own health, but in service of their communities as well.

Various strategic documents have led up to revisions covering NCD services in Timor-Leste as part of the 2021 reform packages. Thus much of the reform is forthcoming, with a strong emphasis on PHC and expected partnership with WHO and other UN agencies. An ambitious target of 80% coverage of core essential medicines is set in place and specific targets for NCD service coverage – enhancement and skilling of the human resource workforce is being given priority at present. Data systems require greater digital enhancement and tailoring to be fit for purpose and workable across the particular contexts of the country while health promotion efforts will need also to be ratcheted up. Cervical cancer service delivery is in early stages and will need to receive more emphasis going forward, drawing on regional expertise and good practice.

4.3 What has worked and what are the broad regional trends

On the governance side, the region appears to be on track, particularly in the post COVID context: policy appetite for NCD reforms at PHC level is overt. This is in part because global guidance related to NCD reached a stage of saturation and maturity, and increasing emphasis was also being given to PHC reforms by WHO and other UN agencies. This pivot was driven in the transition from the Millennium Development Goals to the Sustainable Development Goals, which supported already growing global momentum on de-siloing health reform with an orientation to Universal Health Coverage. In alignment with this, across countries of the region, national targets and plans for NCDs at the primary care level are very much in place.

This is helped in many cases by early adoption of PEN and other WHO packages and availability of resources like STEPS. In addition, governance structures, including for multisectoral action components of primary health care, appear to be primed. In some member states, implementation has been well underway for years, while in others, these structures are beginning to operationalise. There is a clear steer away from opportunistic or facility based approaches to population or community and outreach based approaches throughout the region. The clear shift here is from looking at NCDs as a subpopulation to assessing the entire population's risk profile with respect to NCDs as part of a larger focus on primary healthcare and wellbeing.

In many countries of the region, NCDs have been either the entrypoint or mainstay of PHC reforms at scale, particularly 2020 onwards, when the criticality of these reforms was manifest in a pandemic context. Governance structures are in some cases long-standing for NCDs and in other cases are entering the agenda of local governance institutions, which holds promise in augmenting attention to preventive and health promotive aspects.

Across the region, there exists a possibility now of relying on human resources that are either established newly or for some time now on the frontline. In many countries, momentum and gains in screening for hypertension and diabetes are apparent, with more coverage awaited for cervical cancer.

In many countries, NCDs represent an opportunity to "de-verticalise" health systems, moving them from a curative, disease specific focus to a cascade or continuum of care type approach that foregrounds primary health care. In such an approach, programme attention is placed not just on treatment or (facility-based) screening, but population-level screening to management, management to treatment/lifestyle modification and population level outcomes (i.e. hypertension or diabetes under control) as part of a UHC "effective coverage" framework.

A careful balance will need to be struck between creating focused targets for NCD achievement on the one hand (recognising the diversity of conditions therein) and of using NCDs as index markers for progress on PHCs and the health system backbone required to address all of health and well-being. NCDs, therefore, represent a real opportunity for countries in the region, to make or complete this transition on the path to Universal Health Coverage. The very large range of conditions under the banner of NCDs moreover, help train the spotlight

on the multiplicity of health considerations– physical and mental – through the life-course and for various subpopulations who may have particular needs.

Focus on left behind populations (in some countries) – eg. Cox's Bazaar in Bangladesh, immigrant groups in Thailand, and by way of the compassionate care initiative in Bhutan are seen. As earlier sections suggest, there are local flavours and idioms of "value-based" care even if the use of the term "people-centred" is not as prominent. The region has various and in many cases specific populations experiencing barriers – related to geographical accessibility, acceptability, as well as factors that impede effective coverage – are already known and efforts are underway to create a basic service package for them by way of augmenting access to NCD care. This strategy appears to be yielding dividends in terms of both widening (in terms of population coverage) and deepening (in terms of service coverage) access.

More recent years have introduced innovations in the use of technology – many examples of pilots exist. As access to technology grows in member states across the region, possibilities may emerge for leveraging technology and tools like decision-support, - care will have to be taken, however, to not deepen but rather bridge the digital divide where it exists and also harmonize, streamline and make interoperable digital systems across NCDs and in relation to other existing (vertical) programmes in countries. Another emerging area is the use of technology to enhance awareness, sustain networks and support systems for persons living with NCDs, and address misinformation about NCDs in countries.

4.4 What were the challenges

As with health systems overall in the region, chronic underfunding for NCD and PHC programming is an underlying barrier. Taking NCD service delivery to scale will require substantial financial allocations and absorptive capacities at subnational levels. Greater control of and steer by local government may serve many countries in the region well, although a concomitant focus on prevention and promotion will be needed.

A related challenge is of health systems strengthening in order to deliver true continuity of care. While many member states are trying to achieve wide screening coverage, ensuring effective coverage of NCD care, which requires continuous and repeated follow up over the life course, is a fundamental reshaping of care, particularly in public systems. This requires (re) tooling of funds, human resources, service delivery design, and attendant building blocks like medicines and information systems to provide chronic care.

In this light, the remaining, substantial challenge of basic human resource availability and distribution remains in most countries of the region. While frontlie teams are now increasingly established in member states, their appropriate distribution (and the requirements of ensuring retention) will need addressal, as well as key components of continuous training and supervision to deliver a much wider range of services, to a broader set of population groups. Here there are two sets of challenges: for those who are familiar with public systems, ensuring expectations are met and trust is/remains high and for those who have unmet need or have been neglected

by health systems, creating spaces for initial and continued footfall to be sustained. In a way, building NCD services into primary care reforms is a real opportunity to draw out heretofore neglected populations – given the extremely large burden of NCDs – but challenges of foregone care and unmet need will have to be addressed head on at this point. [90]

A key related pain point is access to medication and diagnostics, for which the need in the NCD context is large and likely to grow. Stockouts and drug pricing will need to be a major area of focus in order to attract and sustain population interest. Novel and enhanced methods of cervical cancer (home) testing and assured access to treatment will help build confidence of women in NCD services and in the system overall.

Another blind spot in many countries of the region has been the role of the private sector. This is of course highly variable given the design and path dependencies of countries in the region, but in almost every country, the private sector already is playing a role in the NCD space. Identifying how governments may steward this role, ensuring primacy is given to PHC level provisioning and prevention, is an area where WHO support could yield gains. Increasing the coverage of outpatient and out of pocket expenditure – ideally through pre-payment and budgetary mechanisms on the one hand, while also disincentivising corporate profiteering from (non-primary level) NCD care would be important, while not for profit models of PHC level service delivery could be carefully assessed for scale-up potential, appropriately adapted and incorporated to enhance inclusion.

The region lacks championing of NCD care in a substantial way as has been the case for other disease conditions, even as various smaller efforts exist. National and subnational NCD related efforts should be documented, evaluated and assessed for support, scale-up, and integration into national programmes.

As aforementioned, many pilots and models exist, and scale up will be another major challenge for the region going forward. This is perhaps particularly the case with regard to data systems for NCDs, which in many parts of the region remain quite ad hoc, duplicative, burdensome at the data entry and analysis levels, and in the case of most disease conditions, lack inclusion of public and private sectors or patient reported outcomes or perspective. A major rehaul of NCD related information systems in the region will be required; guidance for this would be very welcome from WHO.

Some additional challenges remain like unmet need and ensuring awareness among populations hitherto not targeted or covered by health programming.

In this, the involvement of persons with lived experience and of communities and civil society representing (the interests of) "left behind" groups will be key – not just to assure coverage, but indeed to develop the very design of policy and services. Community participation is after all the bedrock of people-centredness, and will be important to ensure that a value-based approach to NCD service delivery truly reflects the priorities and needs of those intended to be served by reforms.

5. Recommendations

It is clear that countries in the region have particular and even internally varying contexts and path dependencies. WHO is among a wider cast of players involved with NCD reform processes an can support the harmonization of multiple layers of efforts.

Community dimensions – mass awareness and engagement of communities in policies and planning, require greater attention. Options may be more readily available for enhancing governance and service delivery dimensions of people centred care and countries may decide on the sequencing and prioritization of these elements, seeing where possible to link up elements of service delivery with community participation as is indicated in the WHO PHC framework.

A recommendatory and menu based approach would be the most appropriate. This would help in connecting the multiple approaches to people-centredness to options for what can and should be reformed. WHO SEARO may most appropriately play the role of orienting and promoting NCD governance reform, service delivery changes, and community action. In other countries and contexts where a base already exists, WHO would play the role of supporting and skilling enhancements and reforms. Finally, in countries where NCD programming is well established within a larger existing framework or PHC service delivery (including components of multisectoral action and people's participation), the approach would be one of optimizing for inclusion and learning so that lessons and practices may be considered for adaptation elsewhere in the region.

5.1 Overarching recommendations – what is people-centred NCD care?

Delivering people-centred NCD services at PHC level in the region goes well beyond reducing gaps in care cascades for selected NCDs. No single, consolidated definition of people-centred care exists.

WHO defines People-centred health services as an approach to care that consciously adopts the perspectives of individuals, families and communities. They are participants and beneficiaries of trusted health systems that respond to their needs and preferences in humane and holistic ways."[91] WHO's framework of integrated, people centred care does not define terms, but rather envisions "a future in which all people have equal access to quality health services that are co-produced in a way that meets their life course needs and respects their preferences, are coordinated across the continuum of care and are comprehensive, safe,

effective, timely, efficient, and acceptable and all carers are motivated, skilled and operate in a supportive environment."[9]

In the SE Asia Region, the definition of people-centred care was itself variable and reflected priorities and cultural values that may be distinct from or in many cases add nuance to global definitions. This was reflected even in the descriptions stated by WHO country office KIs:

> ***My personal opinions that I go to the health facility and that facility is very close to me, not far away and I go as a person. I'm not going as a disease, a diseased person. If I see the doctor, the doctor sees me or nurse sees me as a person, and the doctor is not saying that you have to go to that place because you have to tuberculosis, you have to go to that place because you have say NCD but completely checks me and the screen including my mental health status and also others and also the consults with me. I mean they ask my opinion where I would like to be treated and the and ask my opinion. When I leave the health facilities there is also checklist or something asking my opinion that you have to visit this facility, you have this quality of the services provided? How we can improve that… I am not only beneficiary of the health system, but also participants of the health system. (WCO KI)***

A PHC provider in Thailand conveyed this view of people centred care, foregrounding the importance of values in the provision of care

> ***In Thailand we have two terms. We have People centred Care and we also have Value Based Care….Having care based on the peoples… ideas, feelings, function, their expectations so that and care is to be taking the context of the personal life or community life, family life and the community that are setting it.. But how that particularly says should be treated for each individual should be different. So the medication can be standard guideline, but how that guideline is applied to each person and how they would and what is needed for that person to control the disease would be different from each individual. So I think that's patient-centred care. (PHC KI)***

This value based approach was also reflected in Bangladesh where it was described as follows: "When the healthcare provider puts his foot into my shoes and looks at me and describes me what is that all the information that I need to know and follow, that is the patient-centred care."

In the context of NCDs, a Nepali perspective was that "no person, no individual is deprived of getting the NCD service that the person is in need [of], even if they are unique people group, people who are left behind out of reach."

There was some pessimism around this in the region as well. In Sri Lanka, for example, a community KI point blank stated that

> ***I don't think we are interested in being people-centred. I mean, people-centred meaning, they have some say when the clinic is to be opened , (now) they have no say when a clinic is open. Do they have say in where the clinic should be situated, I mean, the only way they included is through elections and the politicians but I don't know whether they have their best interest of their electorate in mind. So, people-centred(care) is a good slogan. (COM KI)***

Our view was that the options to provide people-centred care may be defined by the strengths articulated by Member States, as well as the gaps in the programmes as they exist presently. A number of the countries in the region are yet to put in place mechanisms for communities to shape policies directly.

Based on all the inputs received over the course of this evaluation, therefore, the following list of characteristics define or instantiate people-centred NCD care in the region (see Box A). This is what we are hoping to achieve within the region with programming going forward, with countries placing emphasis in gap areas herein. Critically, this is the vision and horizon line that WHO support and guidance must be directed towards (the following section details what these actions should look like).

Box A. List of characteristics of people-centred NCD care at PHC level – to which countries should aspire

1. Harmonized and streamlined NCD-focused resources within government and across development partners, including, but not limited to WHO.
2. Optimized alignment with and empowerment of decentralised governance structures is also needed in most countries of the region, particularly in urban areas
3. Enhanced oversight, stewardship and meaningful partnership with the private sector to ensure cost efficiencies and to ensure equity
4. NCD integration as core strategy for de-siloing health systems strengthening and primary health care in a manner that is responsive to burden, but also pivots health systems to a focus on well-being and healthy lifestyles
5. Universal coverage of populations not just for screening, but also in mass awareness, counselling, and health promotion aspects with primary health care service design adaptations that include, but are not limited to

(a) Expanded and people-centred working hours

(b) Accessible and inclusive outreach which requires "rebooted" programming for schools, formal and informal worksites, recreation spaces, places of worship and homes

(c) not for profit private sector engagement to enhance outreach,

6. Strengthening and gap-filling of health system building block in parts of the cascade where people are lost to follow up such as

   (a) provision of core infrastructure such as electricity at facilities, ambulatory provisions (vehicles), housing and children's education for rural/remote posted human resources; and more

   (b) training, supportive supervision and an enabling environment for PHC teams so they may handle multimorbidity, work with population subgroups with unmet need (e.g. The elderly, males, workers)

   (c) drug and commodity access at point of care as well as institutional capacity for quality control (with a focus on adherence), as well as orientation on standard treatment guidelines (with their establishment where absent);

7. Effective, equitable, interoperable , and at scale deployment of digital health information data capture and use of systems that

   (a) Enable cascade and life course approaches while also integrating with existing health information systems – particularly those established for PHC - using linkage and identifier systems

   (b) Integrate and routinely make public the data generated by the private sector and non-state players involved in NCD service delivery

   (c) Protect and promote privacy and confidentiality for populations while also empowering them with information on health promotion, risk, and their medical record

   (d) Enable data capture in a manner that reduce data duplication and burdens while enabling local use of data by PHC teams, particularly frontline workers

8. Vibrant and impactful community initiatives and platforms like Friends of Hospital programs, community-based monitoring, community health groups, national health assemblies and more, with a focus on NCDs;

9. Participation of the public and in particular "left behind" and "lived experience" communities in the development, design as well as monitoring and evaluation of NCD policies programs

In a people-centred system persons and communities are empowered to take responsibility for their health and make fully informed decisions regarding their and their community's health, backstopped by the health system of their countries to safeguard or improve their health status as well as the health status of those who may be left behind. It is therefore a compact between people, providers, government and other actors to serve as active participants, contributors to and agents supporting the NCD health of all. Given the aforementioned, a menu based approach, therefore, seems most appropriate for WHO to tailor its support for increasing people-centredness of NCD care within and across countries in the region. This is detailed in the following section.

We have six recommendations for WHO that correspond to the domain areas of the evaluation. In all cases, SEARO may take the lead with each recommendation informed, guided and supported by country offices as well as subject matter experts and other technical contributors, with relevant backstopping from headquarters.

5.2 Specific Recommendations under each domain

A. On governance:

In relation to governance of people-centred NCD care at the PHC level, the World Health Organisation South-East Asia Regional Office should

(1) **Sustain** momentum and political will among Member States to utilise and adapt NCD tools like PEN, STEPS, HEARTS and MSAP, with a particular emphasis on enablers and drivers at the level of governance, drawing on best practice examples and innovations in the region; **and**

(2) **Support** Country Offices and Member States to enhance the integration of NCD services as a tracer for Health Systems Strengthening (HSS) reforms and de-verticalisation of PHC in light of existing health system architecture and country context. This ought to include guidance on engagement with local and regional governments, the private sector, existing partnerships, compacts and bilateral and multilateral fora (like ASEAN or SAARC)

B. On service delivery:

In relation to service delivery of people-centred NCD care at the PHC level, the World Health Organization South-East Asia Regional Office should

(1) **Support** Country Offices to develop purpose-driven strategies based on existing and previous contexts, reform pathways, epidemiological transitions, pilots and innovations. This may require, as appropriate, at least one of these three options:

(a) **Providing** core orientation and implementation guidance on NCD service delivery reform at PHC level, providing core implementaiton support and core level training for actors in govenent. Geography is a hard reality (e.g. Small Island Developing States (SIDS), landlocked mountaineous terrains) as well as more specific needs and contexts (e.g. political transitions, humanitarian conflict situations, climate change); **or**

(b) **Supporting** and skilling so that verticalized or pilot NCD programming may be integrated and scaled up as a core function of PHC with upgradation of necessary health system supports like sustaining free access to medicines, expansion of cascades of care, and support for team based service delivery; **or**

(c) **Monitoring** and assessment to determine gaps in population coverage, service coverage and financial risk protection related to UHC from the perspective of users and nonusers, as well as optimisation of strategies to fill specific, identified equity and efficiency related gaps identified thereby; **and**

(2) Significantly **enhance** regional knowledge generation, management and translation on NCDs in alignment with existing global and local PHC related processes and forums, supporting health information systems within the region to generate and use disaggregated, purpose-driven data on NCDs, reducing both duplication and fragmentation of knowledge in and from the region

C. On community participation:

In relation to community participation to support people-centred NCD care at the PHC level, the World Health Organization South-East Asia Regional Office should

(1) **Expand** the regional evidence base on national and sub-national efforts to link and scale up impactful and promising community initiatives and platforms to support PHC planning, monitoring, patient support, and resource allocation; **and**

(2) **Advocate** for the participation of the public and, in particular, groups facing disadvantage and/or marginalisation as well as persons living with NCDs in the development, design as well as monitoring and evaluation of NCD policies programs

Official commitments to NCD management at the primary level in the South-East Asian region have been undeniably strong, with momentum and WHO-offered technical resources increasing demonstrably in recent years. Using a varied approach, the region should now focus on operationalisation, adaptation and uptake of guidance, establishing a strong baseline, filling gaps as and where needed, and employing cross-learning approaches where possible. Critically, for NCD programming to truly be mainstreamed at PHC level using a people-centred approach, an expressed focus on community engagement and buy-in may help amplify and sustain the progress made in the region so far. The path may be long, but countries in the region are facing the right direction.

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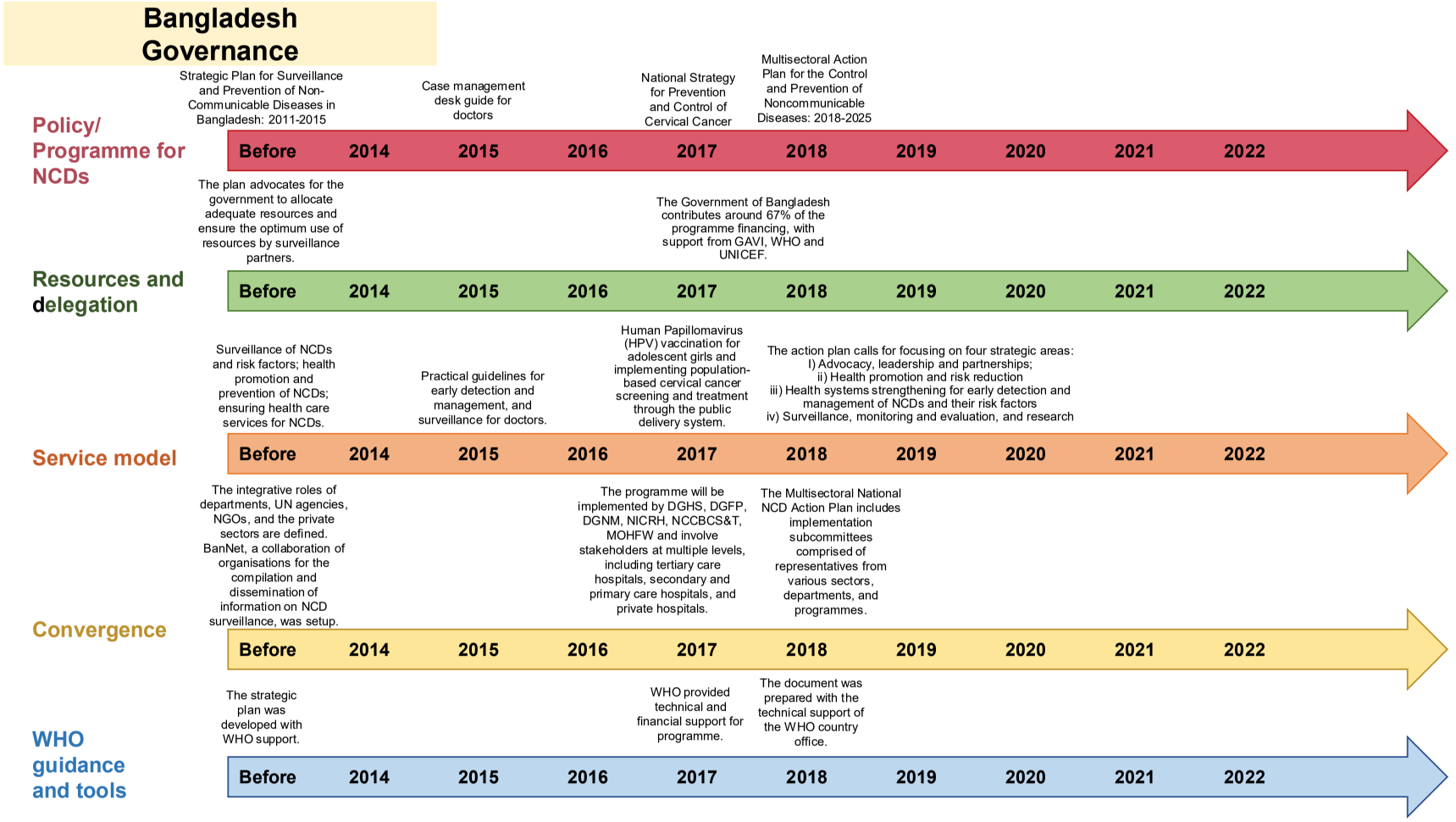
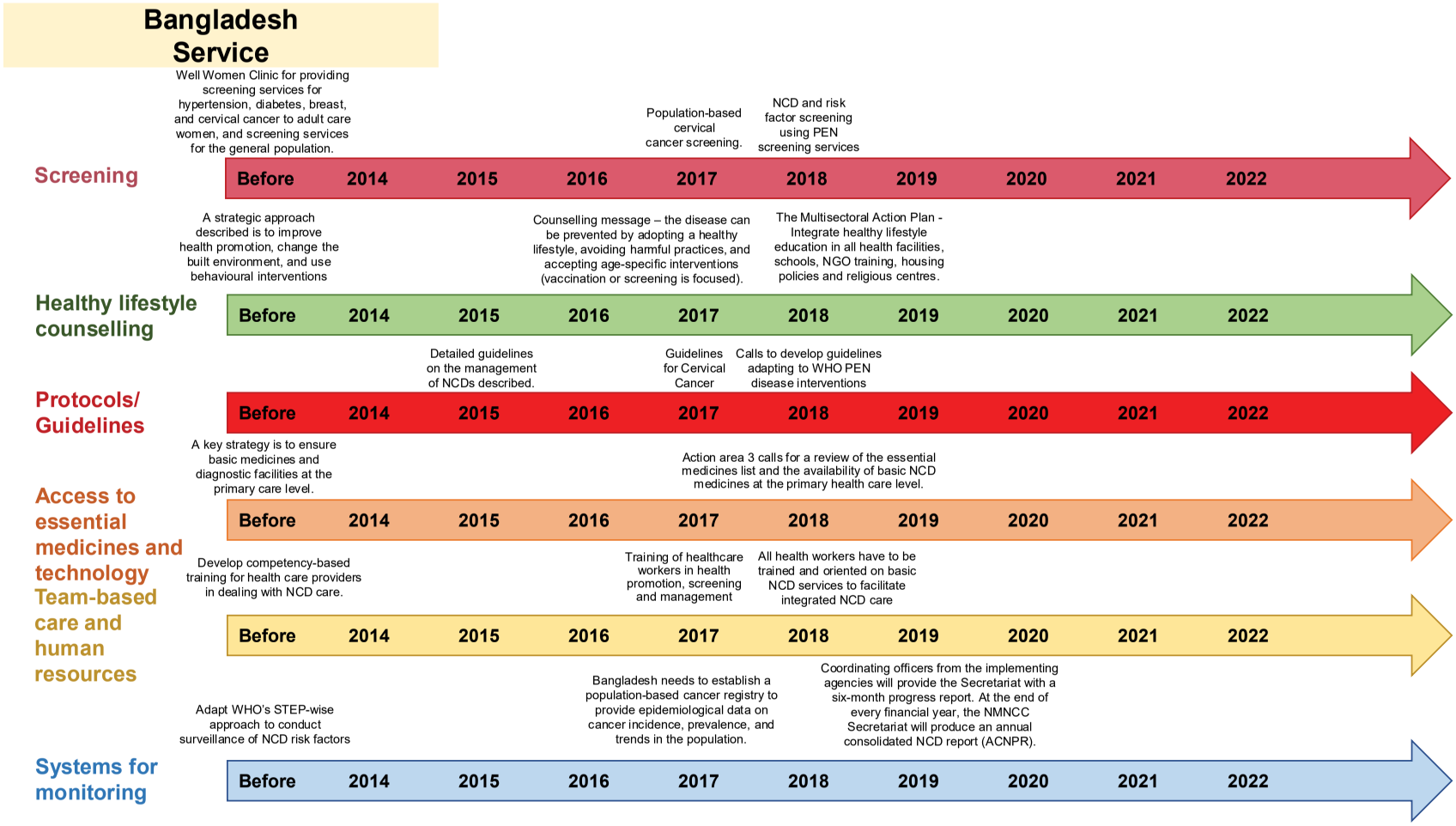
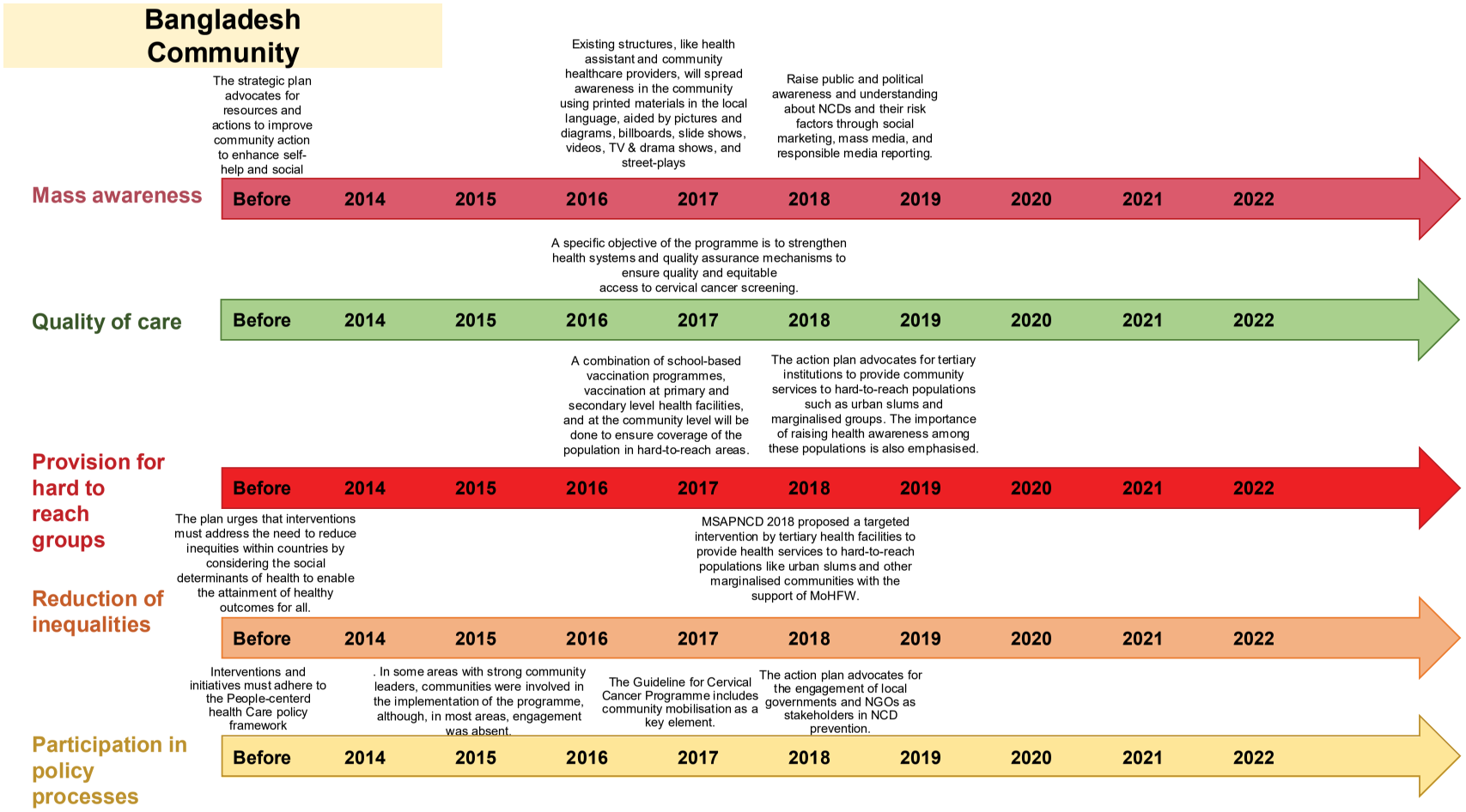
Annex 1

Timeline of policy progress in NCD service delivery through PHCs in South-East Asia countries

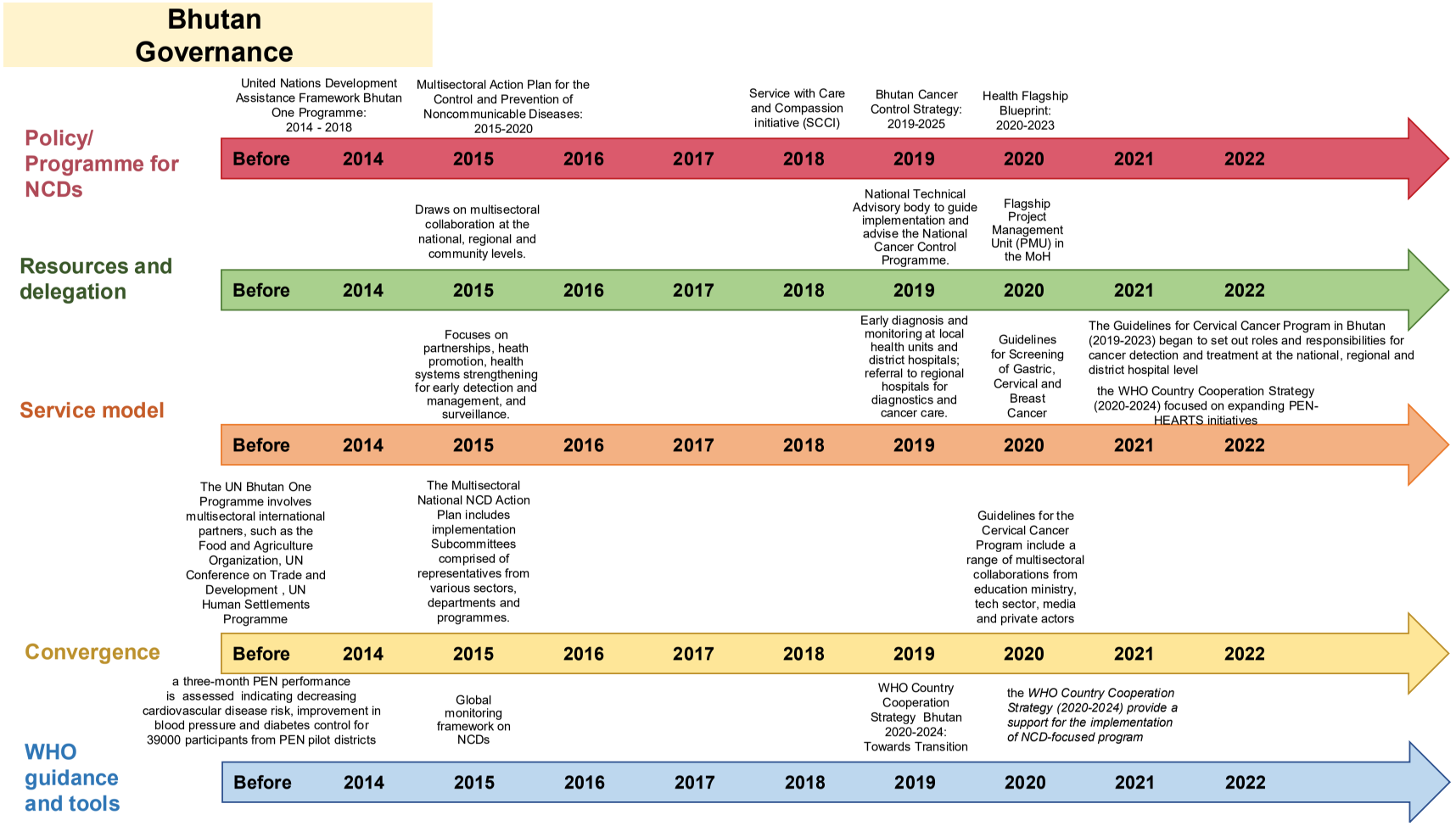
Bangladesh


Bangladesh Governance
Policy/ Programme for NCDs
Strategic Plan for Surveillance and Prevention of Non-Communicable Diseases in Bangladesh: 2011-2015
Case management desk guide for doctors
National Strategy for Prevention and Control of Cervical Cancer
Multisectoral Action Plan for the Control and Prevention of Noncommunicable Diseases: 2018-2025
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Resources and delegation
The plan advocates for the government to allocate adequate resources and ensure the optimum use of resources by surveillance partners.
The Government of Bangladesh contributes around 67% of the programme financing, with support from GAVI, WHO and UNICEF.
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Service model
Surveillance of NCDs and risk factors; health promotion and prevention of NCDs; ensuring health care services for NCDs.
Practical guidelines for early detection and management, and surveillance for doctors.
Human Papillomavirus (HPV) vaccination for adolescent girls and implementing population-based cervical cancer screening and treatment through the public delivery system.
The action plan calls for focusing on four strategic areas:
I) Advocacy, leadership and partnerships;
ii) Health promotion and risk reduction
iii) Health systems strengthening for early detection and management of NCDs and their risk factors
iv) Surveillance, monitoring and evaluation, and research
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Convergence
The integrative roles of departments, UN agencies, NGOs, and the private sectors are defined. BanNet, a collaboration of organisations for the compilation and dissemination of information on NCD surveillance, was setup.
The programme will be implemented by DGHS, DGFP, DGNM, NICRH, NCCBCS&T, MOHFW and involve stakeholders at multiple levels, including tertiary care hospitals, secondary and primary care hospitals, and private hospitals.
The Multisectoral National NCD Action Plan includes implementation subcommittees comprised of representatives from various sectors, departments, and programmes.
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
WHO guidance and tools
The strategic plan was developed with WHO support.
WHO provided technical and financial support for programme.
The document was prepared with the technical support of the WHO country office.
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022

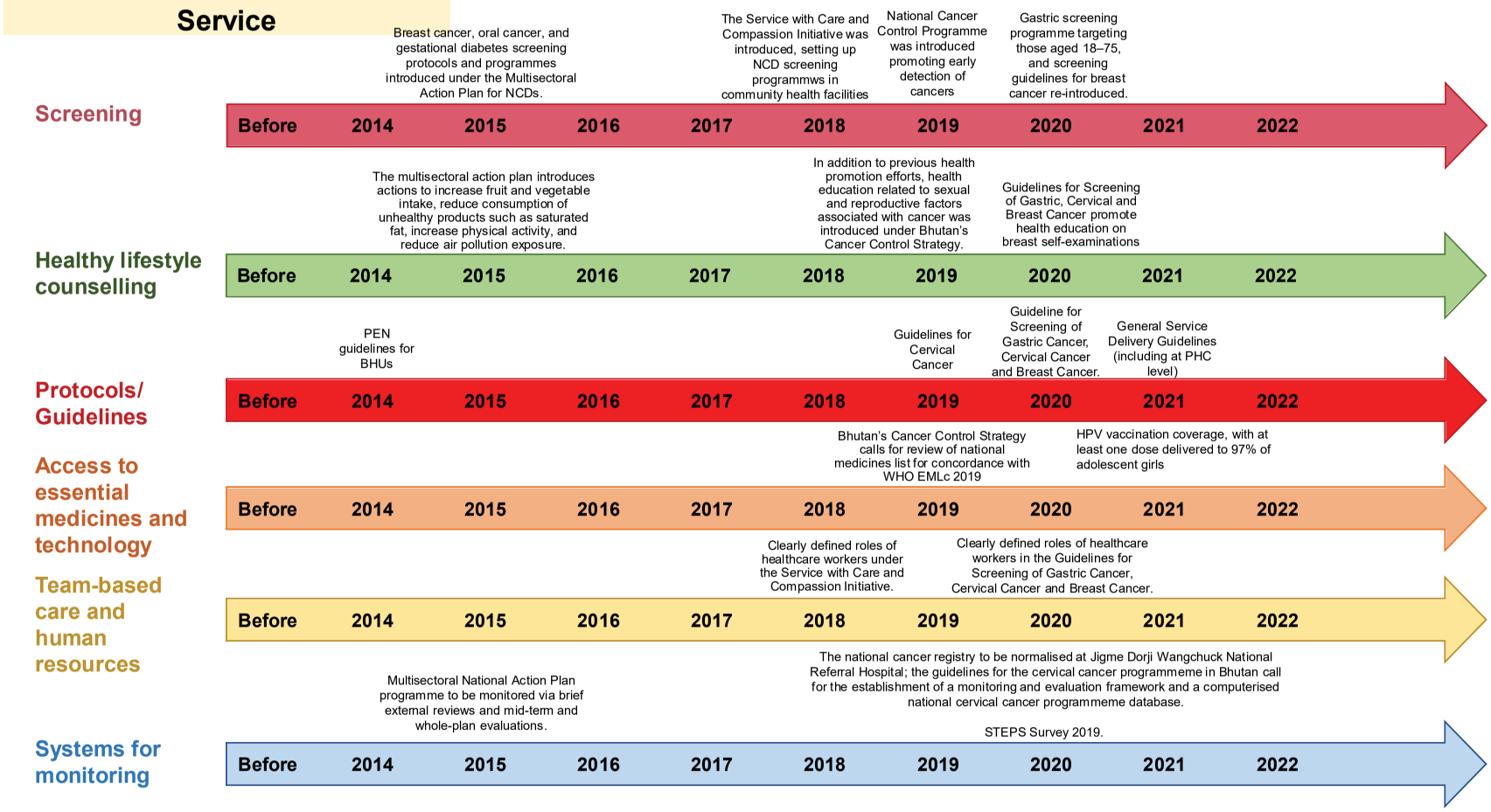

Bangladesh
Service
Well Women Clinic for providing screening services for hypertension, diabetes, breast, and cervical cancer to adult care women, and screening services for the general population.
Population-based cervical cancer screening.
NCD and risk factor screening using PEN screening services
Screening
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
A strategic approach described is to improve health promotion, change the built environment, and use behavioural interventions
Counselling message – the disease can be prevented by adopting a healthy lifestyle, avoiding harmful practices, and accepting age-specific interventions (vaccination or screening is focused).
The Multisectoral Action Plan - Integrate healthy lifestyle education in all health facilities, schools, NGO training, housing policies and religious centres.
Healthy lifestyle counselling
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Detailed guidelines on the management of NCDs described.
Guidelines for Cervical Cancer
Calls to develop guidelines adapting to WHO PEN disease interventions
Protocols/ Guidelines
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
A key strategy is to ensure basic medicines and diagnostic facilities at the primary care level.
Action area 3 calls for a review of the essential medicines list and the availability of basic NCD medicines at the primary health care level.
Access to essential medicines and technology
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Develop competency-based training for health care providers in dealing with NCD care.
Training of healthcare workers in health promotion, screening and management
All health workers have to be trained and oriented on basic NCD services to facilitate integrated NCD care
Team-based care and human resources
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Adapt WHO's STEP-wise approach to conduct surveillance of NCD risk factors
Bangladesh needs to establish a population-based cancer registry to provide epidemiological data on cancer incidence, prevalence, and trends in the population.
Coordinating officers from the implementing agencies will provide the Secretariat with a six-month progress report. At the end of every financial year, the NMNCC Secretariat will produce an annual consolidated NCD report (ACNPR).
Systems for monitoring
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022


Bangladesh
Community
The strategic plan advocates for resources and actions to improve community action to enhance self-help and social
Existing structures, like health assistant and community healthcare providers, will spread awareness in the community using printed materials in the local language, aided by pictures and diagrams, billboards, slide shows, videos, TV & drama shows, and street-plays
Raise public and political awareness and understanding about NCDs and their risk factors through social marketing, mass media, and responsible media reporting.
Mass awareness
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
A specific objective of the programme is to strengthen health systems and quality assurance mechanisms to ensure quality and equitable access to cervical cancer screening.
Quality of care
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
A combination of school-based vaccination programmes, vaccination at primary and secondary level health facilities, and at the community level will be done to ensure coverage of the population in hard-to-reach areas.
The action plan advocates for tertiary institutions to provide community services to hard-to-reach populations such as urban slums and marginalised groups. The importance of raising health awareness among these populations is also emphasised.
Provision for hard to reach groups
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
The plan urges that interventions must address the need to reduce inequities within countries by considering the social determinants of health to enable the attainment of healthy outcomes for all.
MSAPNCD 2018 proposed a targeted intervention by tertiary health facilities to provide health services to hard-to-reach populations like urban slums and other marginalised communities with the support of MoHFW.
Reduction of inequalities
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Interventions and initiatives must adhere to the People-centerd health Care policy framework
. In some areas with strong community leaders, communities were involved in the implementation of the programme, although, in most areas, engagement was absent.
The Guideline for Cervical Cancer Programme includes community mobilisation as a key element.
The action plan advocates for the engagement of local governments and NGOs as stakeholders in NCD prevention.
Participation in policy processes
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022

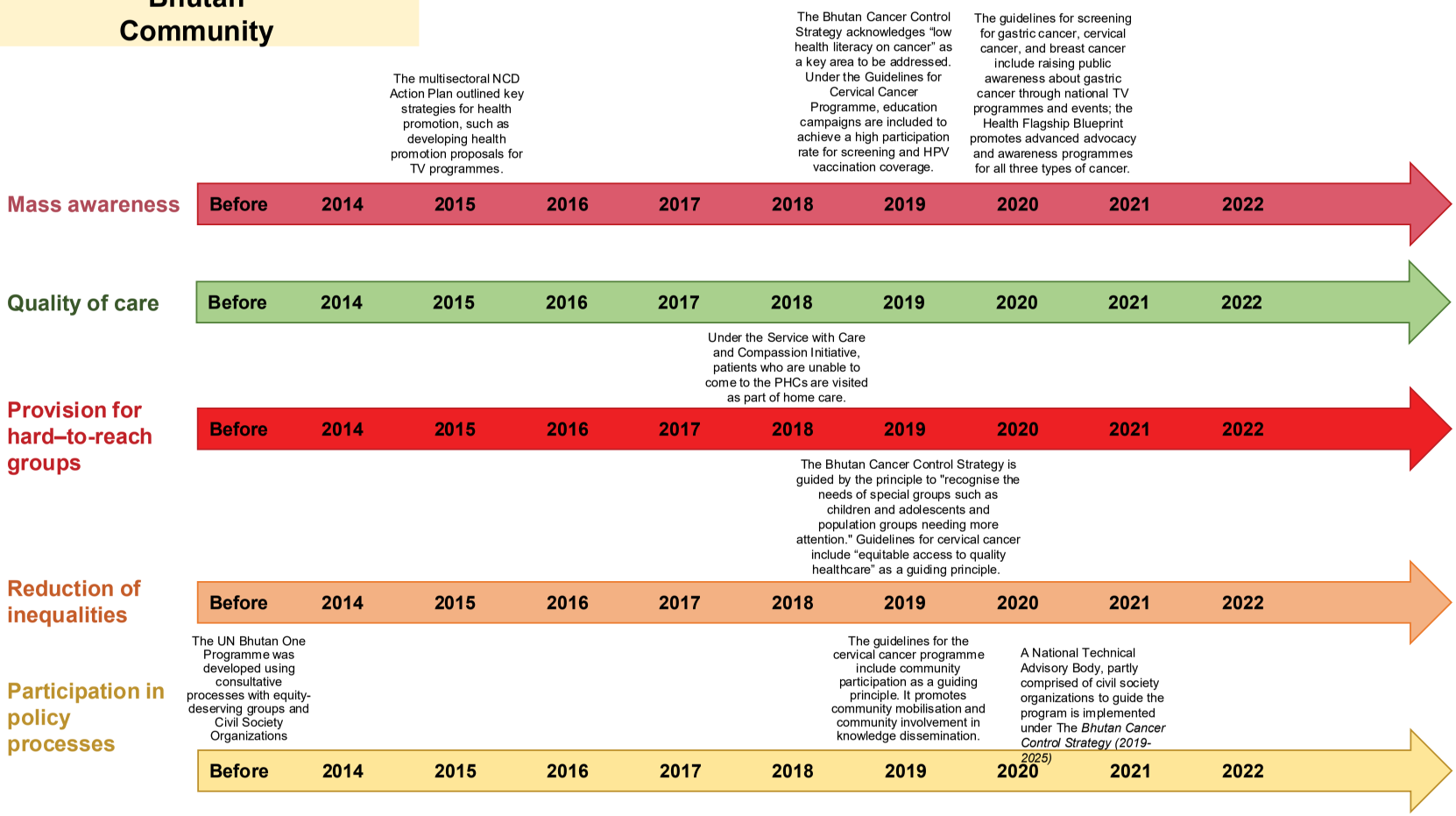
Bhutan


Bhutan Governance
Policy/ Programme for NCDs
United Nations Development Assistance Framework Bhutan One Programme: 2014 - 2018
Multisectoral Action Plan for the Control and Prevention of Noncommunicable Diseases: 2015-2020
Service with Care and Compassion initiative (SCCI)
Bhutan Cancer Control Strategy: 2019-2025
Health Flagship Blueprint: 2020-2023
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Resources and delegation
Draws on multisectoral collaboration at the national, regional and community levels.
National Technical Advisory body to guide implementation and advise the National Cancer Control Programme.
Flagship Project Management Unit (PMU) in the MoH
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Service model
Focuses on partnerships, heath promotion, health systems strengthening for early detection and management, and surveillance.
Early diagnosis and monitoring at local health units and district hospitals; referral to regional hospitals for diagnostics and cancer care.
Guidelines for Screening of Gastric, Cervical and Breast Cancer
The Guidelines for Cervical Cancer Program in Bhutan (2019-2023) began to set out roles and responsibilities for cancer detection and treatment at the national, regional and district hospital level
the WHO Country Cooperation Strategy (2020-2024) focused on expanding PEN-HEARTS initiatives
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Convergence
The UN Bhutan One Programme involves multisectoral international partners, such as the Food and Agriculture Organization, UN Conference on Trade and Development , UN Human Settlements Programme
The Multisectoral National NCD Action Plan includes implementation Subcommittees comprised of representatives from various sectors, departments and programmes.
Guidelines for the Cervical Cancer Program include a range of multisectoral collaborations from education ministry, tech sector, media and private actors
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
WHO guidance and tools
a three-month PEN performance is assessed indicating decreasing cardiovascular disease risk, improvement in blood pressure and diabetes control for 39000 participants from PEN pilot districts
Global monitoring framework on NCDs
WHO Country Cooperation Strategy Bhutan 2020-2024: Towards Transition
the *WHO Country Cooperation Strategy (2020-2024) provide a support for the implementation of NCD-focused program*
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022

Bhutan Service

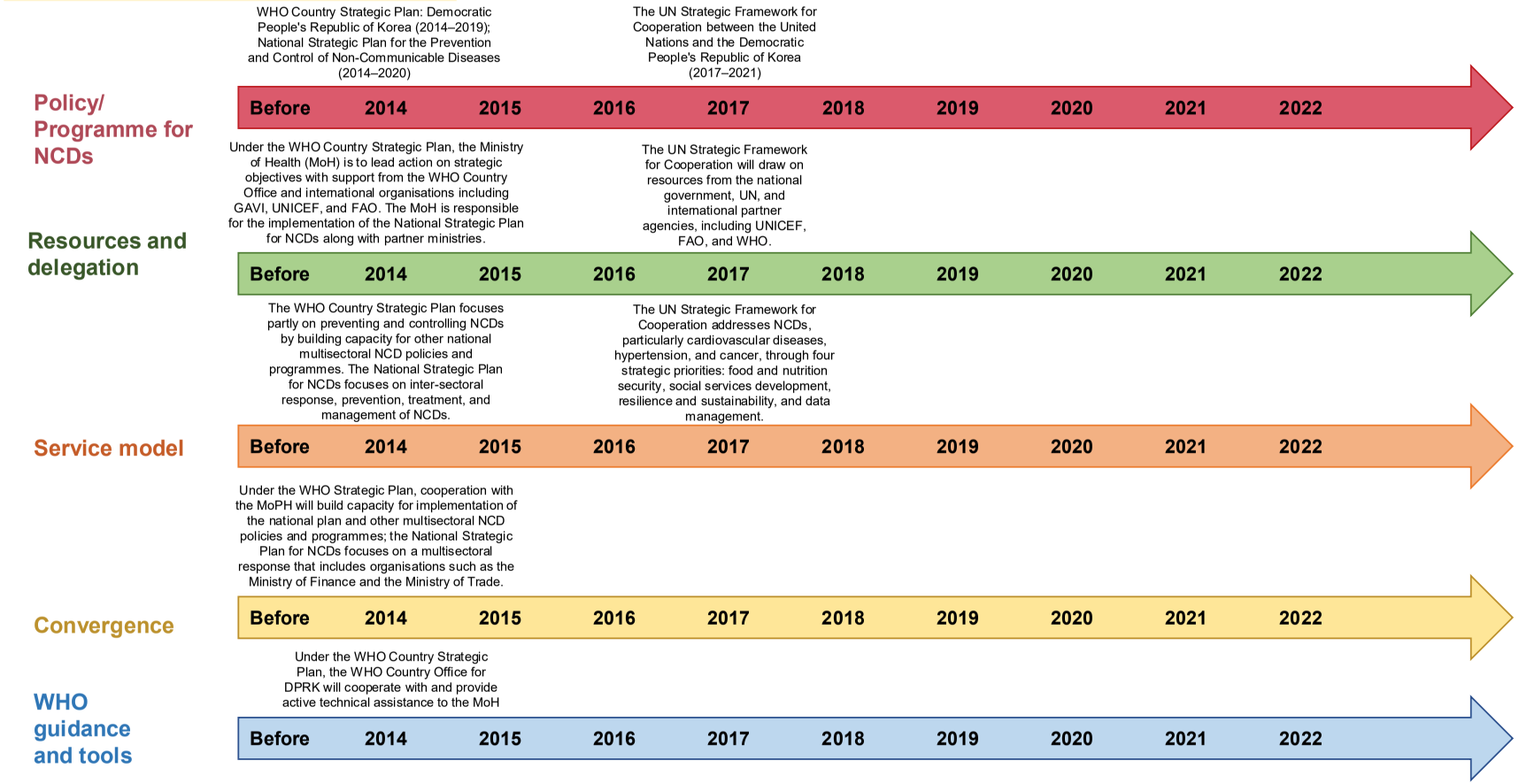


Bhutan Community

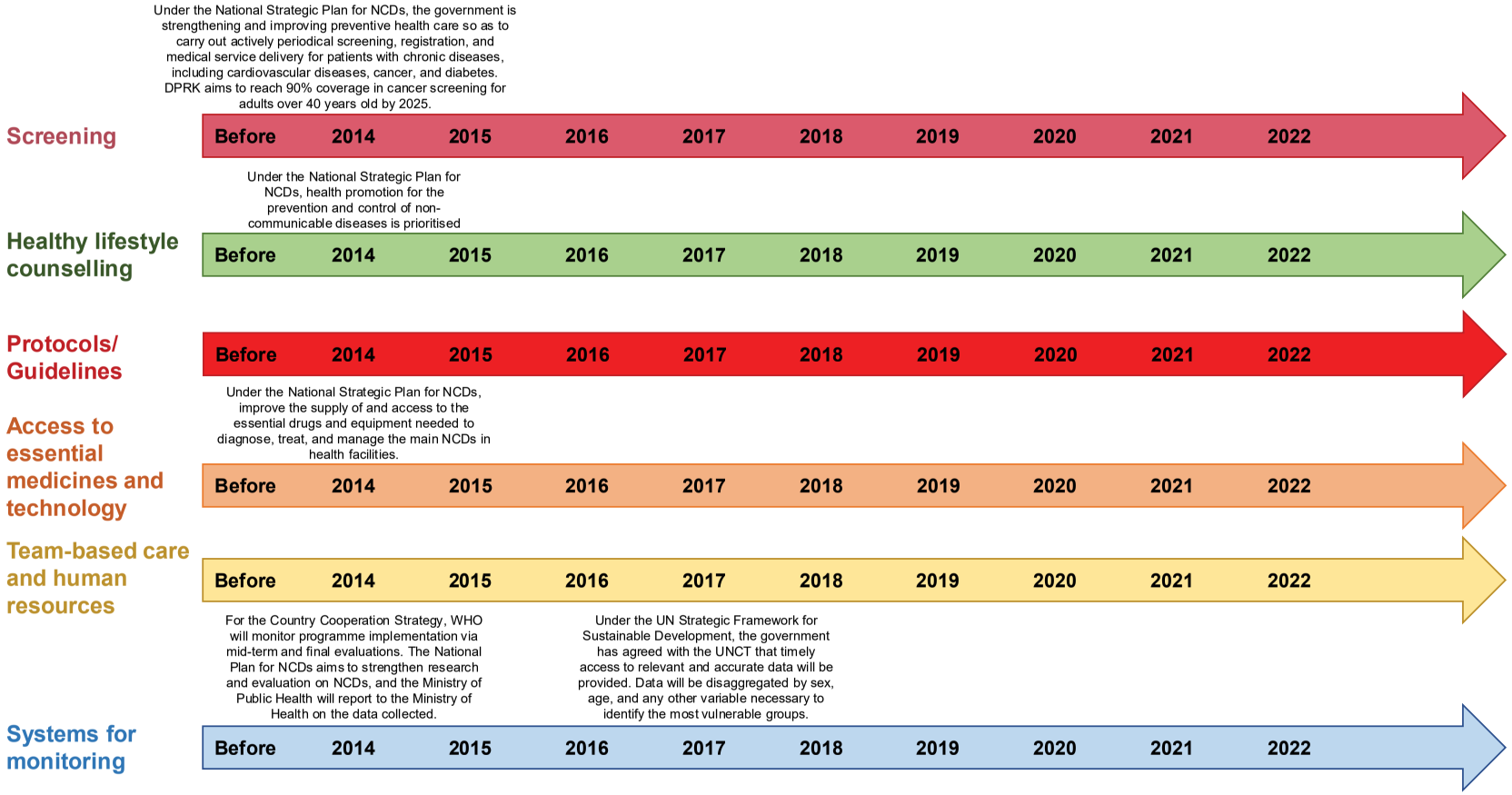


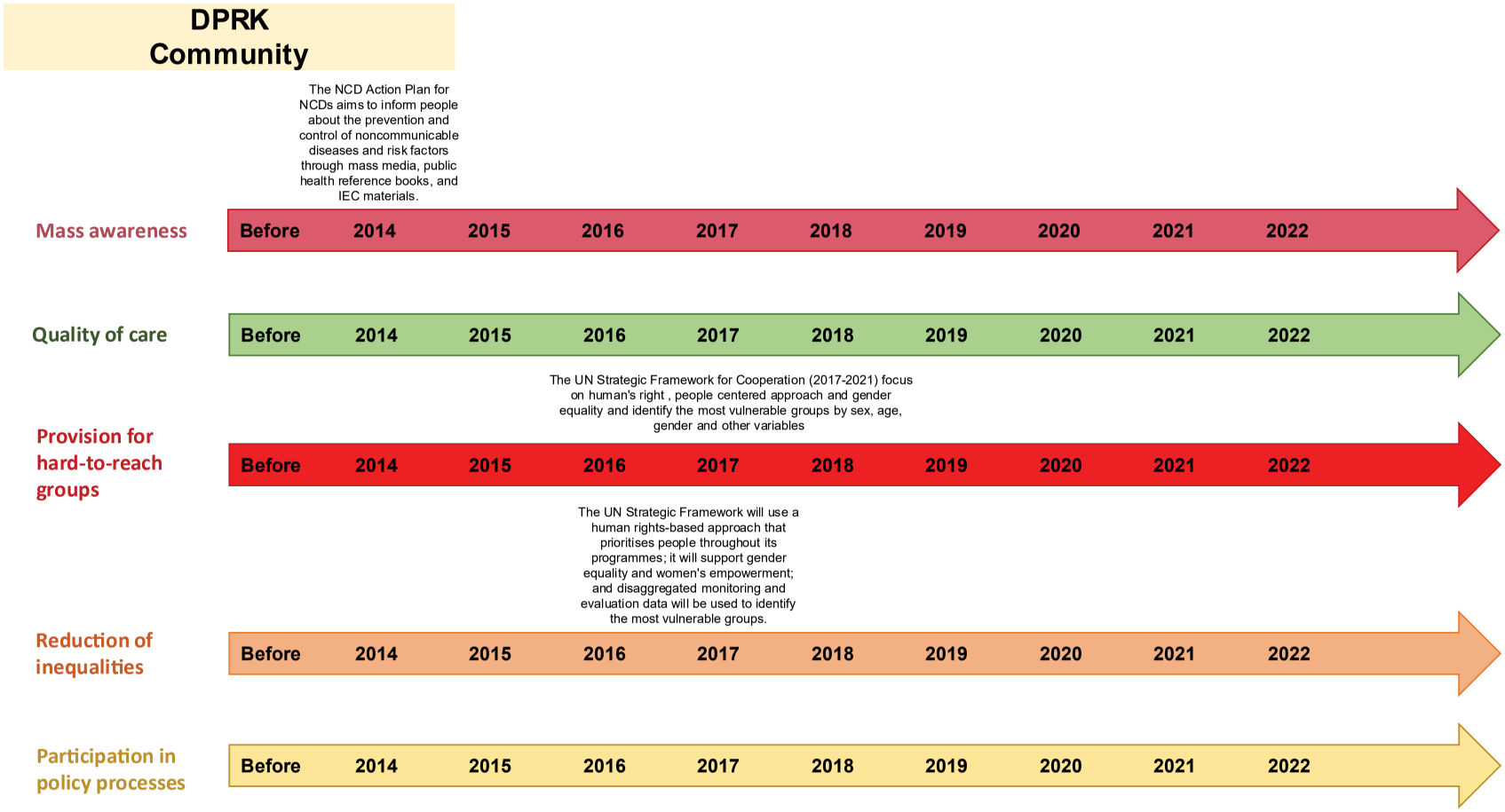
Democratic People's Republic of Korea

DPRK Governance

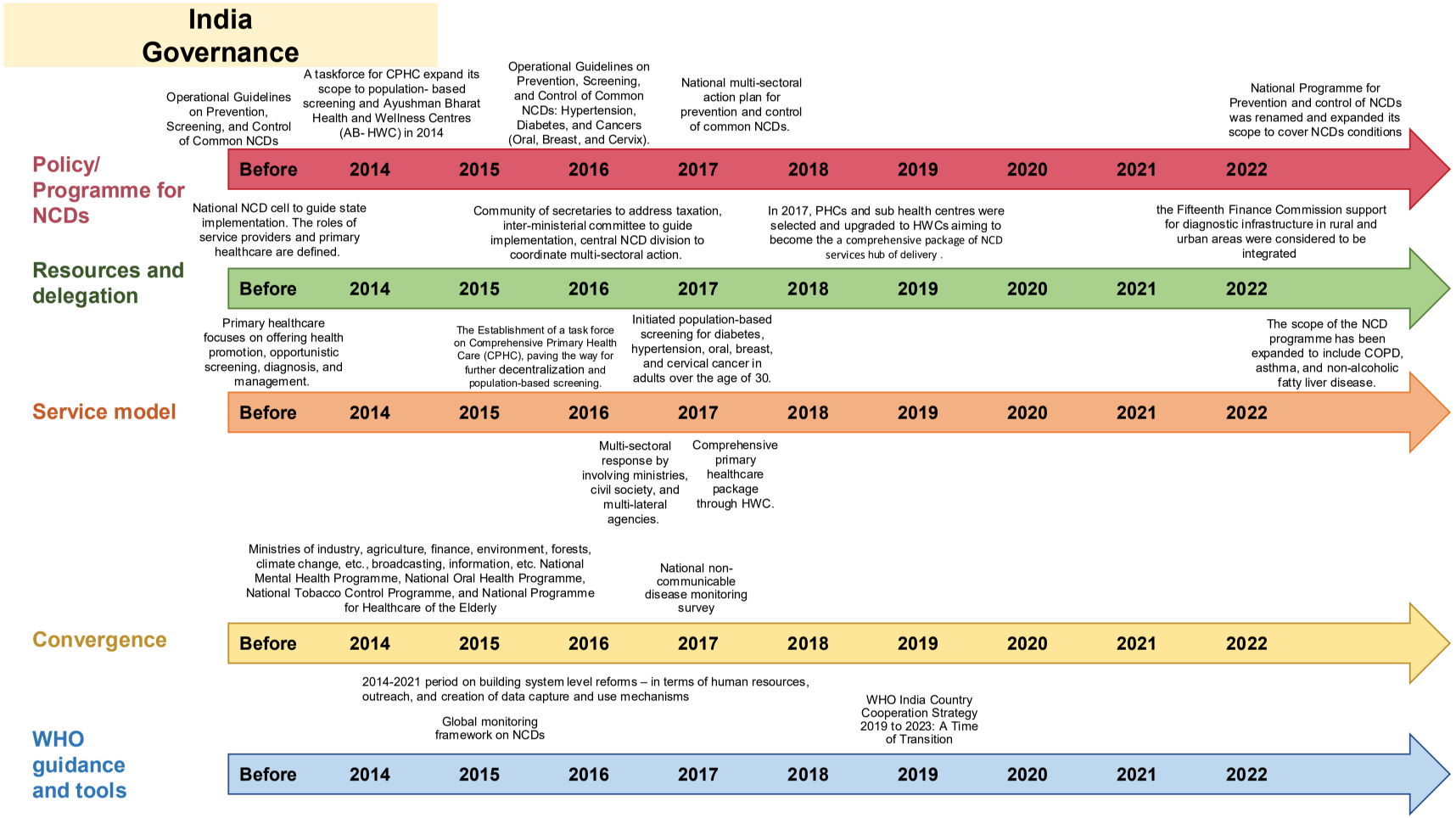


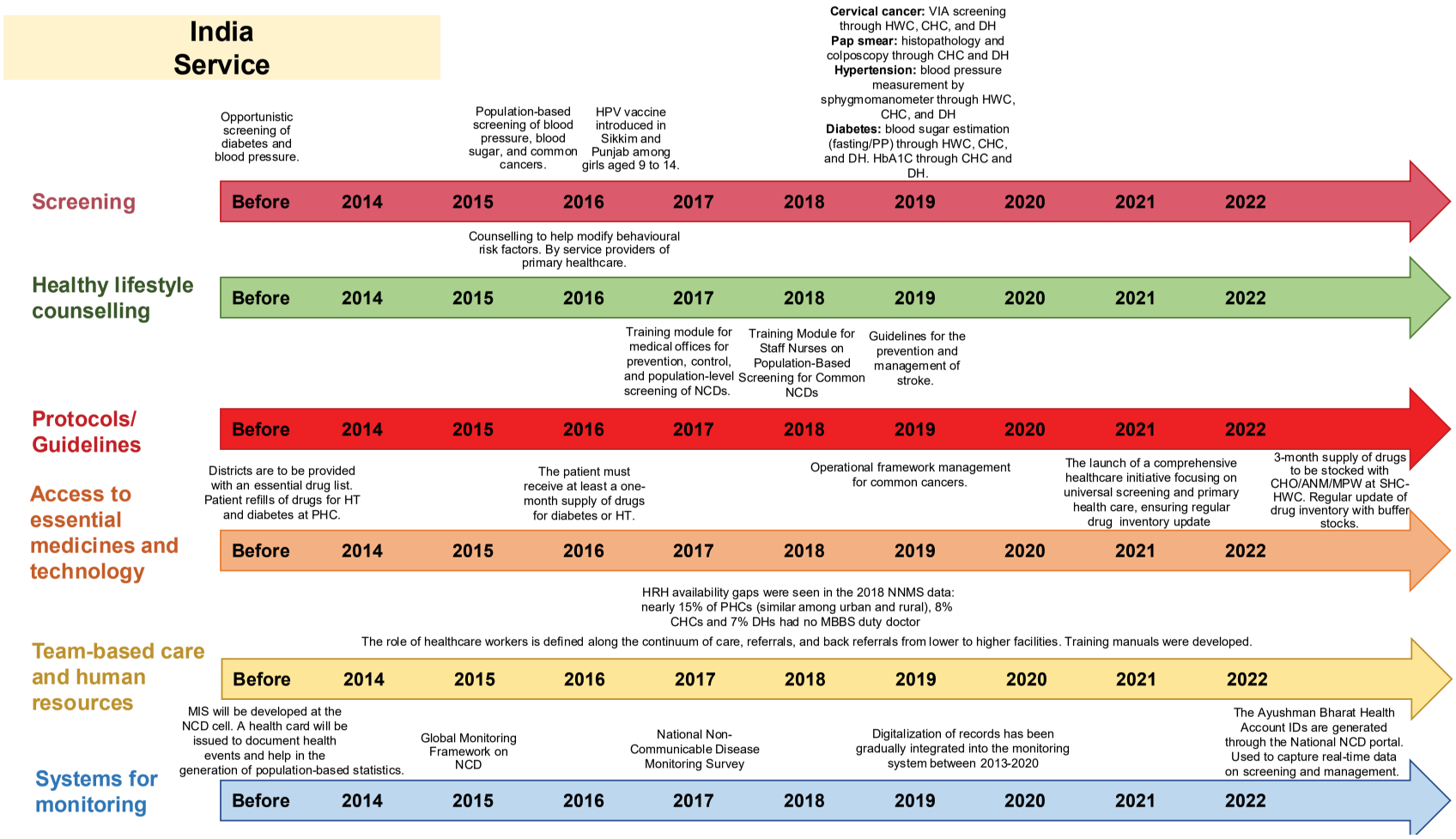
DPRK
Service



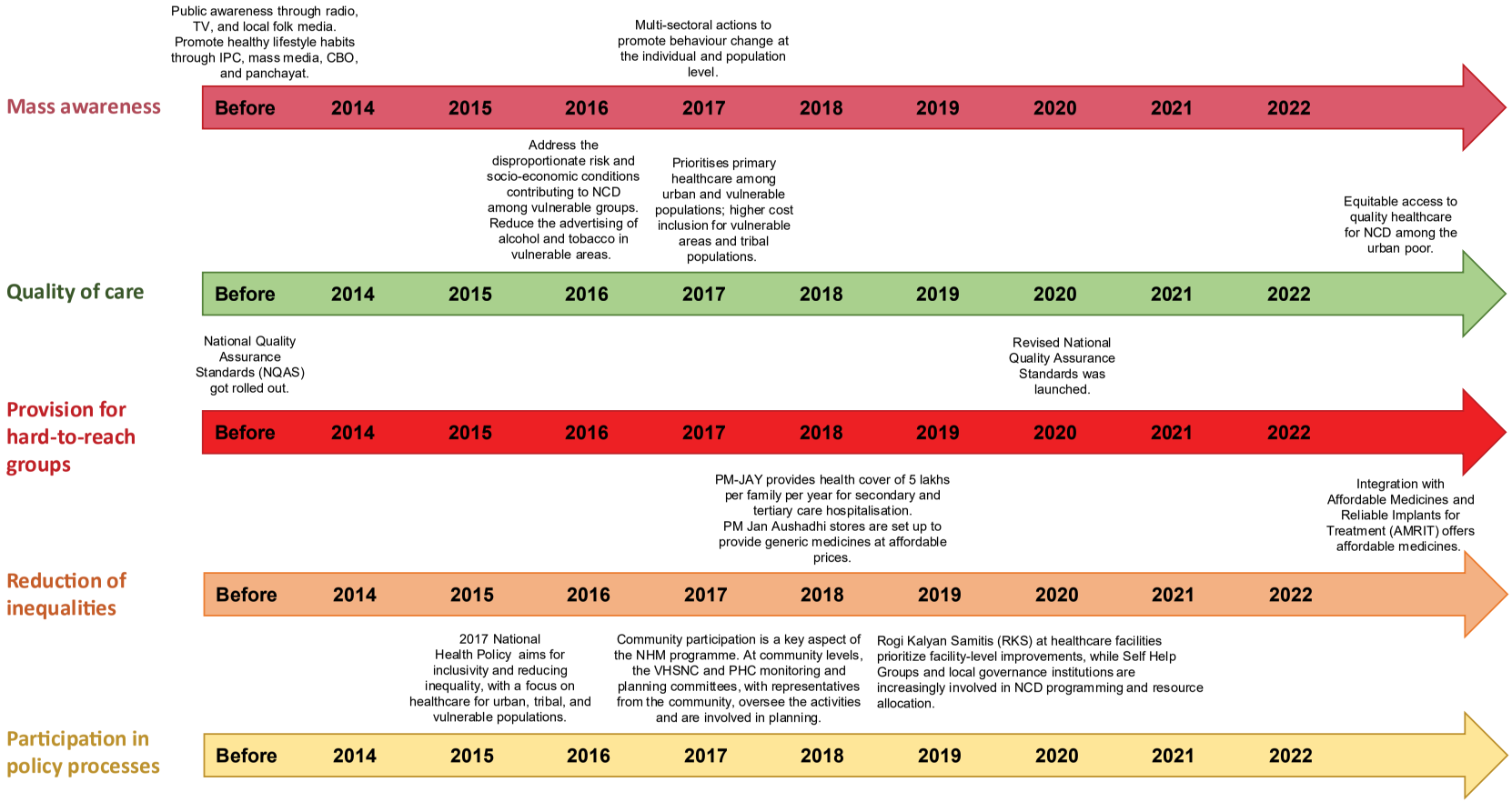

DPRK
Community
The NCD Action Plan for NCDs aims to inform people about the prevention and control of noncommunicable diseases and risk factors through mass media, public health reference books, and IEC materials.
Mass awareness
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Quality of care
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
The UN Strategic Framework for Cooperation (2017-2021) focus on human's right , people centered approach and gender equality and identify the most vulnerable groups by sex, age, gender and other variables
Provision for hard-to-reach groups
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
The UN Strategic Framework will use a human rights-based approach that prioritises people throughout its programmes; it will support gender equality and women's empowerment; and disaggregated monitoring and evaluation data will be used to identify the most vulnerable groups.
Reduction of inequalities
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Participation in policy processes
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022

India


India
Governance
Operational Guidelines on Prevention, Screening, and Control of Common NCDs
A taskforce for CPHC expand its scope to population- based screening and Ayushman Bharat Health and Wellness Centres (AB- HWC) in 2014
Operational Guidelines on Prevention, Screening, and Control of Common NCDs: Hypertension, Diabetes, and Cancers (Oral, Breast, and Cervix).
National multi-sectoral action plan for prevention and control of common NCDs.
National Programme for Prevention and control of NCDs was renamed and expanded its scope to cover NCDs conditions
Policy/ Programme for NCDs
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
National NCD cell to guide state implementation. The roles of service providers and primary healthcare are defined.
Community of secretaries to address taxation, inter-ministerial committee to guide implementation, central NCD division to coordinate multi-sectoral action.
In 2017, PHCs and sub health centres were selected and upgraded to HWCs aiming to become the a comprehensive package of NCD services hub of delivery .
the Fifteenth Finance Commission support for diagnostic infrastructure in rural and urban areas were considered to be integrated
Resources and delegation
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Primary healthcare focuses on offering health promotion, opportunistic screening, diagnosis, and management.
The Establishment of a task force on Comprehensive Primary Health Care (CPHC), paving the way for further decentralization and population-based screening.
Initiated population-based screening for diabetes, hypertension, oral, breast, and cervical cancer in adults over the age of 30.
The scope of the NCD programme has been expanded to include COPD, asthma, and non-alcoholic fatty liver disease.
Service model
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Multi-sectoral response by involving ministries, civil society, and multi-lateral agencies.
Comprehensive primary healthcare package through HWC.
Ministries of industry, agriculture, finance, environment, forests, climate change, etc., broadcasting, information, etc. National Mental Health Programme, National Oral Health Programme, National Tobacco Control Programme, and National Programme for Healthcare of the Elderly
National non-communicable disease monitoring survey
Convergence
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
2014-2021 period on building system level reforms – in terms of human resources, outreach, and creation of data capture and use mechanisms
Global monitoring framework on NCDs
WHO India Country Cooperation Strategy 2019 to 2023: A Time of Transition
WHO guidance and tools
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022

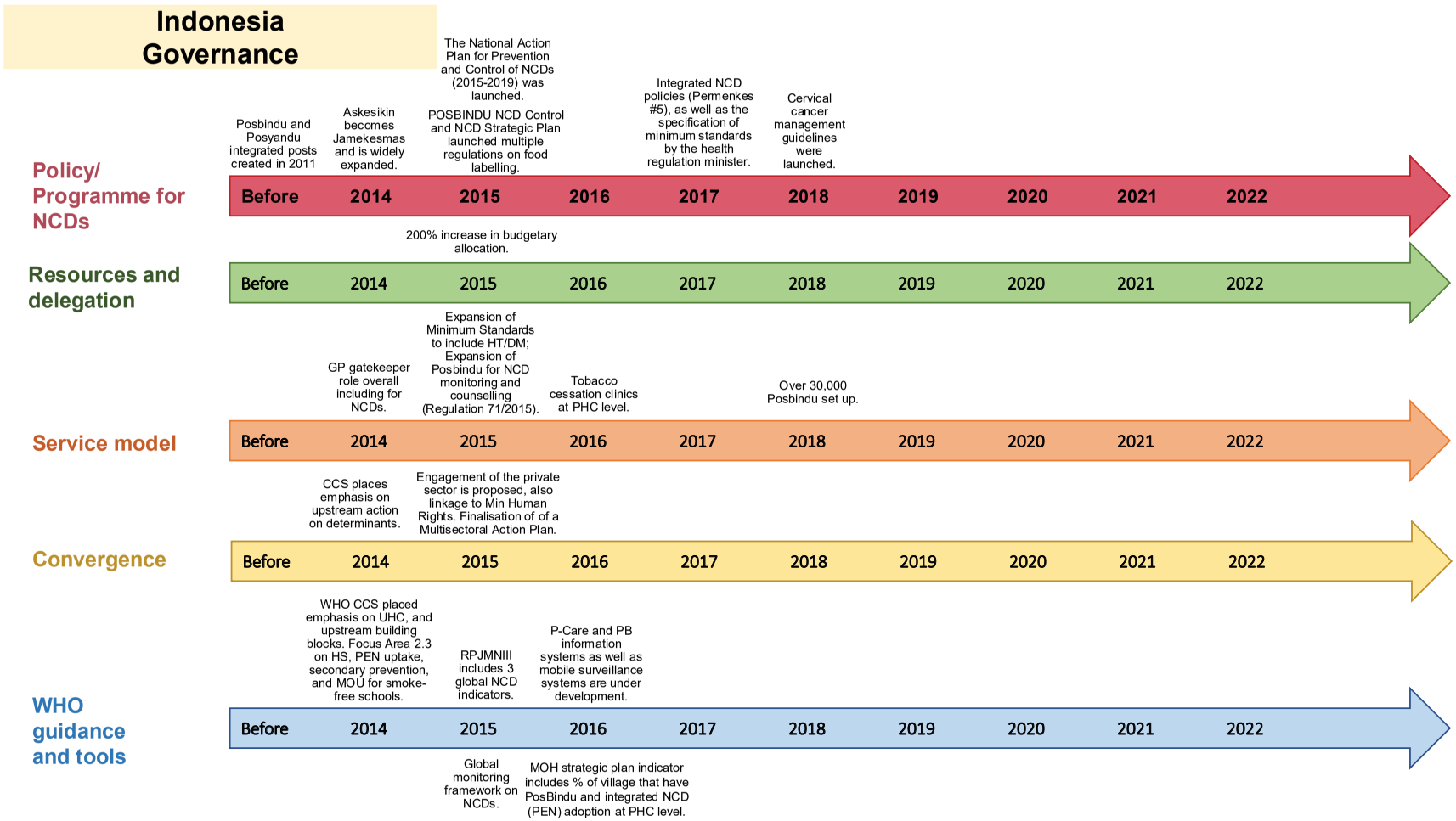

India
Service
Opportunistic screening of diabetes and blood pressure.
Population-based screening of blood pressure, blood sugar, and common cancers.
HPV vaccine introduced in Sikkim and Punjab among girls aged 9 to 14.
Cervical cancer: VIA screening through HWC, CHC, and DH
Pap smear: histopathology and colposcopy through CHC and DH
Hypertension: blood pressure measurement by sphygmomanometer through HWC, CHC, and DH
Diabetes: blood sugar estimation (fasting/PP) through HWC, CHC, and DH. HbA1C through CHC and DH.
Screening
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Counselling to help modify behavioural risk factors. By service providers of primary healthcare.
Healthy lifestyle counselling
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Training module for medical offices for prevention, control, and population-level screening of NCDs.
Training Module for Staff Nurses on Population-Based Screening for Common NCDs
Guidelines for the prevention and management of stroke.
Protocols/ Guidelines
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Districts are to be provided with an essential drug list. Patient refills of drugs for HT and diabetes at PHC.
The patient must receive at least a one-month supply of drugs for diabetes or HT.
Operational framework management for common cancers.
The launch of a comprehensive healthcare initiative focusing on universal screening and primary health care, ensuring regular drug inventory update
3-month supply of drugs to be stocked with CHO/ANM/MPW at SHC-HWC. Regular update of drug inventory with buffer stocks.
Access to essential medicines and technology
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
HRH availability gaps were seen in the 2018 NNMS data: nearly 15% of PHCs (similar among urban and rural), 8% CHCs and 7% DHs had no MBBS duty doctor
The role of healthcare workers is defined along the continuum of care, referrals, and back referrals from lower to higher facilities. Training manuals were developed.
Team-based care and human resources
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
MIS will be developed at the NCD cell. A health card will be issued to document health events and help in the generation of population-based statistics.
Global Monitoring Framework on NCD
National Non-Communicable Disease Monitoring Survey
Digitalization of records has been gradually integrated into the monitoring system between 2013-2020
The Ayushman Bharat Health Account IDs are generated through the National NCD portal. Used to capture real-time data on screening and management.
Systems for monitoring
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022

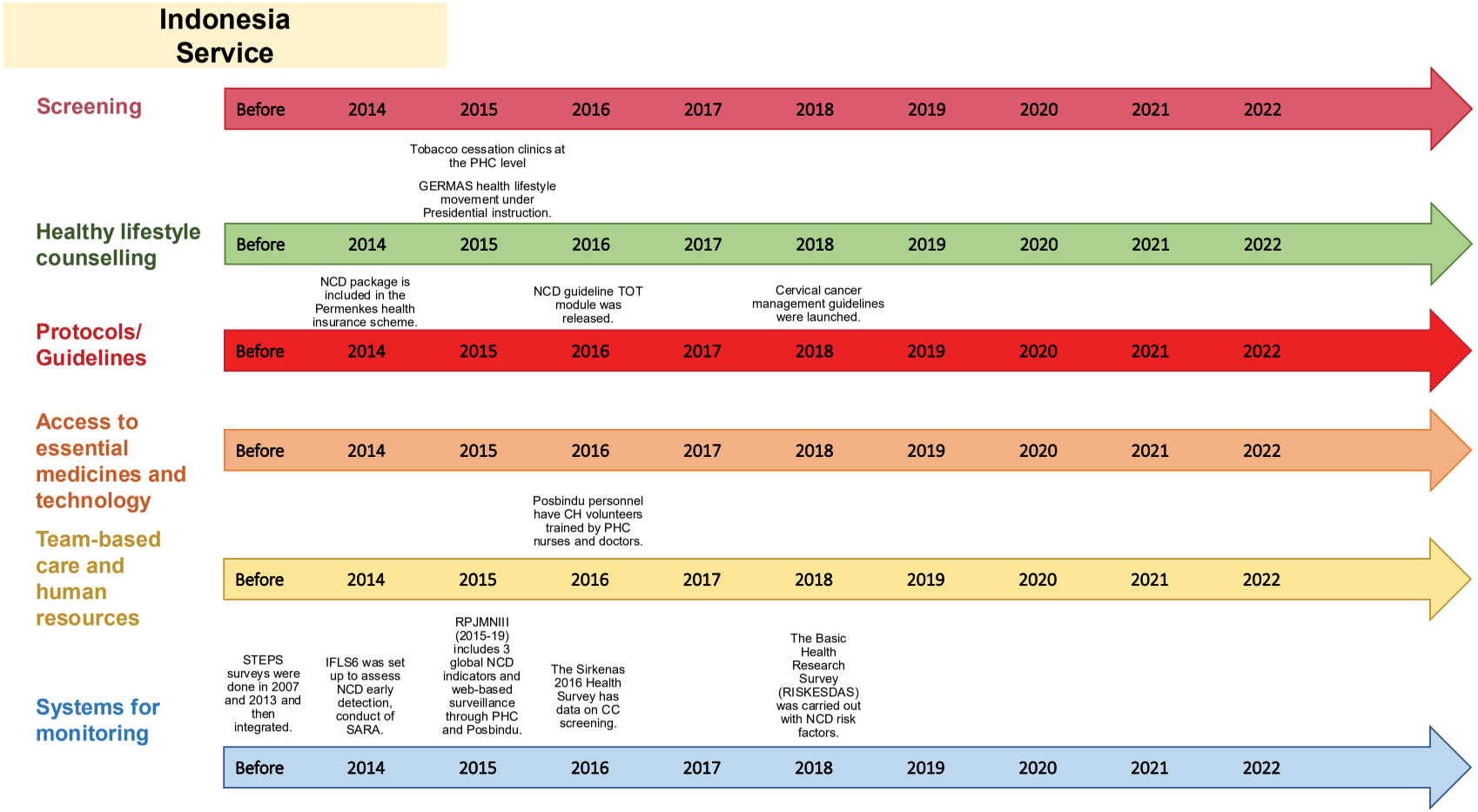
India
Community

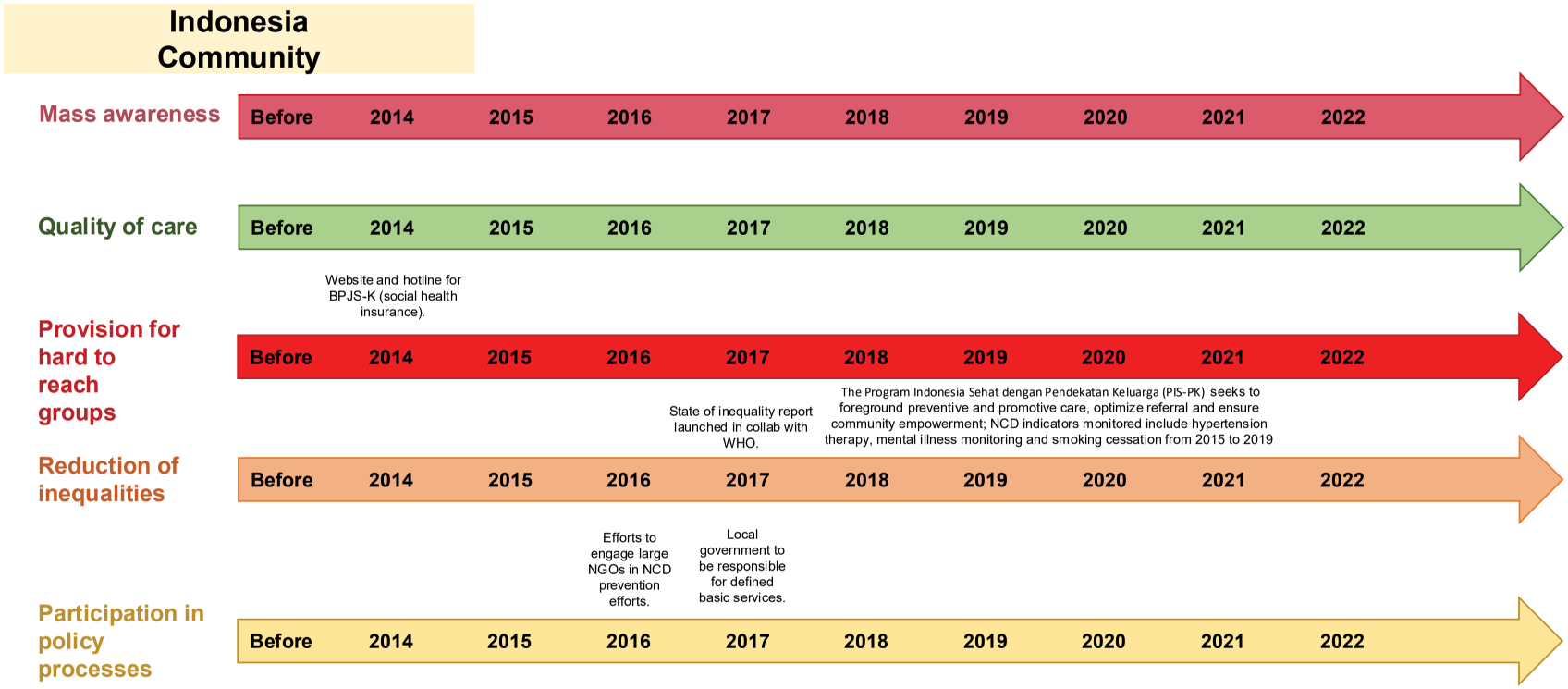


Indonesia

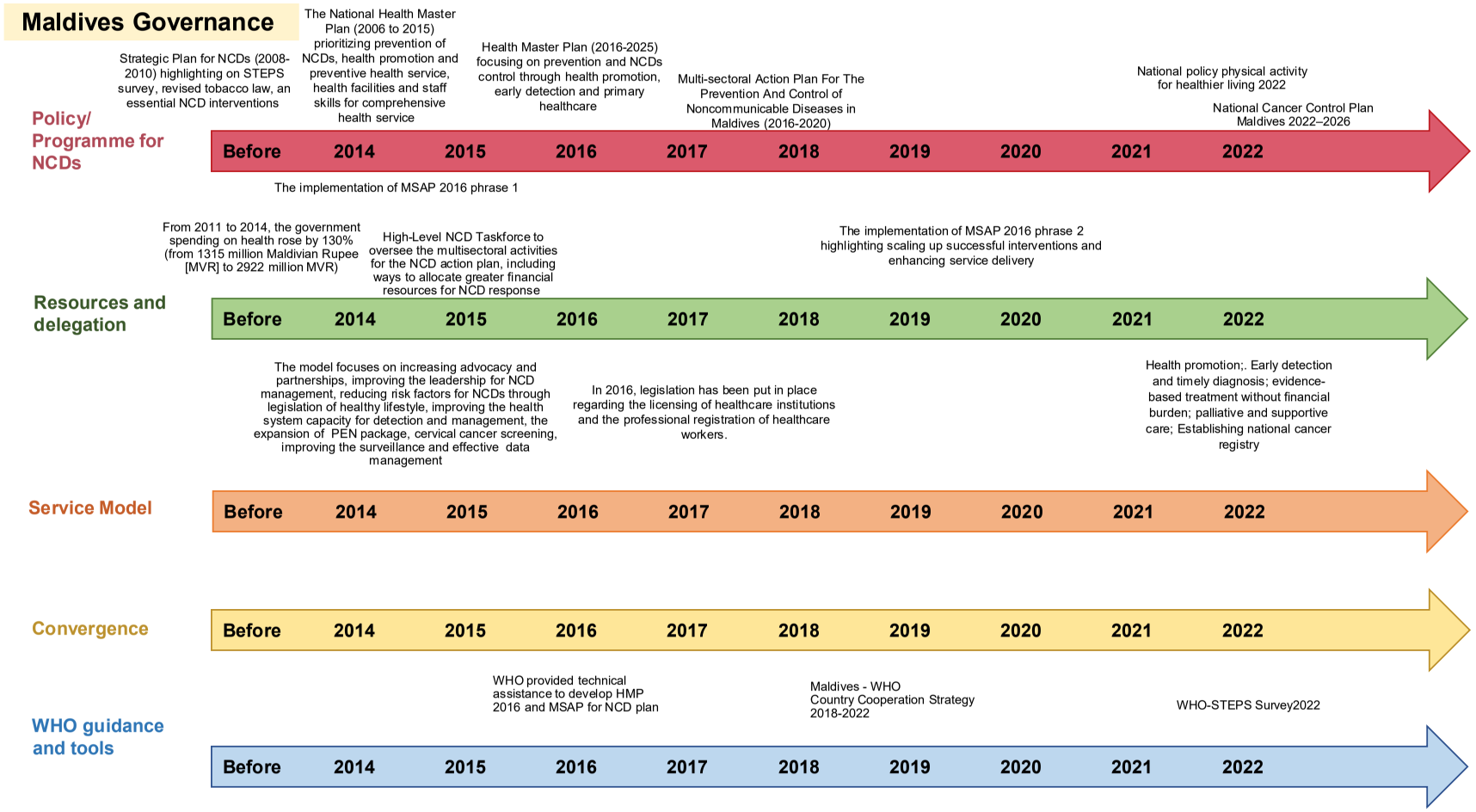
Indonesia Governance

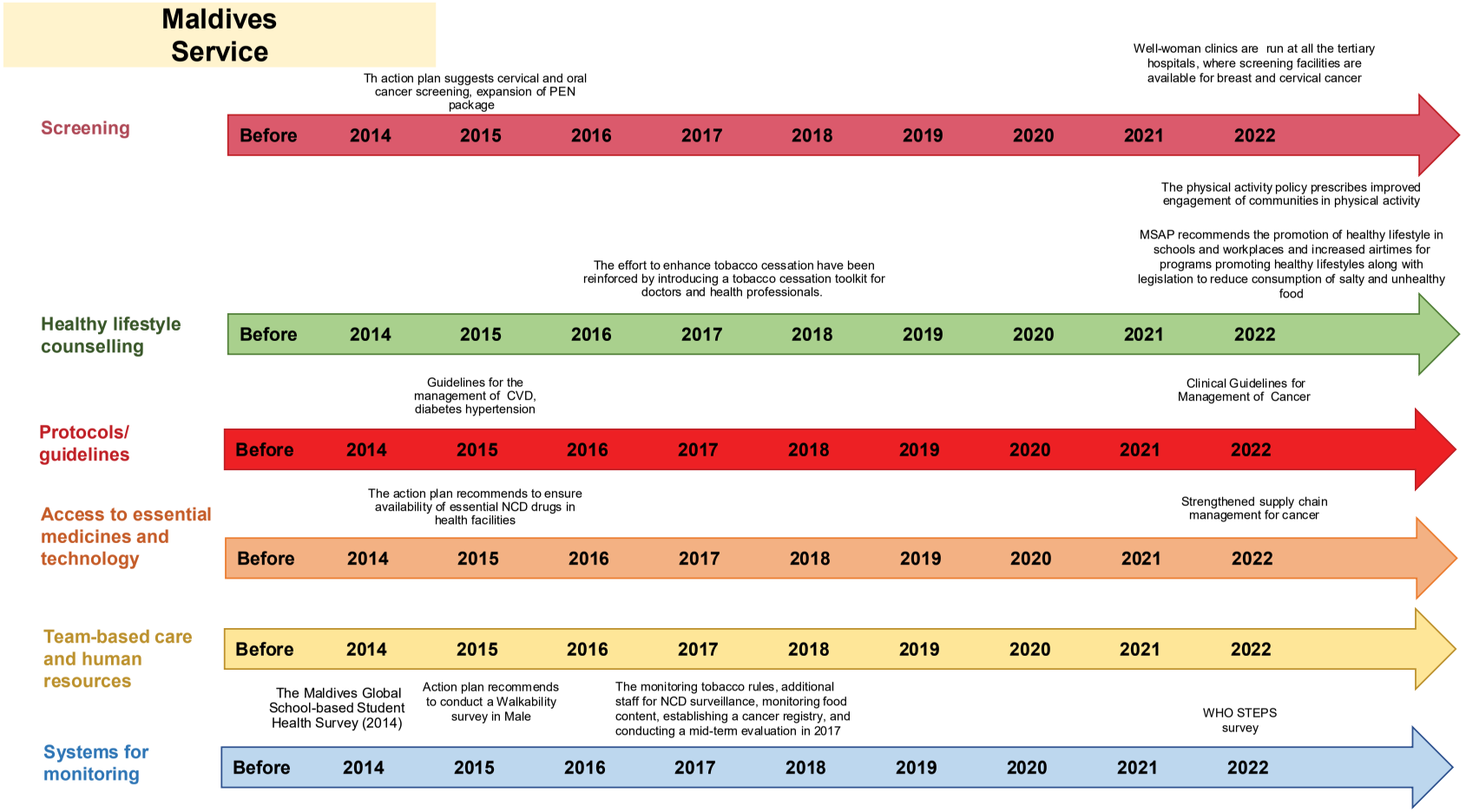


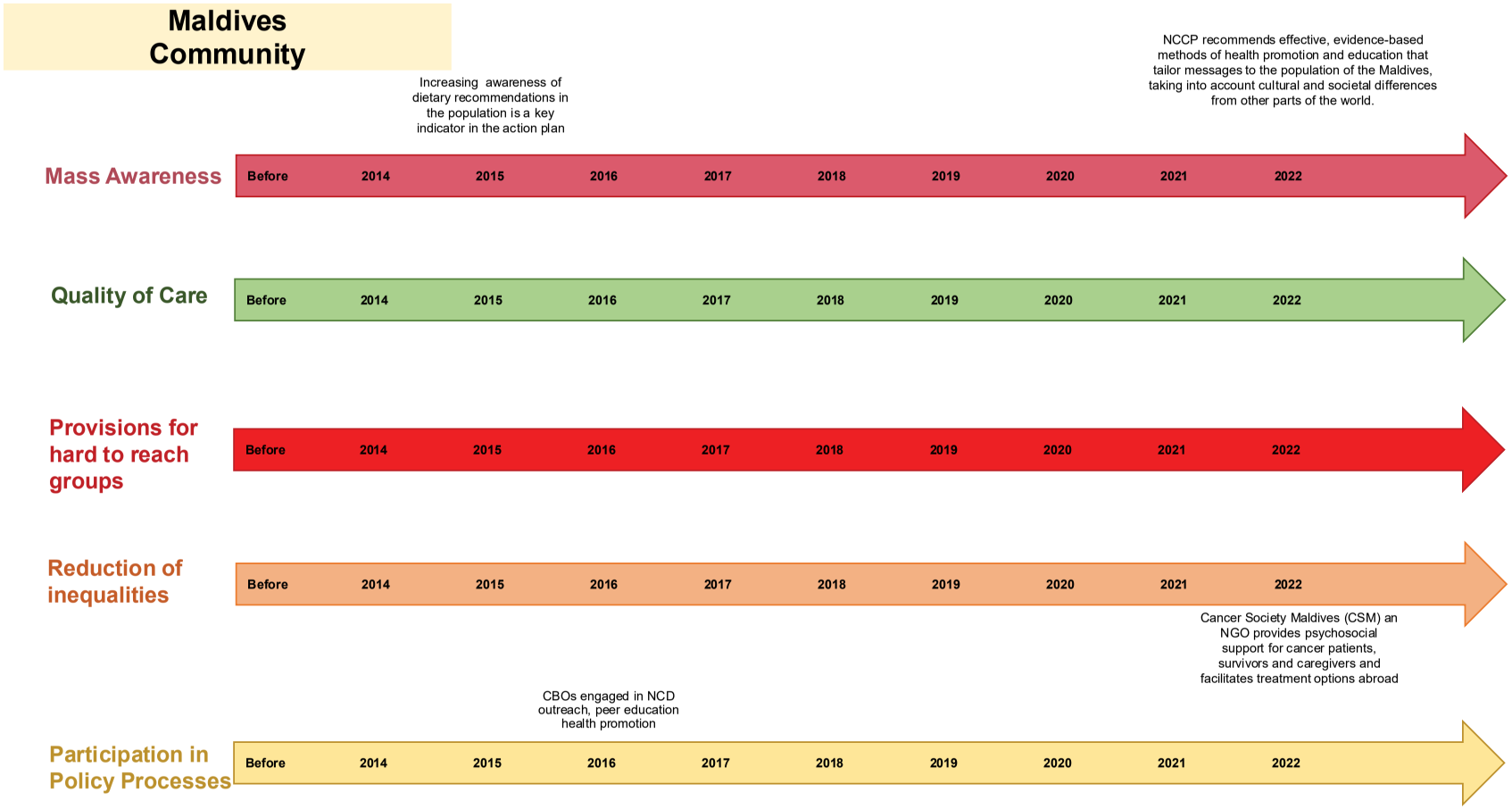

Indonesia
Service
Screening
Before
2014
2015
2016
2017
2018
2019
2020
2021
2022
Tobacco cessation clinics at the PHC level
GERMAS health lifestyle movement under Presidential instruction.
Healthy lifestyle counselling
NCD package is included in the Permenkes health insurance scheme.
NCD guideline TOT module was released.
Cervical cancer management guidelines were launched.
Protocols/ Guidelines
Access to essential medicines and technology
Posbindu personnel have CH volunteers trained by PHC nurses and doctors.
Team-based care and human resources
STEPS surveys were done in 2007 and 2013 and then integrated.
IFLS6 was set up to assess NCD early detection, conduct of SARA.
RPJMNIII (2015-19) includes 3 global NCD indicators and web-based surveillance through PHC and Posbindu.
The Sirkenas 2016 Health Survey has data on CC screening.
The Basic Health Research Survey (RISKESDAS) was carried out with NCD risk factors.
Systems for monitoring


Indonesia
Community
Mass awareness
Quality of care
Provision for hard to reach groups
Reduction of inequalities
Participation in policy processes
Before
2014
2015
2016
2017
2018
2019
2020
2021
2022
Website and hotline for BPJS-K (social health insurance).
State of inequality report launched in collab with WHO.
The Program Indonesia Sehat dengan Pendekatan Keluarga (PIS-PK) seeks to foreground preventive and promotive care, optimize referral and ensure community empowerment; NCD indicators monitored include hypertension therapy, mental illness monitoring and smoking cessation from 2015 to 2019
Efforts to engage large NGOs in NCD prevention efforts.
Local government to be responsible for defined basic services.

Maldives


Maldives Governance
Strategic Plan for NCDs (2008-2010) highlighting on STEPS survey, revised tobacco law, an essential NCD interventions
The National Health Master Plan (2006 to 2015) prioritizing prevention of NCDs, health promotion and preventive health service, health facilities and staff skills for comprehensive health service
Health Master Plan (2016-2025) focusing on prevention and NCDs control through health promotion, early detection and primary healthcare
Multi-sectoral Action Plan For The Prevention And Control of Noncommunicable Diseases in Maldives (2016-2020)
National policy physical activity for healthier living 2022
National Cancer Control Plan Maldives 2022–2026
Policy/ Programme for NCDs
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
The implementation of MSAP 2016 phrase 1
From 2011 to 2014, the government spending on health rose by 130% (from 1315 million Maldivian Rupee [MVR] to 2922 million MVR)
High-Level NCD Taskforce to oversee the multisectoral activities for the NCD action plan, including ways to allocate greater financial resources for NCD response
The implementation of MSAP 2016 phrase 2 highlighting scaling up successful interventions and enhancing service delivery
Resources and delegation
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
The model focuses on increasing advocacy and partnerships, improving the leadership for NCD management, reducing risk factors for NCDs through legislation of healthy lifestyle, improving the health system capacity for detection and management, the expansion of PEN package, cervical cancer screening, improving the surveillance and effective data management
In 2016, legislation has been put in place regarding the licensing of healthcare institutions and the professional registration of healthcare workers.
Health promotion;. Early detection and timely diagnosis; evidence-based treatment without financial burden; palliative and supportive care; Establishing national cancer registry
Service Model
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Convergence
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
WHO provided technical assistance to develop HMP 2016 and MSAP for NCD plan
Maldives - WHO Country Cooperation Strategy 2018-2022
WHO-STEPS Survey2022
WHO guidance and tools
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022


Maldives
Service
Screening
Th action plan suggests cervical and oral cancer screening, expansion of PEN package
Well-woman clinics are run at all the tertiary hospitals, where screening facilities are available for breast and cervical cancer
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Healthy lifestyle counselling
The effort to enhance tobacco cessation have been reinforced by introducing a tobacco cessation toolkit for doctors and health professionals.
The physical activity policy prescribes improved engagement of communities in physical activity
MSAP recommends the promotion of healthy lifestyle in schools and workplaces and increased airtimes for programs promoting healthy lifestyles along with legislation to reduce consumption of salty and unhealthy food
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Protocols/ guidelines
Guidelines for the management of CVD, diabetes hypertension
Clinical Guidelines for Management of Cancer
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Access to essential medicines and technology
The action plan recommends to ensure availability of essential NCD drugs in health facilities
Strengthened supply chain management for cancer
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Team-based care and human resources
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Systems for monitoring
The Maldives Global School-based Student Health Survey (2014)
Action plan recommends to conduct a Walkability survey in Male
The monitoring tobacco rules, additional staff for NCD surveillance, monitoring food content, establishing a cancer registry, and conducting a mid-term evaluation in 2017
WHO STEPS survey
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022


Maldives
Community
Increasing awareness of dietary recommendations in the population is a key indicator in the action plan
NCCP recommends effective, evidence-based methods of health promotion and education that tailor messages to the population of the Maldives, taking into account cultural and societal differences from other parts of the world.
Mass Awareness
Quality of Care
Provisions for hard to reach groups
Reduction of inequalities
Participation in Policy Processes
Before
2014
2015
2016
2017
2018
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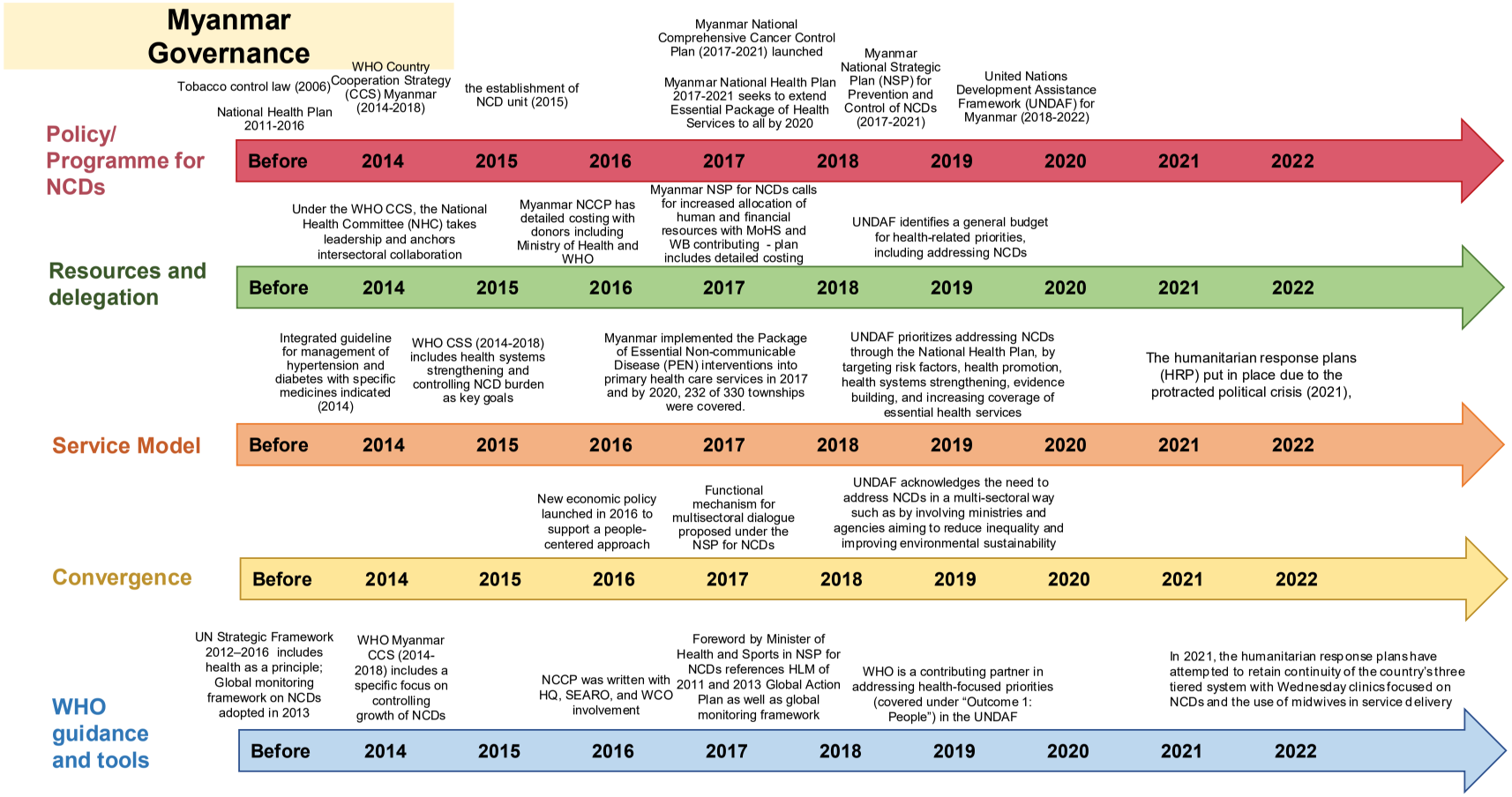
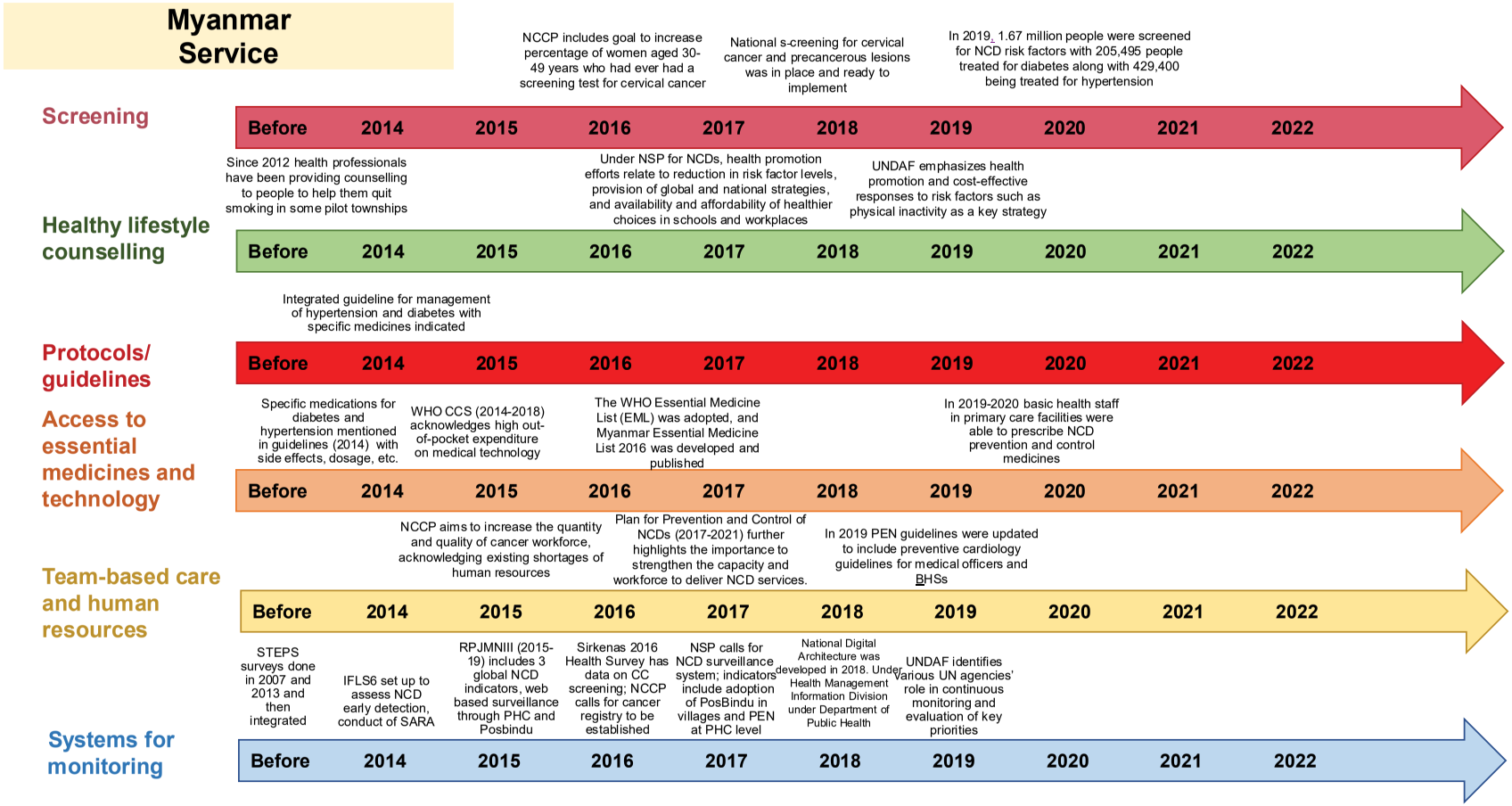
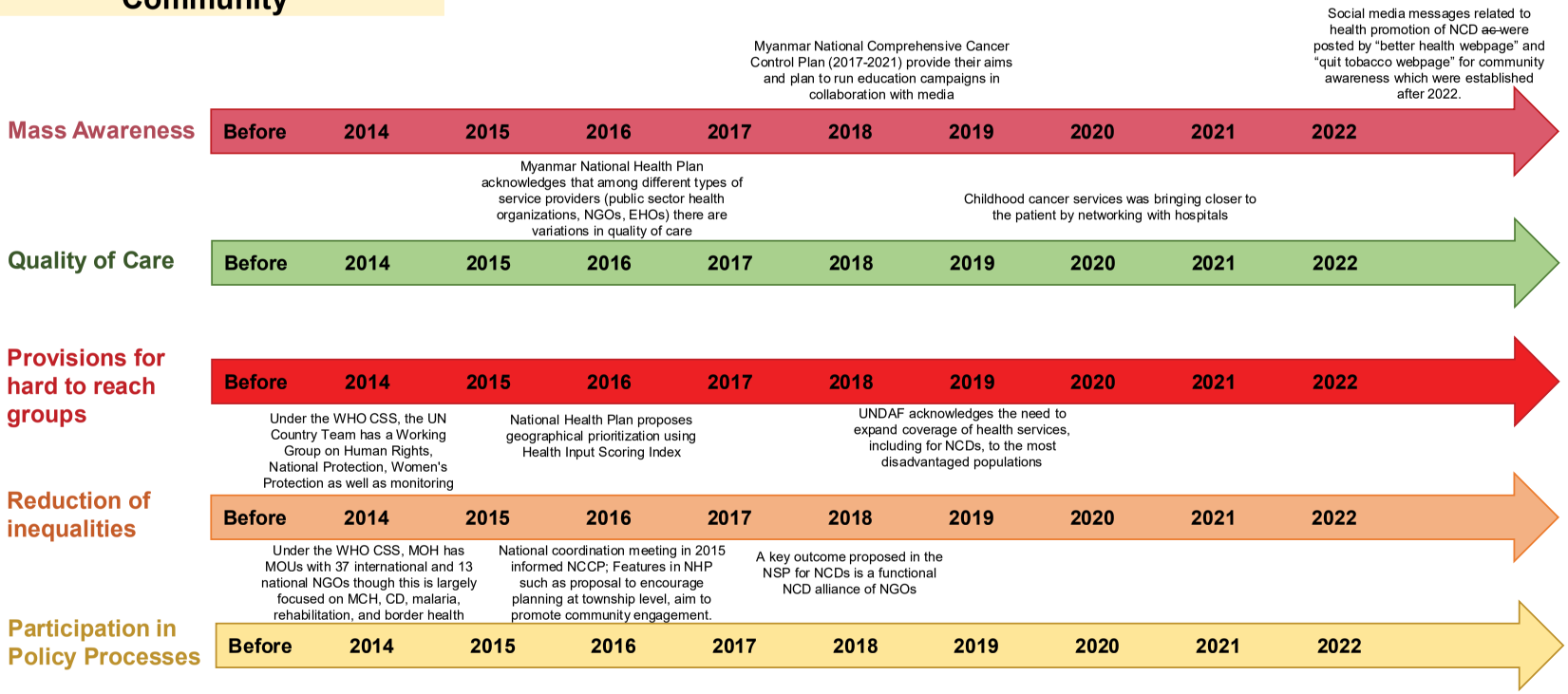
2021
2022
Cancer Society Maldives (CSM) an NGO provides psychosocial support for cancer patients, survivors and caregivers and facilitates treatment options abroad
CBOs engaged in NCD outreach, peer education health promotion

Myanmar

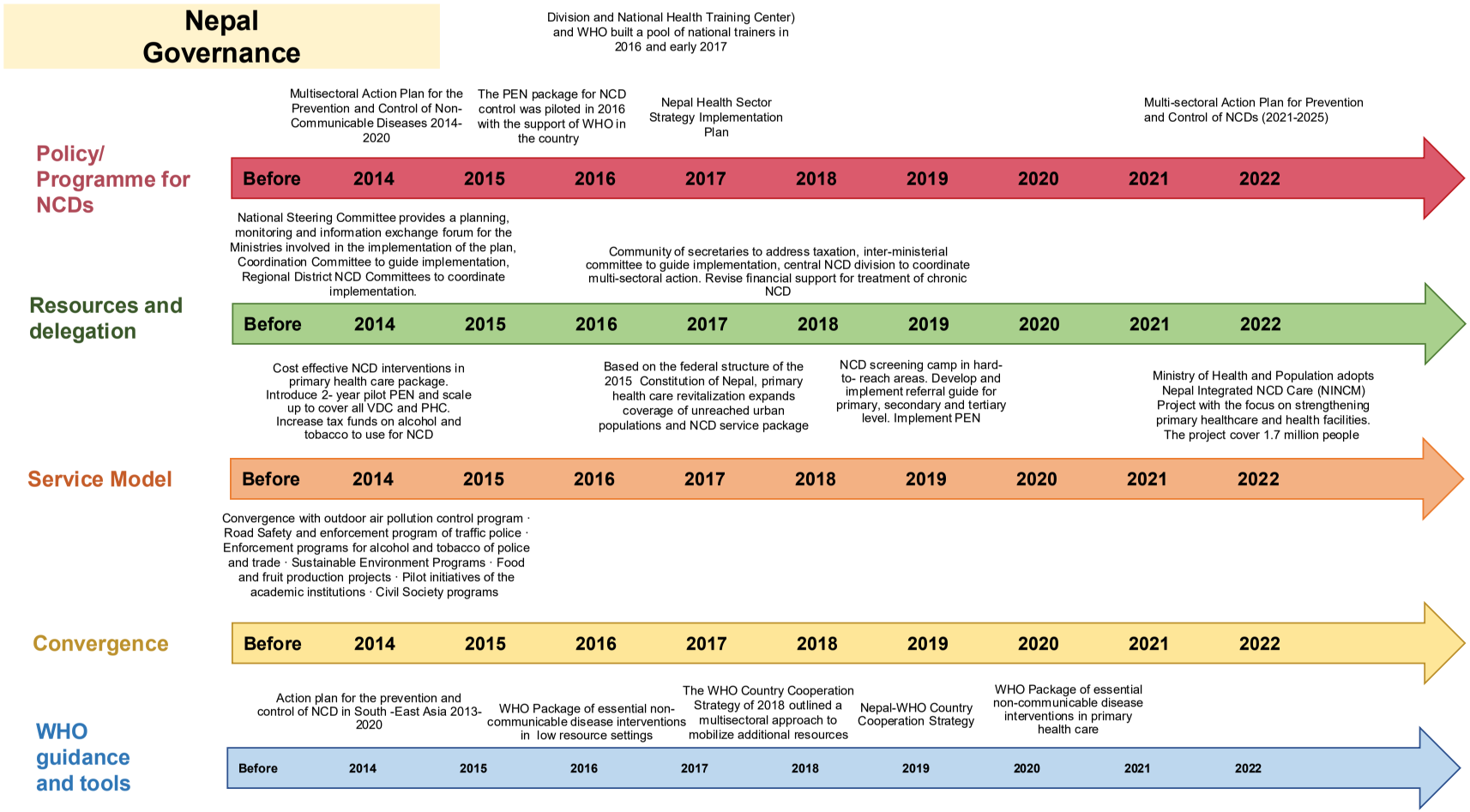

Myanmar Governance
Policy/ Programme for NCDs
Tobacco control law (2006)
National Health Plan 2011-2016
WHO Country Cooperation Strategy (CCS) Myanmar (2014-2018)
the establishment of NCD unit (2015)
Myanmar National Comprehensive Cancer Control Plan (2017-2021) launched
Myanmar National Health Plan 2017-2021 seeks to extend Essential Package of Health Services to all by 2020
Myanmar National Strategic Plan (NSP) for Prevention and Control of NCDs (2017-2021)
United Nations Development Assistance Framework (UNDAF) for Myanmar (2018-2022)
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Resources and delegation
Under the WHO CCS, the National Health Committee (NHC) takes leadership and anchors intersectoral collaboration
Myanmar NCCP has detailed costing with donors including Ministry of Health and WHO
Myanmar NSP for NCDs calls for increased allocation of human and financial resources with MoHS and WB contributing - plan includes detailed costing
UNDAF identifies a general budget for health-related priorities, including addressing NCDs
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Service Model
Integrated guideline for management of hypertension and diabetes with specific medicines indicated (2014)
WHO CSS (2014-2018) includes health systems strengthening and controlling NCD burden as key goals
Myanmar implemented the Package of Essential Non-communicable Disease (PEN) interventions into primary health care services in 2017 and by 2020, 232 of 330 townships were covered.
UNDAF prioritizes addressing NCDs through the National Health Plan, by targeting risk factors, health promotion, health systems strengthening, evidence building, and increasing coverage of essential health services
The humanitarian response plans (HRP) put in place due to the protracted political crisis (2021),
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Convergence
New economic policy launched in 2016 to support a people-centered approach
Functional mechanism for multisectoral dialogue proposed under the NSP for NCDs
UNDAF acknowledges the need to address NCDs in a multi-sectoral way such as by involving ministries and agencies aiming to reduce inequality and improving environmental sustainability
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
WHO guidance and tools
UN Strategic Framework 2012–2016 includes health as a principle; Global monitoring framework on NCDs adopted in 2013
WHO Myanmar CCS (2014-2018) includes a specific focus on controlling growth of NCDs
NCCP was written with HQ, SEARO, and WCO involvement
Foreword by Minister of Health and Sports in NSP for NCDs references HLM of 2011 and 2013 Global Action Plan as well as global monitoring framework
WHO is a contributing partner in addressing health-focused priorities (covered under "Outcome 1: People") in the UNDAF
In 2021, the humanitarian response plans have attempted to retain continuity of the country's three tiered system with Wednesday clinics focused on NCDs and the use of midwives in service delivery
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022

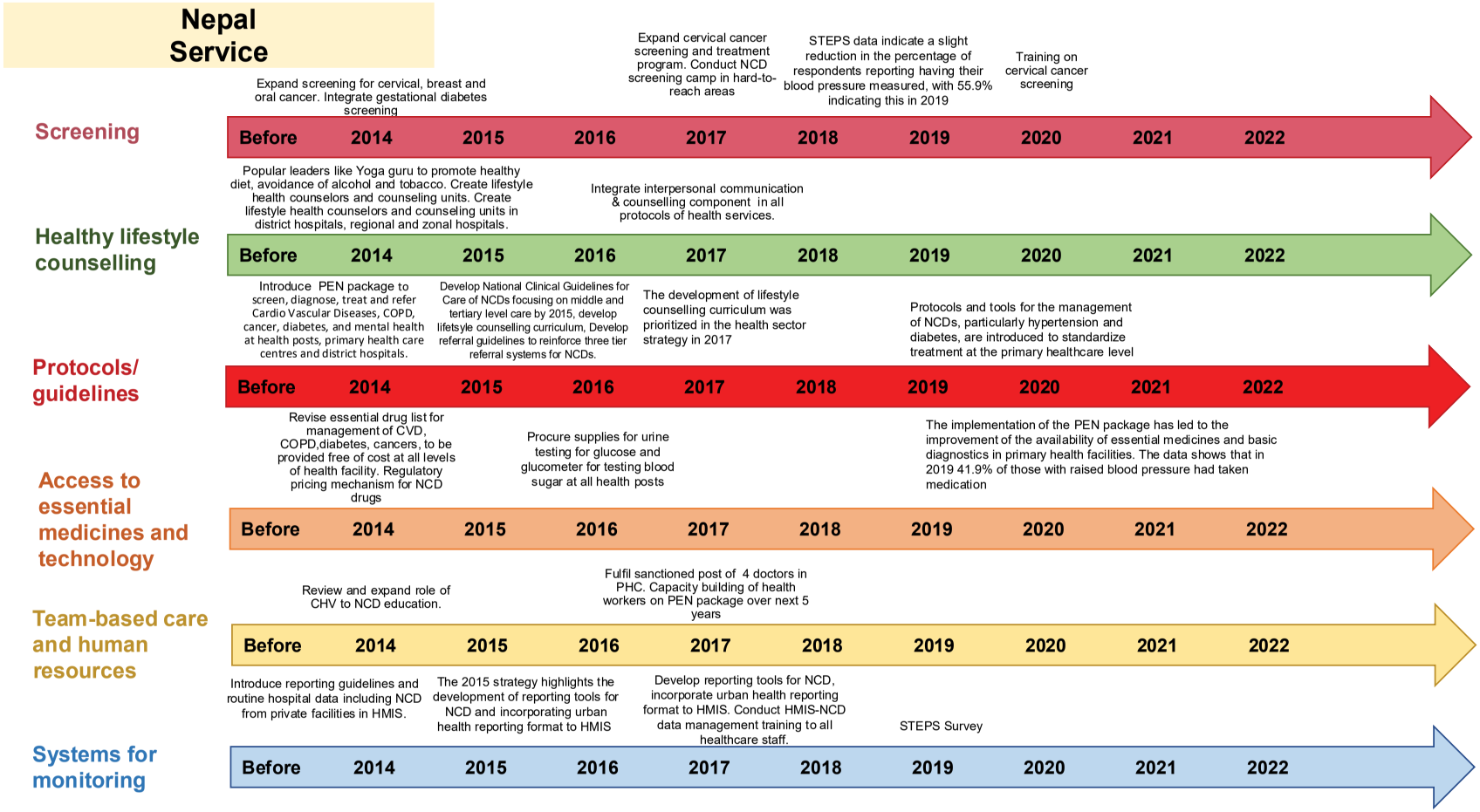

Myanmar
Service
Screening
Healthy lifestyle counselling
Protocols/ guidelines
Access to essential medicines and technology
Team-based care and human resources
Systems for monitoring
Before
2014
2015
2016
2017
2018
2019
2020
2021
2022
NCCP includes goal to increase percentage of women aged 30-49 years who had ever had a screening test for cervical cancer
National s-creening for cervical cancer and precancerous lesions was in place and ready to implement
In 2019, 1.67 million people were screened for NCD risk factors with 205,495 people treated for diabetes along with 429,400 being treated for hypertension
Since 2012 health professionals have been providing counselling to people to help them quit smoking in some pilot townships
Under NSP for NCDs, health promotion efforts relate to reduction in risk factor levels, provision of global and national strategies, and availability and affordability of healthier choices in schools and workplaces
UNDAF emphasizes health promotion and cost-effective responses to risk factors such as physical inactivity as a key strategy
Integrated guideline for management of hypertension and diabetes with specific medicines indicated
Specific medications for diabetes and hypertension mentioned in guidelines (2014) with side effects, dosage, etc.
WHO CCS (2014-2018) acknowledges high out-of-pocket expenditure on medical technology
The WHO Essential Medicine List (EML) was adopted, and Myanmar Essential Medicine List 2016 was developed and published
In 2019-2020 basic health staff in primary care facilities were able to prescribe NCD prevention and control medicines
NCCP aims to increase the quantity and quality of cancer workforce, acknowledging existing shortages of human resources
Plan for Prevention and Control of NCDs (2017-2021) further highlights the importance to strengthen the capacity and workforce to deliver NCD services.
In 2019 PEN guidelines were updated to include preventive cardiology guidelines for medical officers and BHSs
STEPS surveys done in 2007 and 2013 and then integrated
IFLS6 set up to assess NCD early detection, conduct of SARA
RPJMNIII (2015-19) includes 3 global NCD indicators, web based surveillance through PHC and Posbindu
Sirkenas 2016 Health Survey has data on CC screening; NCCP calls for cancer registry to be established
NSP calls for NCD surveillance system; indicators include adoption of PosBindu in villages and PEN at PHC level
National Digital Architecture was developed in 2018. Under Health Management Information Division under Department of Public Health
UNDAF identifies various UN agencies' role in continuous monitoring and evaluation of key priorities

Myanmar Community

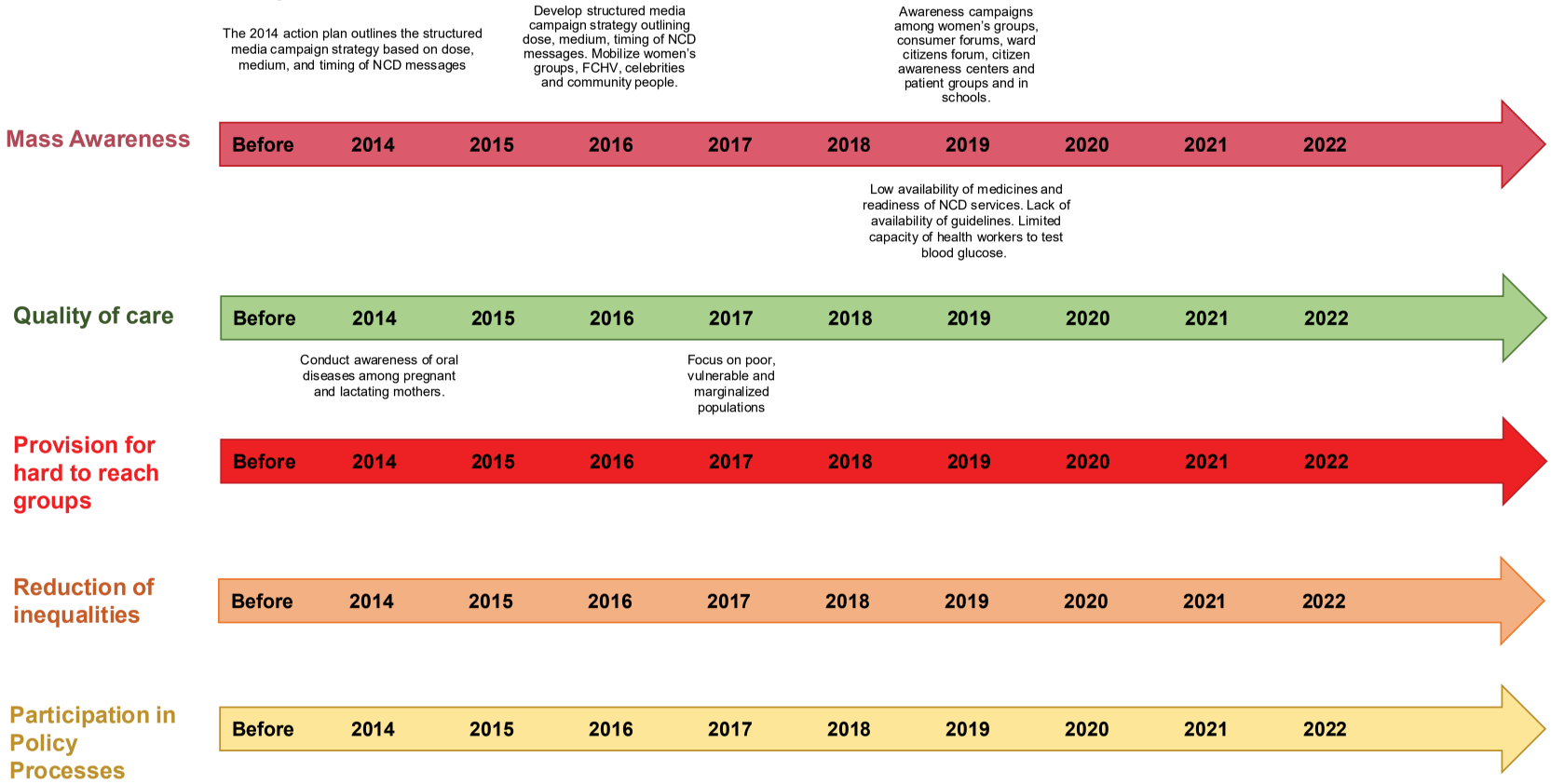


Nepal


Nepal
Governance
Division and National Health Training Center) and WHO built a pool of national trainers in 2016 and early 2017
Multisectoral Action Plan for the Prevention and Control of Non-Communicable Diseases 2014-2020
The PEN package for NCD control was piloted in 2016 with the support of WHO in the country
Nepal Health Sector Strategy Implementation Plan
Multi-sectoral Action Plan for Prevention and Control of NCDs (2021-2025)
Policy/ Programme for NCDs
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
National Steering Committee provides a planning, monitoring and information exchange forum for the Ministries involved in the implementation of the plan, Coordination Committee to guide implementation, Regional District NCD Committees to coordinate implementation.
Community of secretaries to address taxation, inter-ministerial committee to guide implementation, central NCD division to coordinate multi-sectoral action. Revise financial support for treatment of chronic NCD
Resources and delegation
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Cost effective NCD interventions in primary health care package. Introduce 2- year pilot PEN and scale up to cover all VDC and PHC. Increase tax funds on alcohol and tobacco to use for NCD
Based on the federal structure of the 2015 Constitution of Nepal, primary health care revitalization expands coverage of unreached urban populations and NCD service package
NCD screening camp in hard-to- reach areas. Develop and implement referral guide for primary, secondary and tertiary level. Implement PEN
Ministry of Health and Population adopts Nepal Integrated NCD Care (NINCM) Project with the focus on strengthening primary healthcare and health facilities. The project cover 1.7 million people
Service Model
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Convergence with outdoor air pollution control program · Road Safety and enforcement program of traffic police · Enforcement programs for alcohol and tobacco of police and trade · Sustainable Environment Programs · Food and fruit production projects · Pilot initiatives of the academic institutions · Civil Society programs
Convergence
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Action plan for the prevention and control of NCD in South -East Asia 2013-2020
WHO Package of essential non-communicable disease interventions in low resource settings
The WHO Country Cooperation Strategy of 2018 outlined a multisectoral approach to mobilize additional resources
Nepal-WHO Country Cooperation Strategy
WHO Package of essential non-communicable disease interventions in primary health care
WHO guidance and tools
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022

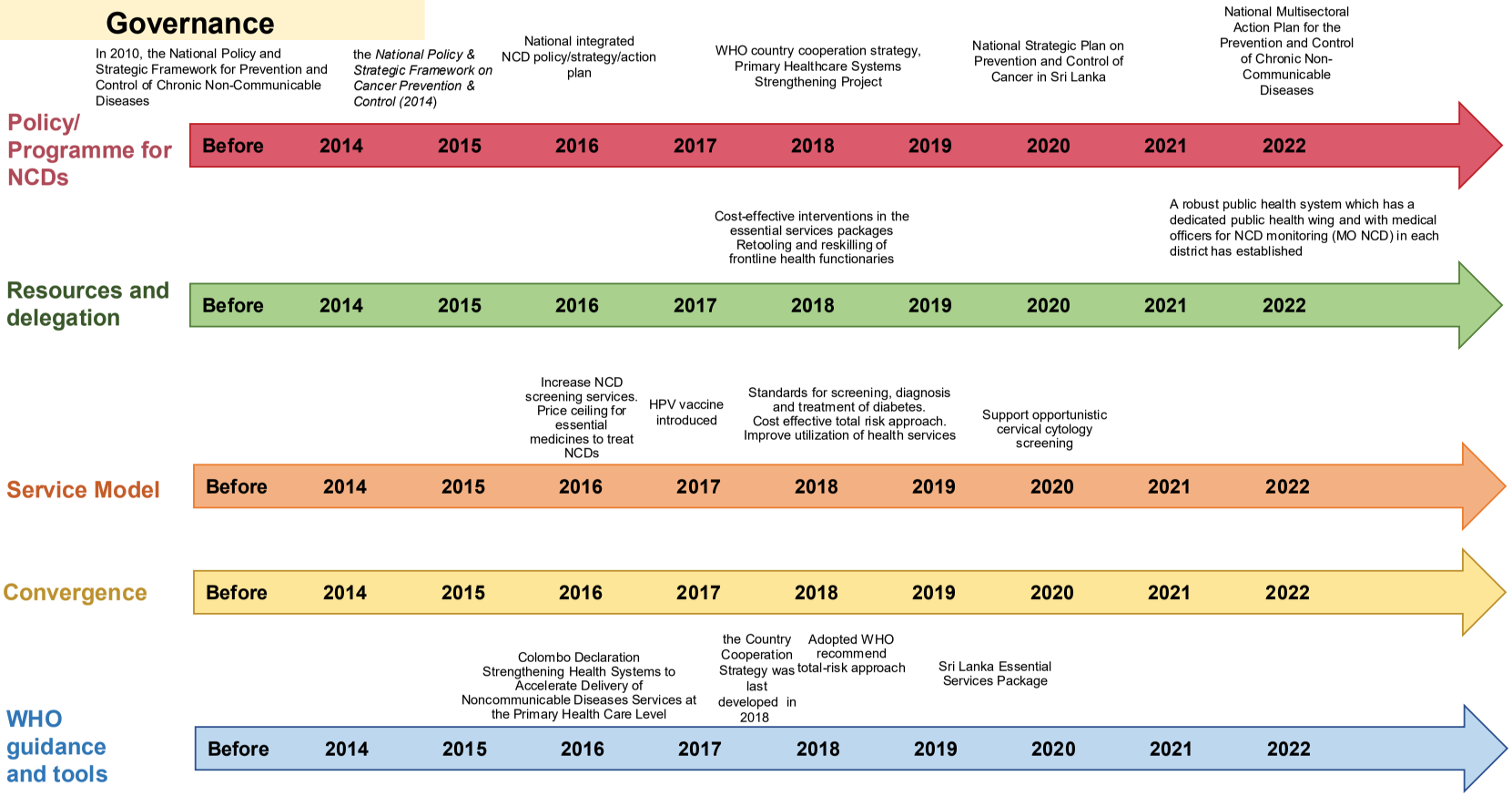

Nepal
Service
Screening
Expand screening for cervical, breast and oral cancer. Integrate gestational diabetes screening
Expand cervical cancer screening and treatment program. Conduct NCD screening camp in hard-to-reach areas
STEPS data indicate a slight reduction in the percentage of respondents reporting having their blood pressure measured, with 55.9% indicating this in 2019
Training on cervical cancer screening
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Healthy lifestyle counselling
Popular leaders like Yoga guru to promote healthy diet, avoidance of alcohol and tobacco. Create lifestyle health counselors and counseling units. Create lifestyle health counselors and counseling units in district hospitals, regional and zonal hospitals.
Integrate interpersonal communication & counselling component in all protocols of health services.
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Protocols/ guidelines
Introduce PEN package to screen, diagnose, treat and refer Cardio Vascular Diseases, COPD, cancer, diabetes, and mental health at health posts, primary health care centres and district hospitals.
Develop National Clinical Guidelines for Care of NCDs focusing on middle and tertiary level care by 2015, develop lifetsyle counselling curriculum, Develop referral guidelines to reinforce three tier referral systems for NCDs.
The development of lifestyle counselling curriculum was prioritized in the health sector strategy in 2017
Protocols and tools for the management of NCDs, particularly hypertension and diabetes, are introduced to standardize treatment at the primary healthcare level
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Access to essential medicines and technology
Revise essential drug list for management of CVD, COPD,diabetes, cancers, to be provided free of cost at all levels of health facility. Regulatory pricing mechanism for NCD drugs
Procure supplies for urine testing for glucose and glucometer for testing blood sugar at all health posts
The implementation of the PEN package has led to the improvement of the availability of essential medicines and basic diagnostics in primary health facilities. The data shows that in 2019 41.9% of those with raised blood pressure had taken medication
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Team-based care and human resources
Review and expand role of CHV to NCD education.
Fulfil sanctioned post of 4 doctors in PHC. Capacity building of health workers on PEN package over next 5 years
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Systems for monitoring
Introduce reporting guidelines and routine hospital data including NCD from private facilities in HMIS.
The 2015 strategy highlights the development of reporting tools for NCD and incorporating urban health reporting format to HMIS
Develop reporting tools for NCD, incorporate urban health reporting format to HMIS. Conduct HMIS-NCD data management training to all healthcare staff.
STEPS Survey
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022

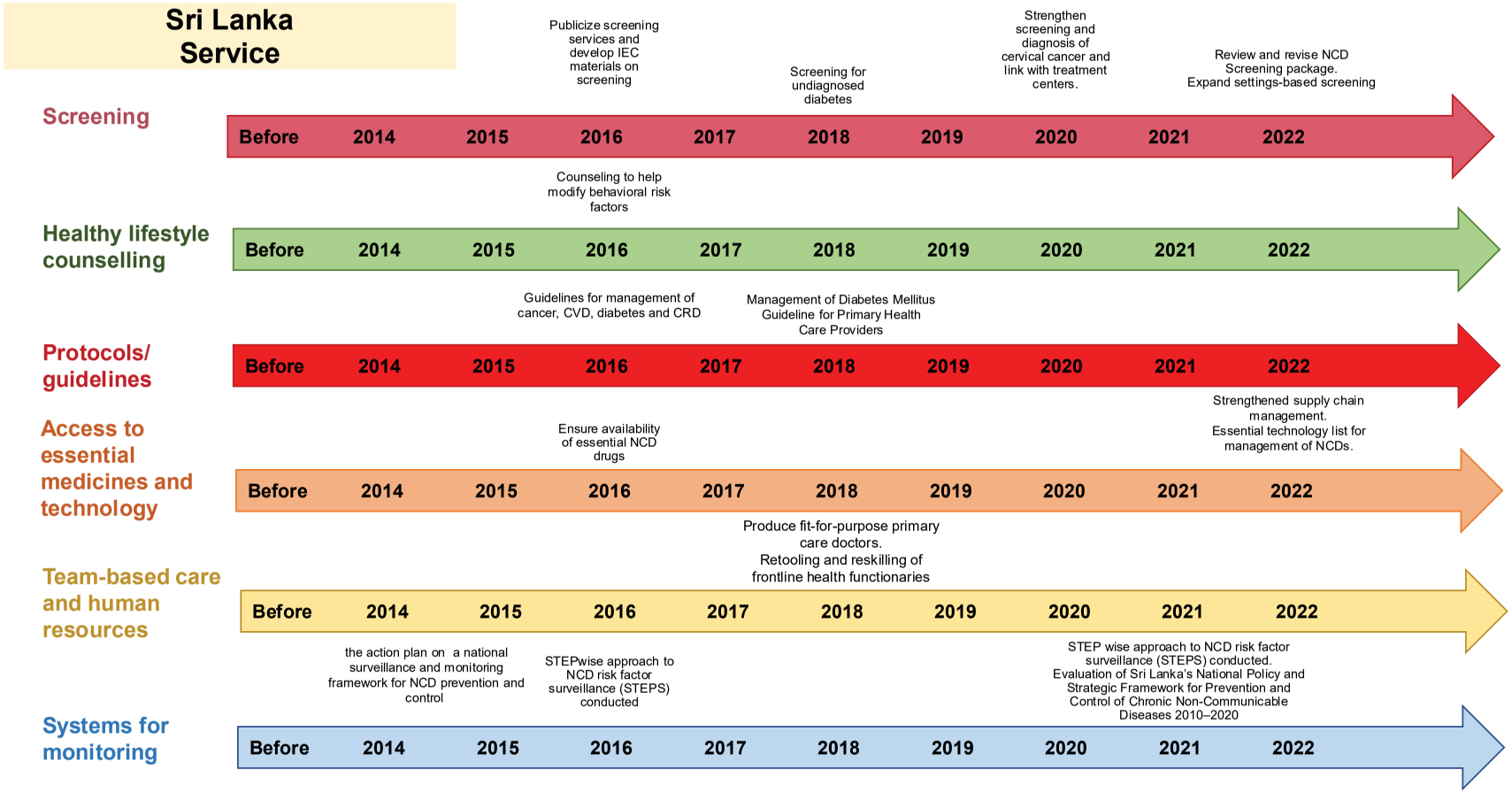
Nepal
Community



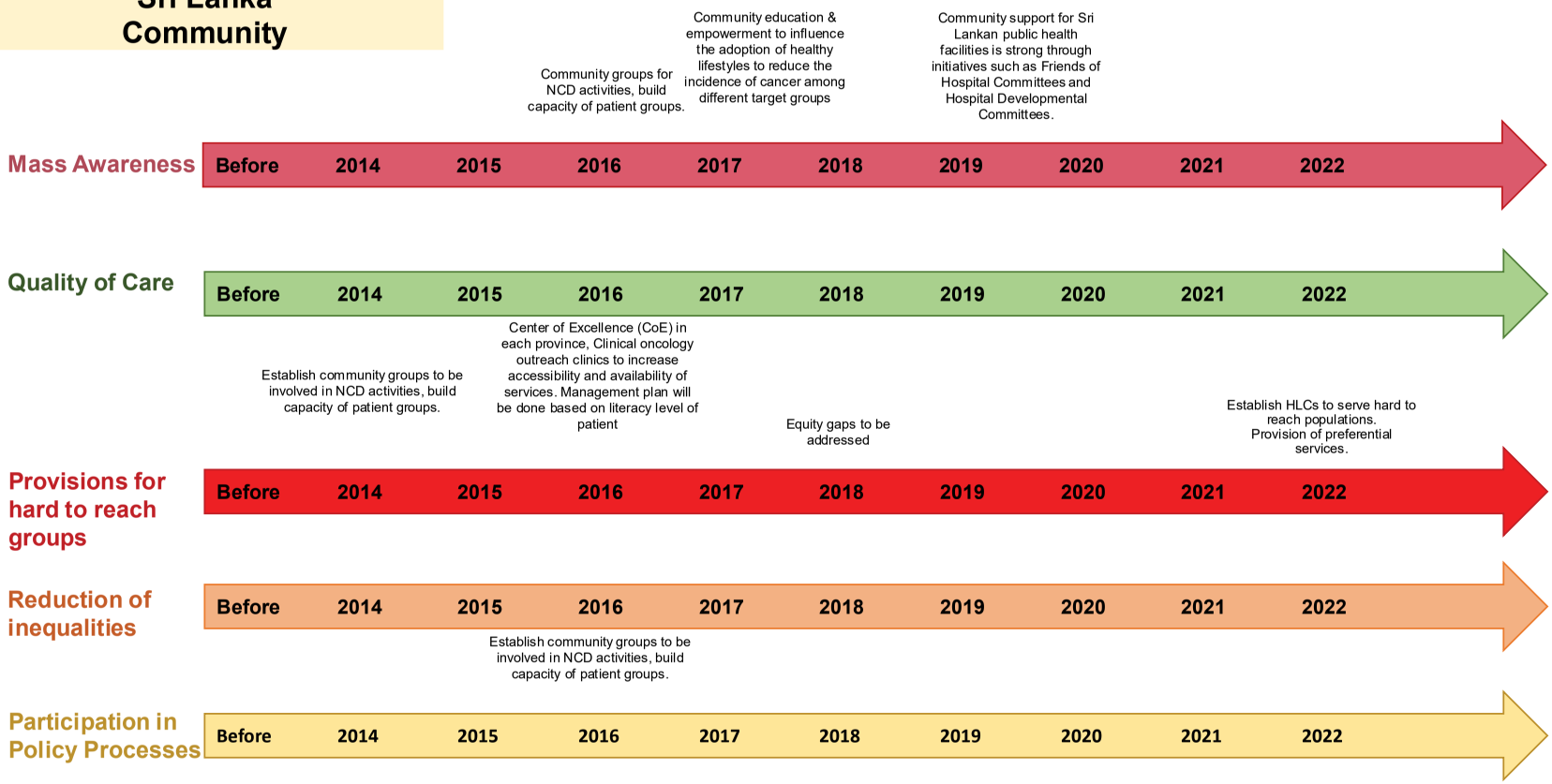
Sri Lanka

Sri Lanka Governance



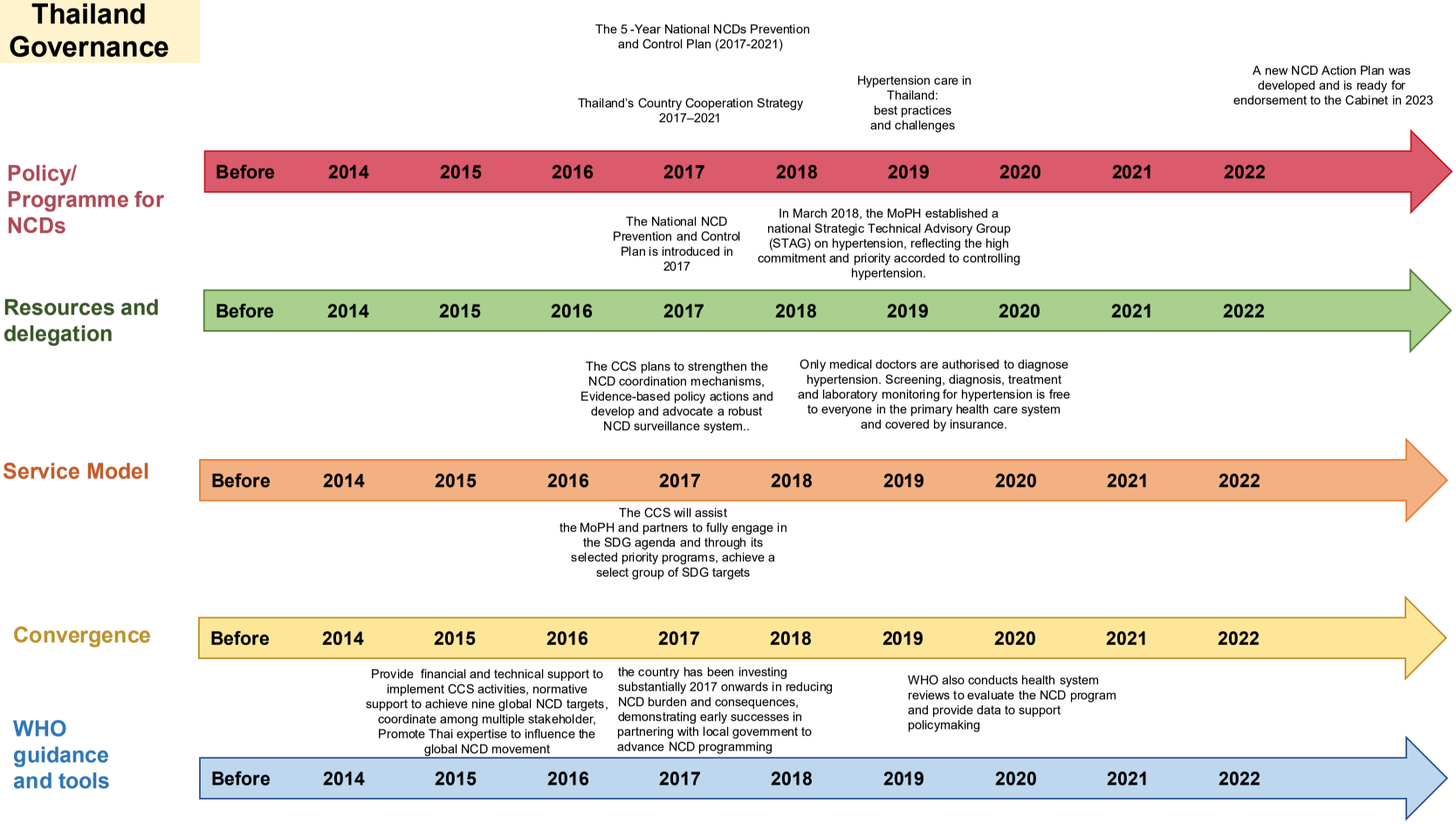

Sri Lanka Service
Screening
Publicize screening services and develop IEC materials on screening
Screening for undiagnosed diabetes
Strengthen screening and diagnosis of cervical cancer and link with treatment centers.
Review and revise NCD Screening package. Expand settings-based screening
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Healthy lifestyle counselling
Counseling to help modify behavioral risk factors
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Protocols/ guidelines
Guidelines for management of cancer, CVD, diabetes and CRD
Management of Diabetes Mellitus Guideline for Primary Health Care Providers
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Access to essential medicines and technology
Ensure availability of essential NCD drugs
Strengthened supply chain management. Essential technology list for management of NCDs.
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Team-based care and human resources
Produce fit-for-purpose primary care doctors. Retooling and reskilling of frontline health functionaries
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Systems for monitoring
the action plan on a national surveillance and monitoring framework for NCD prevention and control
STEPwise approach to NCD risk factor surveillance (STEPS) conducted
STEP wise approach to NCD risk factor surveillance (STEPS) conducted. Evaluation of Sri Lanka's National Policy and Strategic Framework for Prevention and Control of Chronic Non-Communicable Diseases 2010–2020
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022

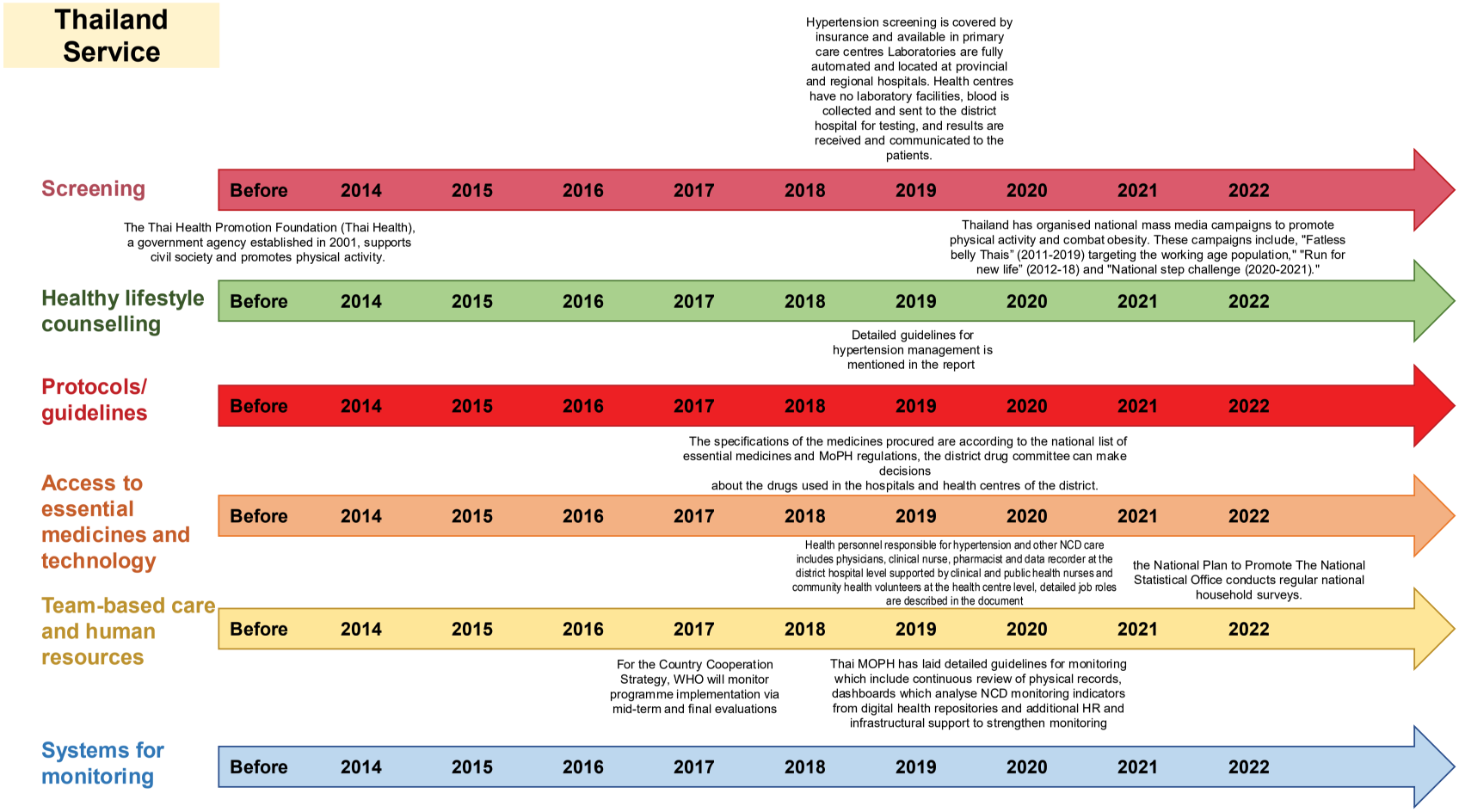
Sri Lanka Community

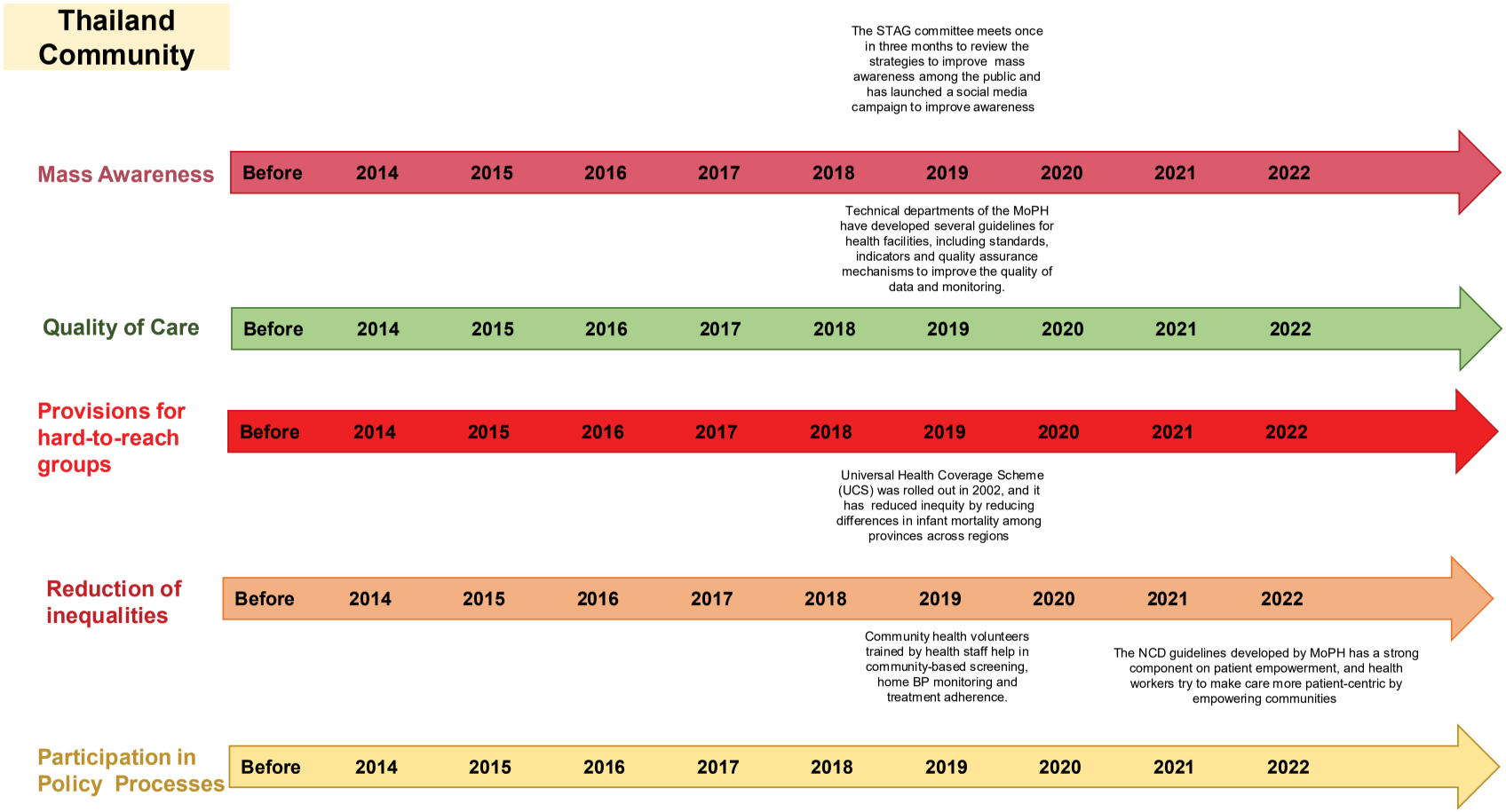


Thailand

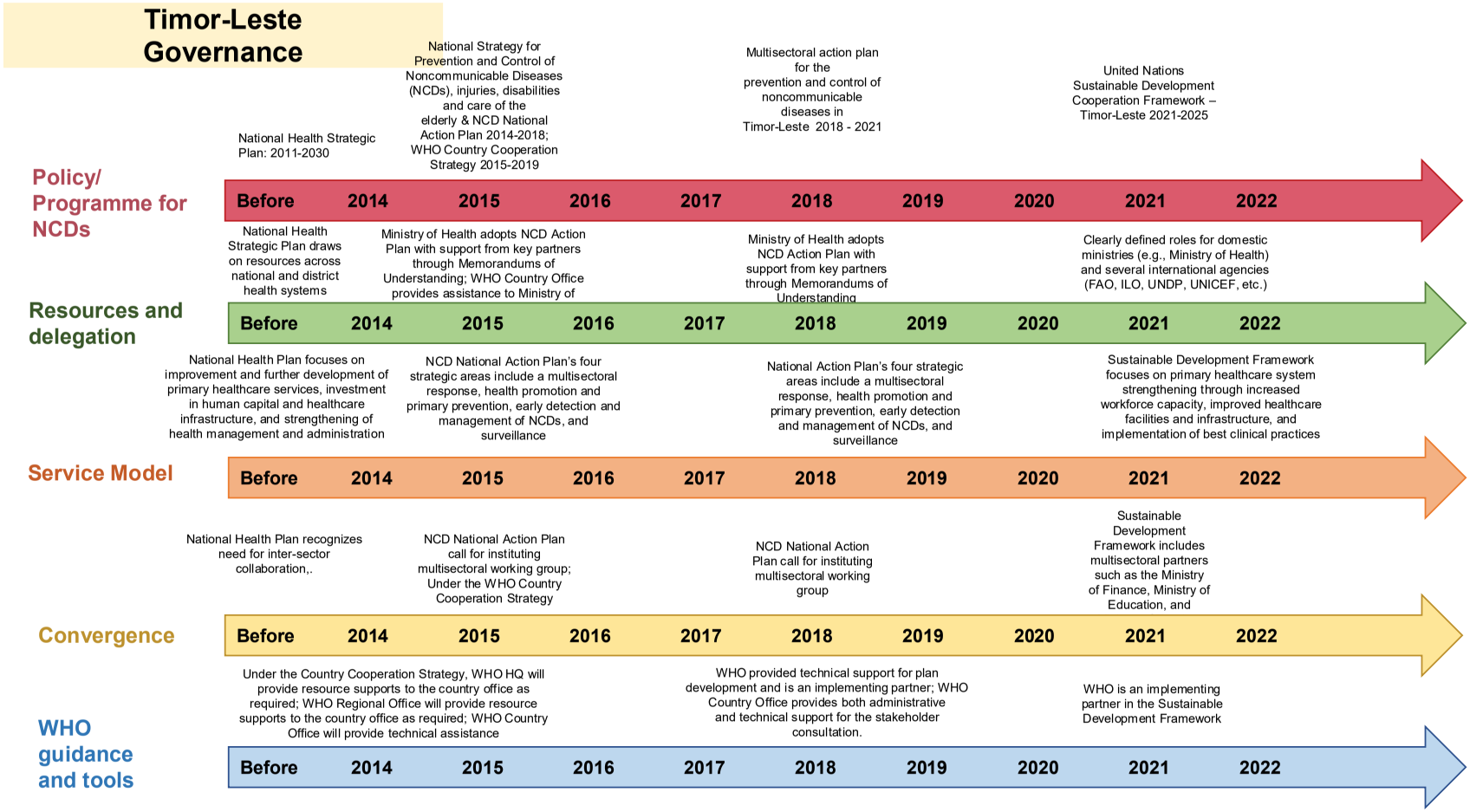
Thailand Governance



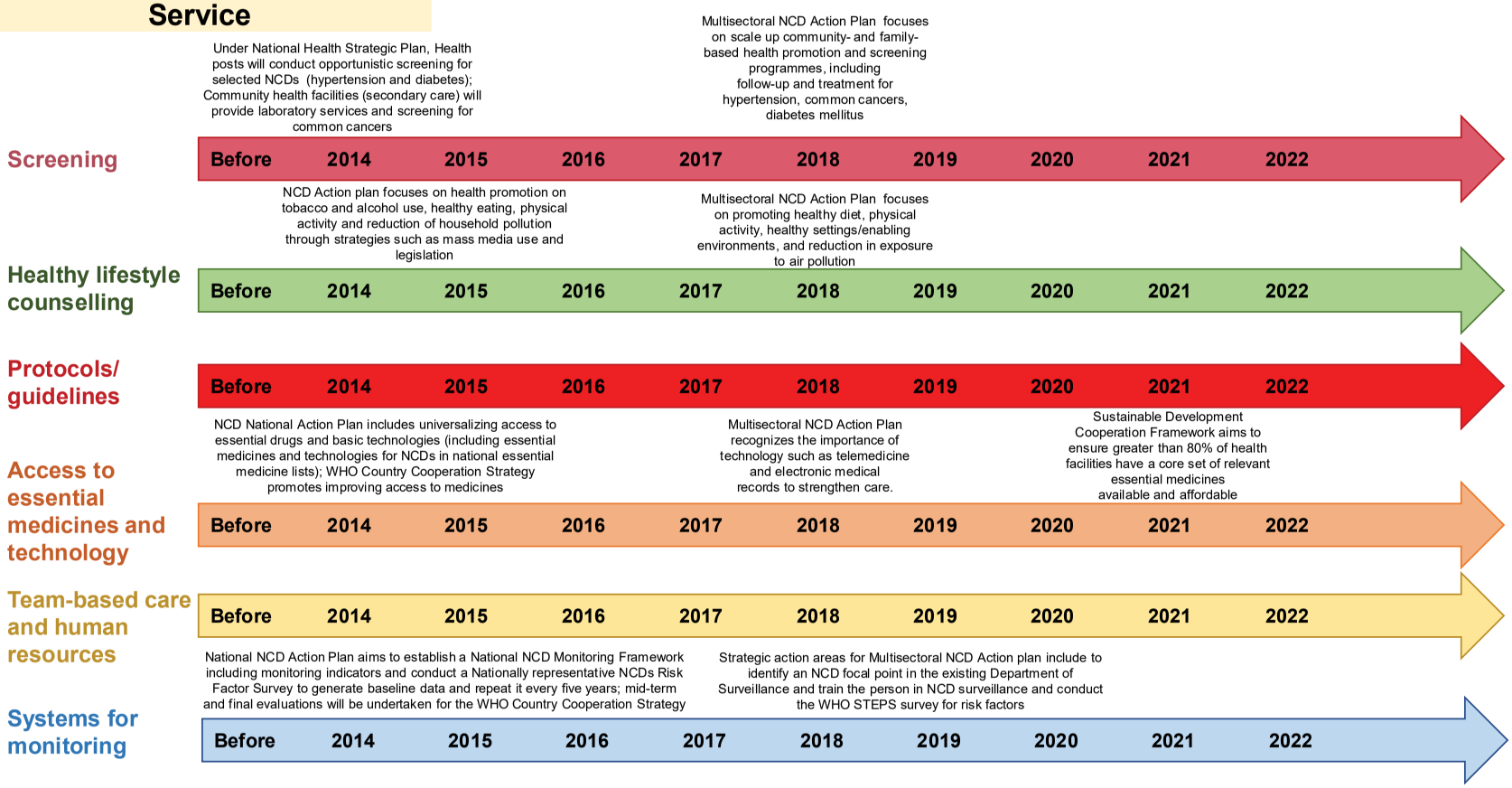

Thailand Service
Hypertension screening is covered by insurance and available in primary care centres Laboratories are fully automated and located at provincial and regional hospitals. Health centres have no laboratory facilities, blood is collected and sent to the district hospital for testing, and results are received and communicated to the patients.
Screening
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
The Thai Health Promotion Foundation (Thai Health), a government agency established in 2001, supports civil society and promotes physical activity.
Thailand has organised national mass media campaigns to promote physical activity and combat obesity. These campaigns include, "Fatless belly Thais" (2011-2019) targeting the working age population," "Run for new life" (2012-18) and "National step challenge (2020-2021)."
Healthy lifestyle counselling
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Detailed guidelines for hypertension management is mentioned in the report
Protocols/ guidelines
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
The specifications of the medicines procured are according to the national list of essential medicines and MoPH regulations, the district drug committee can make decisions about the drugs used in the hospitals and health centres of the district.
Access to essential medicines and technology
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Health personnel responsible for hypertension and other NCD care includes physicians, clinical nurse, pharmacist and data recorder at the district hospital level supported by clinical and public health nurses and community health volunteers at the health centre level, detailed job roles are described in the document
the National Plan to Promote The National Statistical Office conducts regular national household surveys.
Team-based care and human resources
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
For the Country Cooperation Strategy, WHO will monitor programme implementation via mid-term and final evaluations
Thai MOPH has laid detailed guidelines for monitoring which include continuous review of physical records, dashboards which analyse NCD monitoring indicators from digital health repositories and additional HR and infrastructural support to strengthen monitoring
Systems for monitoring
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022

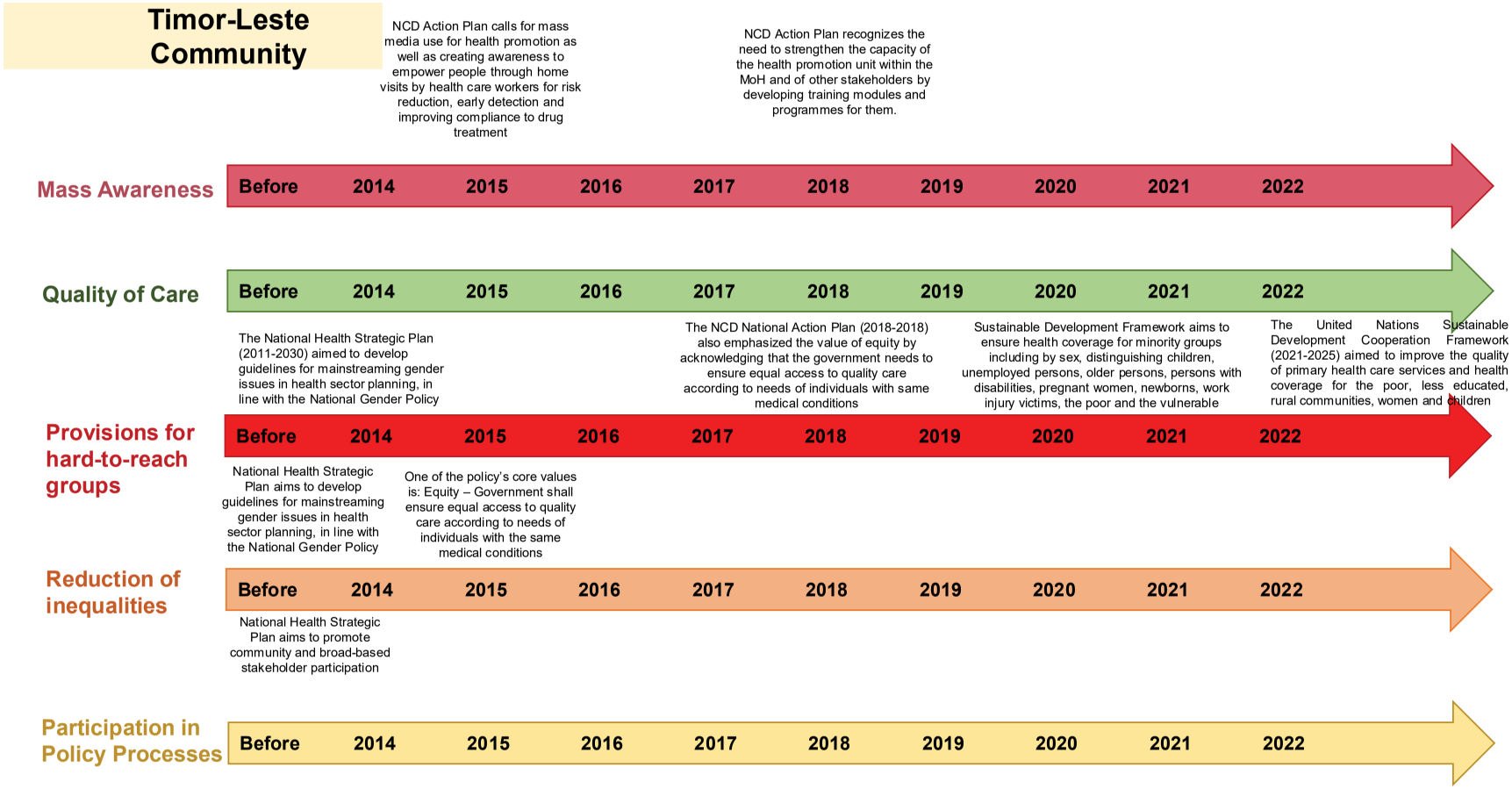

Thailand Community
The STAG committee meets once in three months to review the strategies to improve mass awareness among the public and has launched a social media campaign to improve awareness
Mass Awareness
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Technical departments of the MoPH have developed several guidelines for health facilities, including standards, indicators and quality assurance mechanisms to improve the quality of data and monitoring.
Quality of Care
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Provisions for hard-to-reach groups
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Universal Health Coverage Scheme (UCS) was rolled out in 2002, and it has reduced inequity by reducing differences in infant mortality among provinces across regions
Reduction of inequalities
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Community health volunteers trained by health staff help in community-based screening, home BP monitoring and treatment adherence.
The NCD guidelines developed by MoPH has a strong component on patient empowerment, and health workers try to make care more patient-centric by empowering communities
Participation in Policy Processes
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022

Tmor-Leste


Timor-Leste Governance
National Health Strategic Plan: 2011-2030
National Strategy for Prevention and Control of Noncommunicable Diseases (NCDs), injuries, disabilities and care of the elderly & NCD National Action Plan 2014-2018; WHO Country Cooperation Strategy 2015-2019
Multisectoral action plan for the prevention and control of noncommunicable diseases in Timor-Leste 2018 - 2021
United Nations Sustainable Development Cooperation Framework – Timor-Leste 2021-2025
Policy/ Programme for NCDs
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
National Health Strategic Plan draws on resources across national and district health systems
Ministry of Health adopts NCD Action Plan with support from key partners through Memorandums of Understanding; WHO Country Office provides assistance to Ministry of
Ministry of Health adopts NCD Action Plan with support from key partners through Memorandums of Understanding
Clearly defined roles for domestic ministries (e.g., Ministry of Health) and several international agencies (FAO, ILO, UNDP, UNICEF, etc.)
Resources and delegation
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
National Health Plan focuses on improvement and further development of primary healthcare services, investment in human capital and healthcare infrastructure, and strengthening of health management and administration
NCD National Action Plan's four strategic areas include a multisectoral response, health promotion and primary prevention, early detection and management of NCDs, and surveillance
National Action Plan's four strategic areas include a multisectoral response, health promotion and primary prevention, early detection and management of NCDs, and surveillance
Sustainable Development Framework focuses on primary healthcare system strengthening through increased workforce capacity, improved healthcare facilities and infrastructure, and implementation of best clinical practices
Service Model
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
National Health Plan recognizes need for inter-sector collaboration,.
NCD National Action Plan call for instituting multisectoral working group; Under the WHO Country Cooperation Strategy
NCD National Action Plan call for instituting multisectoral working group
Sustainable Development Framework includes multisectoral partners such as the Ministry of Finance, Ministry of Education, and
Convergence
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Under the Country Cooperation Strategy, WHO HQ will provide resource supports to the country office as required; WHO Regional Office will provide resource supports to the country office as required; WHO Country Office will provide technical assistance
WHO provided technical support for plan development and is an implementing partner; WHO Country Office provides both administrative and technical support for the stakeholder consultation.
WHO is an implementing partner in the Sustainable Development Framework
WHO guidance and tools
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022

Timor-Leste Service




Timor-Leste
Community
NCD Action Plan calls for mass media use for health promotion as well as creating awareness to empower people through home visits by health care workers for risk reduction, early detection and improving compliance to drug treatment
NCD Action Plan recognizes the need to strengthen the capacity of the health promotion unit within the MoH and of other stakeholders by developing training modules and programmes for them.
Mass Awareness
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
Quality of Care
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
The National Health Strategic Plan (2011-2030) aimed to develop guidelines for mainstreaming gender issues in health sector planning, in line with the National Gender Policy
The NCD National Action Plan (2018-2018) also emphasized the value of equity by acknowledging that the government needs to ensure equal access to quality care according to needs of individuals with same medical conditions
Sustainable Development Framework aims to ensure health coverage for minority groups including by sex, distinguishing children, unemployed persons, older persons, persons with disabilities, pregnant women, newborns, work injury victims, the poor and the vulnerable
The United Nations Sustainable Development Cooperation Framework (2021-2025) aimed to improve the quality of primary health care services and health coverage for the poor, less educated, rural communities, women and children
Provisions for hard-to-reach groups
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
National Health Strategic Plan aims to develop guidelines for mainstreaming gender issues in health sector planning, in line with the National Gender Policy
One of the policy's core values is: Equity – Government shall ensure equal access to quality care according to needs of individuals with the same medical conditions
Reduction of inequalities
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022
National Health Strategic Plan aims to promote community and broad-based stakeholder participation
Participation in Policy Processes
Before 2014 2015 2016 2017 2018 2019 2020 2021 2022

Annex 2

Country deep dives and case studies country-level achievements and challenges encountered in expanding access to people-centred NCD services

Bangladesh

Governance

Policy and strategies

Bangladesh launched its Strategic Plan for Surveillance and Prevention of Non-Communicable Diseases 2011–2015 (SPSPNCD 2011),[1] building on the achievements of the Strategic Plan for Surveillance and Prevention of NCDs 2007–2010. The 2011 SPSPNCD aimed to reduce NCD-related deaths by 2% annually by focusing on the surveillance of NCDs and their risk factors, health promotion and prevention, and improving health care services for NCDs. The Health, Population and Nutrition Sector Development Program (HPNSDP) (2011–2016) [2] proposed program integration to improve the socioeconomic conditions of the population as a strategy for NCD control. The 4th Health, Nutrition and Population Strategic Investment Plan (HNPSIP) (2016–2021) [3] recognized NCD control as a priority area, and the 7th Five Year Plan of Bangladesh imbibed the strategies proposed in HNPSIP and stressed improving health promotion for NCD control. In 2017 The National Strategy for Prevention and Control of Cervical Cancer [4] introduced the HPV vaccination program for adolescent girls through the Expanded Program on Immunization (EPI). It implemented population-based cervical cancer screening and treatment through the public delivery system. The 2018 Multisectoral Action Plan for Prevention and Control of Noncommunicable Diseases (MSAPNCD 2018) [5] focused on leveraging multisectoral action by engaging multiple ministries, departments, private sector and building partnerships for NCD prevention and control. The action plan has two stages. The first is a three-year plan from July 2018 to June 2021, followed by the second stage from July 2021 to June 2025. The MSAPNCD 2018–2025 defines four action areas: Advocacy, leadership and partnerships, Health promotion and risk reduction, Health systems strengthening for early detection and management of NCDs and their risk factors, Surveillance, monitoring and evaluation, and research. The policy also envisages adapting the WHO PEN disease interventions in primary care institutions of the country. The NCD policies in Bangladesh are developed in line with the GAP (2013–2020) for the prevention and control of NCDs [6] and UN Sustainable Development Goal (SDG) 3, and other global initiatives in NCD control. The Dhaka Declaration (2022) endorsing 32 action areas to address prevailing challenges and gaps provided an added fillip to accelerate progress towards NCD control, management and prevention.

Roles and responsibilities

Bangladesh offers health services through a combination of public and private systems. The Ministry of Health and Family Welfare (MoHFW) is the country's primary government agency for coordinating and regulating NCD services. The NCD Line Directorate of the Directorate General of Health Services (DGHS) plays a crucial role in coordination, while the MoHFW's various directorates handle executive functions. Moreover, the Directorate General of Family Planning (DGFP) provides lifestyle education alongside reproductive health and family planning

services at maternal and child health centres, union health and family welfare centers, and community clinics. The health care service delivery, including NCD care for rural populations, is provided through the public system of district hospitals, Upazila health complexes (UZHC), union subcenters and community clinics. Local government institutions (city corporations and municipalities) provide primary health care in cities. NGOs also provide NCD services in the country through a public-private partnership mechanism. NCD prevention and control is a policy priority in the country that implementation of MSAPNCD 2018 is supervised by the National Multisectoral NCD Coordination Committee (NMNCC), a high-level committee appointed by the Prime Minister and led by the Minister of Health and Family Welfare (MoHFW). The DGHS's NCD control unit acts as the Secretariat for the NMNCC and arranges for biannual NMNCC meetings. Coordination efforts also involve bilateral sectoral coordination mechanisms. A WCO KI described the role of MSAP in guiding the national program for NCD management, saying that

> ***In alignment with the rest of the SE Asia Regional countries, Bangladesh also adopted and developed their own Multisectoral Action Plan for the prevention of NCDs..., it has been approved by the Government. So that has become a guiding document to strengthen the initiative for prevention and management of NCDs. (WCO KI)***

Allocations and budget

The Bangladesh National Health Accounts 2017 reported that the government's contribution to the health sector has increased over the years, but its contribution to Total Health Expenditure is on the decline. Bangladeshi households contributed 67% (Taka 302 billion) of THE, and the Government share was 23% (Taka 102 billion in 2015 compared to 37% share of THE in 1997.

Drugs and medical products contribute to 64.49% of Household share of OOP [7].

A World Bank brief in 2019 reported that the share of the NCD control budget in Bangladesh - 4.2% of the health sector- was low considering the high NCD burden in the country. This results in high out-of-pocket expenditure for seeking NCD care [8]. In 2107 the government started the pilot for a social security scheme Shasthyo Surokhsha Karmasuchi (SSK) a pro poor heath protection scheme providing 50000 BDT financial cover to enrolled households for inpatient and outpatient care cost. The scheme is currently piloted in one district with plan for scaleup. A WCO KI reported a challenge with resource allocation to health sector in the country, which was not helped by underutilization: "The utilization rate is very low. In the past, it was an underutilized fund at about 5% but in recent years, it increased to 22% of the fund written back. So, this becomes a challenge to the health ministry to argue with the finance ministry to ask for more" (WCO KI)

According to KIs, two types of funding sources are available for NCD control and management. NCD services are covered by the government revenue budget and development funds. The line directors of NCDC (DGHS) and the programme staff are supported partly by the government and partly by the development fund, which is a pool of funds coming from development partners. The World Bank is a major donor to this fund. WHO funds Training of Trainer programmes for mental health provided to doctors and nurses. As NCD is a priority for both the government and the development partners, there is synergy in their expectations. However, there is no separate directorate for NCD as the line directors and other staff come on deputation from other departments and there is no formal structure. A WCO KI reported that budget for NCD is underutilized as the funds are meant for specific activities like trainings and development of guidelines. Since the NCD programme thus far is built on a public private partnership, human resourcing at the Upazila health centre (UzHC) NCD corner and community clinics is provided partly by the government and partly by development and funding agencies, and since these are project based, resources can be withdrawn once the project ends which disrupts continuity in services. Under the leadership of the line director, NCDC, development partners gather for discussions though there is no formal platform for these meetings.

Service model

NCD management in primary health care

The Government provides healthcare services to rural communities through UzHC facilities at the subdistrict level. The Upazila Health System (UHS) consists of a three-tier system that includes a hospital with 30–50 beds, Health Centers (with or without beds), and Community Clinics. This model strongly influenced the United Nations resolution on community-based care which was co-sponsored by 70 countries and unanimously adopted in May of 2023.[9]

Across levels facilities have different staff mixes of doctors, nurses, and paramedics, community health workers and the district administration plays a crucial role in managing them. SPSPNCD (2011) proposed an approach that focused on three levels- policy interventions for an effective change of environment, population-based lifestyle interventions to reduce risk factors and clinical interventions like screening and management through clinical guidelines for the population with established disease conditions. The policy advocates setting up a "model upazila" with NCD Corner and establishing primary care teams and NCD clinics to provide integrated care. The policy aimed to train health workers in both government and non-government sectors, who fall under the jurisdiction of the UZHC, in the prevention of NCDs, health promotion and the delivery of NCD services, or set up community NCD clinics with assistance from local councils, schools, NGOs, and other organisations.

Information from KI revealed that NCD corners and community clinics are unique innovations to bring people centred care in NCD services. Community clinics (CC) are headed by a community healthcare provider (CHCP), health assistant (HA) and family welfare assistant (FWA). CC provide basic blood sugar and hypertension screening. Those detected with high

BP or blood sugar are referred to NCD corners in the UzHC where they are provided with medication. Cases with complications are referred to the district hospital or medical college which often are at a distance and therefore many patients drop out from seeking secondary and tertiary care. According to the government KI, the union health sub centre, which is sandwiched between the CC and UzHC is underutilized for NCD services primarily due to the shortage of medical officers. This is another reason for overcrowding in the UzHC NCD corners which sees approximately 200 to 300 OPD patients daily. However, the fifth sectoral operational plan (July 2024 to 2029) has plans to activate the union subcenter to cater to NCD patients. Out of 492 total UzHC, 230 NCD corners have been digitalized.

In the urban areas, the local government is responsible for primary health care which is however, almost non-existent as the local government's priority is on the environment and not on health. Additionally, there is shortage of funds and human resources. Development partners fill up this void, however, it is not sufficient to cover 40% of the total population of Bangladesh that reside in urban areas. A senior DOH KI described the disparity in health infrastructure distribution in rural and urban areas of the country

> ***We have…14,000 community clinics. There are around 5000 Union Center. 492 Upazilla health complex and all 53 District Hospitals and you have a lot of medical colleges for …For the urban primary health care, we have only 32 GD 16 health facilities and two municipality hospitals. So we can see the number is still in the two digits. You shouldn't put 40% of the population (with these facilities) (DOH KI)***

Other problems further plague the urban health care structure. Most slum residents access private facilities, primarily the pharmacies. The timing of the public health care clinics do not correspond to the time when the people are free. Most people return from work late evening when the clinics are closed. Furthermore, development partners are selected to run healthcare facilities through a bidding process which can change the implementors from one cycle to another thus jeopardizing the continuous functioning of the facility. Cox's Bazaar, however, has a different scenario as most of the development partners are concentrated there. WHO Bangladesh is a major stakeholder, and after a joint situational analysis with WHO SEARO that revealed major gaps, dedicated NCD services began to be implemented from 2019. The PEN protocol is integrated, though the current system still suffers from retention of human resources, lack of supportive supervision, limited funding. Food insecurity and lack of environment that promotes physical activity compounds NCD in urban areas which urgently needs to be addressed, according to a KI.

Standard treatment workflows

Clinical Guidelines were developed for managing hypertension, diabetes, heart disease, stroke, and cancer, emphasising pharmacological and non-pharmacological treatments. Operational

manuals are designed to train primary care physicians in government and private medical practitioners in medicine, diagnosis, and prevention. The guidelines complied with the policies and regulatory frameworks related to NCDs, including the WHO Framework Convention on Tobacco Control and the Global Strategy on Diet, Physical Activity and Health. In 2018 the MSAPNCD proposed to adapt WHO PEN disease interventions and create guidelines, protocols, and tools that will aid in implementing the essential health services package in primary healthcare facilities.

According to a KI from civil society organizations, clinical management is done through the PEN protocol in all NCD corners. There is no standardized protocol in the private health sector. The health assistant motivates the community to access CC where screening for hypertension and diabetes is done but no medication is prescribed, for which patients have to visit NCD corner where they are diagnosed and provided medicines. Upward referral from NCD corner is limited due to distance.

Risk based management

The SPSPNCD 2011 advocated equipping UZHC with NCD screening tools and training the health staff to conduct population-level screening of NCD risk factors. It also recommends establishing a "Well Women Clinic" program in the model Upazilla, which would offer screening services for hypertension, diabetes, breast cancer, and cervical cancer to adult women.

Bangladesh has been gradually developing cervical cancer screening facilities since 2005 and has expanded the program to Upazila since 2012. The program uses Visual Inspection of the Cervix with Acetic Acid (VIA) for women 30 years and above at around 400 centers. The strategy aims to achieve 40% coverage of the target population by offering screening to all married women between 30–60 years old every five years. [4] The VIA-based screening is in place, and the strategy intends for all screen-positive cases to be counselled, evaluated by colposcopy/mini-colposcopy, and treated as needed.

The MSAPNCD 2018 proposed restructuring primary healthcare facilities to provide essential screening and establishing a referral system to a higher-level health facility. The policy recommended integrating NCD services with other healthcare services like maternal and child health, disability prevention, and care for chronic diseases such as TB and HIV, which would require providing health workers with proper training and orientation on delivering essential NCD services.

According to KI, in NCD corners run by the Bangladesh University of Health Sciences (BUHS), screening for diabetes and hypertension is for adults above 18 years of age. In facilities which is run under RESOLVE to save Lives Initiative managed the National Heart Foundation, screening is for 18 years and above. However, before this screening protocol is provided across the country, the immediate need is to increase coverage of those above 40 years and ensure that they are receiving adequate care, according to a DOH KI the decision to keep the screening age 40 years was a calculated decision due to challenges in estimating the need of medicine and supplies for the program in the country.

We are not sure how much drugs we need to have, to determine the eligibility for NCD screening program. We thought that if we can first cover the above 40 population in the country, we'll reduce the screening age of the population to above 30, and then after 2025 we can go for above 18 years for Universal screening (DOH KI)

Cervical cancer diagnosis and treatment is a neglected area. Only a few UzHC conduct visual inspection, but accessing treatment in tertiary care is challenging due to distance. There is limited follow up of cervical cancer patients, and the majority are detected at a late stage. HPV vaccination coverage is only in a few districts, according to a COM KI. A WCO KI reported that due to vaccine shortage, the HPV vaccination programme was stalled at the time of interview and was proposed to restart the following year. The HPV vaccination campaign targets girls aged 10–14 years and there are school based programmes. However, it is challenging to reach 30–40% of girls under 18 years due to school drop out rates. They primarily join the garment factories for work which are difficult to target as most of the girls are illegally employed. Another challenge is in the linkage to treatment if screened positive. One KI recommended including HPV vaccination in screening centers in the hospitals. WHO Bangladesh offered to provide training to the nursing staff on HPV vaccination. Cervical cancer is a priority and focus area for the Obstetrical and Gynaecological Society of Bangladesh (OGSB) which has done much advocacy work with the government.

Healthy Lifestyle Counseling

Health education and counselling are provided at health facilities by trained professionals such as health workers, midwives, nurses, and doctors. The target audience is reached in waiting areas, outpatient clinics, and community outreach. The MSAPNCD 2018 suggested creating a group of trained health counsellors employed in health facilities to provide lifestyle education counselling related to tobacco cessation and optimum intake of salt, sugar, fruits and vegetables as part of the daily diet.

KI from all categories noted that health education and counselling needs to be provided at both CC and NCD corner but this area is currently weak. Shortage of human resources, lack of time, and lack of motivation contributes to limited healthy lifestyle counselling. KI opined that a separate counsellor post should be created in the NCD corner. A WCO KI reported that since motivation is an essential part of PEN package, it should be reinforced during trainings to doctors, nurses and sub-assistant community medical officer (SACMO). However, there has been no documentation of the impact of PEN training although an assessment is underway. A KI from a CSO recommended monitoring and follow-up of trainees and providing refresher training periodically. Bangladesh Diabetic Association (BADAS) has tried a novel approach through mosques to provide healthy lifestyle education and screening. Diabetic care centres have been established in roughly 100 mosques, where trained religious leaders provide education and screening is provided by a nurse. It is now planning to extend this approach to churches and temples. A COM KI associated with BADAS spoke about the initiative

Along with the Islamic Foundation and the Minister of Religious Affairs - we started 100 diabetes corners inside the mosque. This is called as Diabetes prevention through Religious Leaders. And all the diabetes corners are equipped with glucometer, and the blood pressure machine, height and weight - all the facilities (COM KI)

Protocols and Guidelines

Clinical Guidelines have been developed for managing hypertension, diabetes, heart disease, stroke, and cancer, emphasising pharmacological and non-pharmacological treatments. Operational manuals are designed to train primary care physicians in government and private medical practitioners in medicine, diagnosis, and prevention. The guidelines complied with the policies and regulatory frameworks related to NCDs, including the WHO Framework Convention on Tobacco Control and the Global Strategy on Diet, Physical Activity and Health. In 2018 the MSAPNCD proposed to adapt WHO PEN disease interventions and create guidelines, protocols, and tools that will aid in implementing the essential health services package in primary healthcare facilities.

The PEN protocol is followed by all the implementors including a modified version by development partners in NCD corners. Development partners like BRAC and Bangladesh Diabetic Association (BADAS) were involved in the development of clinical guidelines.

Access to essential medicines and technology

Bangladesh's domestic pharmaceutical industry provides 98% of essential drugs in the country, but limited regulatory capacity makes it hard to provide quality medical products at affordable prices, especially for vulnerable groups. NCD policies have reiterated ensuring uninterrupted essential NCD medicines and basic diagnostic facilities at all levels of care, starting from primary care centres. By 2025, one of the goals for addressing non-communicable diseases is to ensure that 80% of health facilities (both public and private) are equipped with essential medicines, including generics, necessary for treating significant NCDs.

The KI from the Health Directorate reported the continued supply of medicines as the primary challenge in NCD care. It is mandatory for DGHS to buy medicines from the Essential Drug Company Limited (EDCL), which produces (or procures) generic medicines. However, due to lack of forecasting in the system- a result of lack of information due to incomplete automation- the medicine supply often falls short and stocks get depleted in the NCD corners. A DOH KI mentioned about the challenge associated with drug forecasting as

Our problem is that we need information. How many people are there (with NCDs) and how many doctors are there (at health centres) .. the this kind of information is not available right now. So what we've done is, you know, just having some sort of calculation that these are the busy areas (facilities with high OPD numbers) sitting around, give them more medicine and where there's not too much busy area, we give them less medicine (DOH KI)

Drug prices are reportedly high even in the market which is a major contributory factor for out of pocket expenditure among poor patients. While 10–20 crore BDT is available for UzHC currently for NCD management, this is significantly low compared to the projected need for 100,000 crore BDT in NCD corners, as conveyed by KIs.

The fifth sectoral plan has prioritized a more systematic forecasting mechanism with enhanced digitalization. The EDCL also plans to increase the number of manufacturing factories with a larger capacity for stocking medicines. The need for workshop on indenting and forecasting principles was reported by a DOH KI.

Challenges in the provision of NCD services include diagnostic service gaps: in 2014, only 24.6% of public facilities in Bangladesh had the necessary equipment to perform blood glucose testing[10]. This report noted that less than 50% of NGO clinics and private hospitals had the capacity for blood glucose testing. It would be important to check/update these capacities going forward.

Team-based care and human resources

HPNSDP 2011 recommended revitalising community health clinics by posting community health care providers (CHCP), health assistant, as well as family welfare assistant to strengthen grassroots-level delivery of primary care services. SPSPNCD2011 recommended creating a primary care team by reorienting the existing staff structure. The staff vacancy rate fell to 15% in 2014 from 20% in 2011 following large scale recruitment of doctors and nurses; however, the maldistribution of staff and skill mix of professionals remain a concern.

Most of the KI reported that a team based approach led to the success of NCD service delivery in primary health care. Two MO, staff nurse and a pharmacist are available in NCD corners with a statistician to enter data. At the community clinic, the SACMO conducts screening while the health assistant and family welfare assistant motivates people from the community to access care and provides health information.

However, human resource shortages are common, and this is also a critical gap in provision of NCD services in the Chittagong hill tracts areas. One COM KI suggested providing added incentive to health providers in remote areas, noting the common health system challenge of rural and remote retention:

We have sites from Chittagong Hill Tracts and in those three districts we found that they do not like access services…so these areas are hard to reach. They always suffer from a scarcity of healthcare providers, because when doctors and nurses are posted there, they usually try to get a transfer from that area as soon as possible. (COM KI)

Another challenge reported was when human resources are supported by projects implemented by development partners and they are withdrawn when the project ends. Bangladesh's formal health system still faces a significant shortage of qualified practitioners and paramedical staff, forcing many patients to seek the services of unqualified and formally unrecognised allopathic providers and homoeopaths as the first point of contact.

Systems for Monitoring

BanNet, a collaborative of organisations/institutions to gather, analyse and disseminate information concerning NCDs, was established to strengthen NCD surveillance and knowledge dissemination. However, our KI interviews suggested that BanNet has been inactive for several years. The NCD prevention and control monitoring framework adheres to the WHO Comprehensive Global Monitoring Framework's 25 indicators and ten regional targets. It is recommended by MSAPNCD 2018 to conduct surveys such as NCD STEPs, GATS, and GYTS regularly and strengthen the national cancer registry based on hospital and population registries.

The digital MIS for NCD collects data from NCD corners and provides to the District Health Information Systems (DHIS). The monitoring system is also plagued by several challenges as reported by the health department KIs. There is no segregation of NCD from general health conditions in the current MIS system. Human resource shortages and large footfall of OPD patients in NCD corners results in challenges of data entry although a statistician is based there. Also, development partners use different software for data collection which makes it difficult to integrate in the DHIS. Collection of data from all the centres is therefore currently a challenge. A KI with direct experience spoke about the challenge of disintegrated NCD data system in the country

We collect some individual data (patient) also from NCD corner, especially from primary healthcare centre in the NCD corner. The challenge is that we collect data with different apps and that is not aligned with our systems. So, they have data but it's not integrated with our central system (DOH KI)

Nevertheless, in RESOLVE areas of the National Heart Foundation, a simple app is used which is currently being encouraged by the government to be taken up by all development partners,

as it is interoperable with DHIS. Furthermore, private health facilities do not provide any data. The KI from the DGHS reported that the plan for introducing a unique ID for each patient will be piloted in a few UZHC for 1 or 2 months after which it will be scaled up. This will enable integration of data in the next implementation phase. In urban areas, data systems are poor and in Cox's Bazaar, the KI from WHO reported that the data system is still under development. Apart from the coverage data, BRAC is introducing another digital application that records behavioral risk factors which are currently absent from MIS. A proof of concept study was approved by the government which has allowed its use in some of the NCD cornersThe STEPS survey is conducted every five years providing population level estimate. Apart from this, an Urban Health survey was conducted.

Quality Assurance

To maintain high standards of care in service delivery, MOHFW has established national committees on Quality, namely the National Steering Committee (NSC), the National Technical Committee (NTC), and the Quality Assurance Task Group (QATG) under the Directorate General of Health Services (DGHS). In 2011 HPNSPD suggested implementing Total Quality Management for hospital services. Accreditation would depend on accessibility, adequate logistics, the information provided to clients, the technical competence of providers, interpersonal relations, responsiveness, continuity of services, and appropriate service options.

KI interviews reveal that there is a lack of separate regulatory mechanism for assessing the quality of care in NCD corners and community clinics. Additionally, there is no patient satisfaction feedback mechanism introduced yet.

Community

Mass awareness of risks and services

This is one area on which all the KI were in agreement that awareness of NCD is lacking in the population. It was reported that only 35% were aware of diabetes and out of those diagnosed, approximately only 10% were concerned about seeking treatment. There has been no mass awareness campaigns of NCD except for tobacco control campaigns. In private facilities, prevention was reportedly not a priority. In urban areas, lack of awareness was cited by a KI as a major reason for non- utilization of service, high salt diets and lack of dietary diversity. Some efforts were reportedly underway to advocate for and begin to modify food environments.

Addressing inequalities/Leaving no one behind

In 2011, the HPNSDP identified several hard-to-reach populations and those facing vulnerabilities. Special populations, such as ethnic minorities, tribal communities, people living with disabilities, those involved in specific professions like cleaning and sex work, the elderly,

and those living in poor geographic areas, were identified. Interventions were planned with the support of NGOs and other departments to target these populations and provide necessary assistance. In 2016, HNPSIP highlighted the unequal access to healthcare for vulnerable people in the country and considered ensuring the availability of services as a critical strategy of the sector development plan. Using disaggregated data to monitor progress and ensure regular improvement was also suggested. MSAPNCD 2018 proposed a targeted intervention by tertiary health facilities to provide health services to hard-to-reach populations like urban slums and other marginalised communities with the support of MoHFW.

A KI from CSO reported that although services exist in hard to reach areas, the lack of roads and transport makes it difficult to access services. The ethnic minority population prefers to use traditional healers for health issues. However, some progress has been made such as establishing a medical college in Rongamati which caters to mostly the tribal population of Santhals and Orans. The urban poor were also reported by a KI to be underserved by NCD services: almost 70% of the urban poor were reportedly accessing the nearest pharmacy for any health problem. They additionally visit private facilities for something like cancer and in the absence of any financial risk protection, they experience "catastrophic health expenditure" that keeps them below the poverty level.

Community participation in policy-making

The Strategic Plan for Surveillance and Prevention of Non-Communicable Diseases in 2011–2015 was developed based on the guiding principles of people-centeredness, cultural relevance, focus on reducing inequity, ensuring care continuum and involvement of the whole of the community, which reflect the thrust and importance on the people centeredness given by the policy.

Community engagement in the NCD programme was reportedly minimal and highly variant. In some areas with strong community leaders, communities were involved in the implementation of the programme, although, in most areas, engagement was absent. There was a lack of community representation in policy development. Community organisations, like development and academic partners, had a minimal role in policy making, but heavy involvement in implementation of the programme A KI from a Bangladesh diabetic association mentioned about their unique role as service providers:

> ***if you compare with the other Diabetes Associations, like India or the other parts of the world, they are mainly involved in advocacy. But this is the only association who are not involved in advocacy. We give care, the diabetes care, and the non-diabetes care through our own institutes. At this moment we have 110 in the care facilities throughout Bangladesh. These act as the secondary and the tertiary and the primary care providers (COM KI)***

WHO guidance and role

The development of the NCD policies in Bangladesh has been supported by technical assistance from the WHO country office in Bangladesh. Policies were developed in compliance with the Global Action Plan and Regional NCD Action Plans of the WHO. The WHO PEN protocol was accepted and introduced by the government in NCD prevention, control and management. The WHO Bangladesh is currently working with the DGHS to set up the M&E system. WHO provides PEN training of trainers (ToT) and also supports in direct implementation in Cox's Bazaar among the Rohingya refugees. WHO also work with the Directorate General of Drug Administration which is a regulatory body for quality control of pharmaceuticals. HPV vaccination strategy was another area guided and supported by WHO.

Overall in Bangladesh, governance frameworks were shaped by WHO normative guidance and showed a commitment to NCD programming as part of PHC. However, allocations and fund utilisation had yet to match the mandate. Core health system design and recent improvements in human resourcing were starting to set a base for NCD service delivery although challenges of human resource maldistribution and skilling remained. Systems to capture information on drugs and service utilisation required focus. Public awareness was considered another area requiring emphasis with community organisations not playing a role in policy formulation, but certainly in programme design. This would perhaps give them unique insights on how policy (re)formulation ought to take place, addressing gaps like geographic accessibility, training, and human resource shortages.

Bhutan

Governance

Policies and strategy

The Multisectoral National Action Plan for the Control of Non-Communicable Diseases (2015–2020) drew on multi sectoral collaboration at the national, regional and community levels [11]. Breast cancer, oral cancer, and gestational diabetes screening protocols and programs were introduced [12]. The Service with Compassion and Care Initiative (SCCI) launched in 2018 put people centeredness in the heart of service delivery with clearly defined roles of healthcare workers [12]. It also aimed to address a wide range of NCDs. The Bhutan Cancer Control Strategy (2019–2025) called for the review of national medicines list as well as expanding health promotion to include sexual and reproductive factors associated with cancer.[13] The Guidelines for Cervical Cancer Program in Bhutan (2019–2023), Guidelines for Screening of Gastric Cancer, Cervical Cancer and Breast Cancer (2020–2023) expanded the role of health workers. All policy documents outlined measurable indicators to track progress. Plans for periodic audits of progress and data collection were also often outlined.

Governance and Resources

In regard to governance structures, multistakeholder collaboration was a common theme across NCD policies and programs. The Multisectoral National Action Plan for the Control of Non-Communicable Diseases (2015–2020) clearly defined roles for a National Steering Committee on NCDs as well as other implementation subcommittees, the Ministry of Health, Lifestyle Related Disease Program (LRDP), local and district governments and healthcare organizations, and a range of multisectoral departments and agencies, such as the Ministry of Education.

A WCO KI mentioned about the commitment of the Royal Bhutan government in NCD management, and the joint action supported by WHO in shaping the agenda of NCD response in the country. The government plans to place at 50,000 patients in hypertension and diabetes protocol-based management by 2025:

> ***We had this national NCD workshop, and we have arrived how many people should we put on hypertension drugs in each district. We have set targets for each district…now we have to do action tracking. So that workshop was in one way a turning point because we had the leadership of the Ministry of Health, we had support from university, support from WHO." (WCO KI)***

The Bhutan Cancer Control Strategy (2019–2025) was guided by a National Technical Advisory Body (TAB) to advise the National Cancer Control Program (NCCP), a dedicated program at the Ministry of Health staffed with full-time employees. The Guidelines for Screening of Gastric Cancer, Cervical Cancer and Breast Cancer (2020–2023) and Health Flagship Blueprint (2020–2023) were both led by Project Management Units within the Ministry of Health, along with support from Project Steering Committees and Technical Working Groups comprised of medical experts.

Our analysis of policy documents and guidelines found that while Guidelines for Cervical Cancer Program, Guidelines for Screening of Gastric Cancer, Cervical Cancer and Breast Cancer, and the Health Flagship Blueprint specify the amount of funds available for policy implementation, most policy documents do not outline a specific budget. Furthermore, beyond mentioning the need to ensure cost-effectiveness, policies rarely outlined specific strategies to ensure the long-term sustainability of the programs. Information is not provided in all policy documents regarding best practices, program enablers and barriers, the perceived quality of care by the community, and the steps taken to ensure community involvement in the policy process.

Service Delivery

Evidence Based Protocols

Under the Multisectoral National Action Plan for the Control of Non-Communicable Diseases (2015–2020), key strategic priorities included NCD awareness, early detection and management

of NCDs and their risk factors, as well as strengthening of surveillance and monitoring systems. The Bhutan Cancer Control Strategy (2019–2025) prioritized developing a national technical guideline for cancer screening, healthy lifestyle promotion, implementing screening programs, enhancing the monitoring and supervision of existing screening programs, and providing people-centred cancer treatment at national and regional hospitals. Later initiatives through the WHO Country Cooperation Strategy (2020–2024) focused on expanding PEN-HEARTS initiatives to all districts, expanding NCD health services available at regional referral hospitals, and improving the availability of diagnostic services and human resources at Basic Health Units (primary care facilities).

The Guidelines for Cervical Cancer Program in Bhutan (2019–2023) began to set out roles and responsibilities for cancer detection and treatment at the national, regional and district hospital level, as well as at the level of satellite clinics and community organizations, with a major focus on HPV vaccination for prevention services. The Health Flagship Blueprint (2020–2023) further built on cancer prevention and detection by laying out clear screening guidelines for adults.

Screening and Risk based Management

According to STEPS 2019 data, blood pressure screening rates were 83.3% of persons aged 15–69, and a fourth of those with raised levels had ever taken medication. With regard to blood glucose, we found low screening rates with men missing out on screening. Sex inequalities were common here as were education related inequalities in being prescribed with medication and receiving drugs, which requires further attention. In comparison to blood pressure, about a fourth of persons had controlled blood glucose (more so among women and more so in rural areas). We learned from our KI interviews that NCD screening is integrated with every routine field visits of healthcare staff in the community and opportunistic screening and awareness sessions were conducted regularly in the community. A PHC KI stated that *"the (PHC) team moves to community for monthly vaccination programme, after carrying out the vaccination session, they start the screening of old aged peoples and whoever comes through the clinic ".*

Great strides have been made in increasing access to cervical cancer screening. According to STEPS data, from 0% in 2014, 45.6% of women aged 15–69 had been tested for cancer in the previous five years (see Fig. 4). Screening coverage was greater in rural areas as compared to urban areas, however.

Fig. 4. Proportion of women aged 15–69 tested for cervical cancer in the previous five years in Bhutan (2014, 2019)

Source: Regional NCD Dashboard (STEPS, 2014, 2019)

Healthy Lifestyle Counselling

A range of policies and programmes focused on promotion of health through behavioural modifications. The United Nations Development Assistance Framework Bhutan One Program (2014–2018) had a particular emphasis on educating women, youth, and at-risk populations on practices for improved nutrition and well-being. The Multisectoral National Action Plan for the Control of Non-Communicable Diseases (2015–2020), Service with Care and Compassion Initiative, Bhutan Cancer Control Strategy (2019–2025) prioritized education on nutrition, physical activity and avoidance of unhealthy substances such as tobacco and alcohol. Notably, the Service with Care and Compassion Initiative aimed to support physical activity through the introduction of open-air gym facilities across the country. The Guidelines for Screening of Breast Cancer, Cervical Cancer and Breast Cancer, as well as the Health Flagship Blueprint (2020–2023 placed additional emphasis on raising awareness on cancer prevention through behaviours such as breast feeding for breast cancer, detecting the early signs and symptoms of cancer, as well as the diagnostic and treatment services available.

Access to Essential Medicine and Technology

A small number of programmes and policies explicitly address the challenges regarding access to medicines and health technology across the country. The Service with Care and Compassion Initiative aimed to ensure ease of access to medication at the community level, while the Bhutan Cancer Control Strategy (2019–2025) called for a review of the national medicines list to ensure alignment with WHO EMLC (Essential Medicines List for Children) 2019 and clarifying medicines registered and procured based on treatment capacity. There have been marked increases in HPV vaccination coverage, with at least one dose delivered to 97% of adolescent girls [14].

> ***"Once all of a sudden the whole country didn't have Metoprolol, then we had to change to Atenonlol...but we cannot define it as a challenge" (District level service provider)***

Team Based Care and Human Resources

The SCCI has clearly defined roles of healthcare workers involved in community based primary heath care practice and NCD screening services. The Guidelines for Screening of Gastric Cancer, Cervical Cancer and Breast Cancer further laid out the healthcare workers needed for prevention, detection and treatment services of cancer across the national, regional, district, and community levels. A KI involved with medical education in Bhutan spoke to us about the role of team building exercises and designated roles of health workers as part of SCCI which ensured people centred care

Why is people-centered getting the momentum? It was because the training was designed to not just focus on the service delivery alone. Rather, it was on the holistic process of team engagement.... therefore everybody (Health workers) started taking that ownership and that oneness and felt that "I have a role here." (COM KI)

The COM KI further elaborated about the human resource shortage Bhutan faces in delivering NCD services owing to the recent trend in migration of health workers outside of the country. The government is trying to retain human resources, to focus on training and creating additional NCD care providers to ensure continuity of services: "At the town level, (having just) one person is an issue. So we are training alternative NCD focal person. if even one leaves, the other will work. this is to ensure that our services are continuing" (COM KI).

An Academic involved with medical education in Bhutan described a WHO-supported research study which enabled the academics from teaching hospitals of Bhutan to visit health facilities delivering NCD care in the country and understand the job competences required to effectively carry out the duties, the findings of this visits were summarised and the curriculum of medical doctors was revised to produce health care professional who meet the requirement of the health sector.

Systems for Monitoring

All policy documents outlined measurable indicators relating to health outcomes and service use to track progress. Plans for periodic audits of progress and data collection were also often outlined. For instance, under the Multisectoral National Action Plan for the Control of Non-Communicable Diseases (2015–2020), a Brief External Review conducted by a third-party consultant were sought to be conducted at the end of 2016, 2017 and 2019 with a more thorough mid-term and whole-plan review in 2018 and 2020. Some programs, such as the Guidelines for Cervical Cancer Program (2019–2025) called for strengthening of monitoring and evaluation efforts by improving a newly established national cancer registry. Most data systems were manually entered and segregated by program, though some consideration was being given to developing real time, digitized data systems by adapting DHIS and nascent efforts to develop an electronic patient information system (the latter was at the time of our interactions, only operational at higher level facilities).

Community

Mass Awareness

Several policies, such as United Nations Development Assistance Framework Bhutan One Programme (2014–2018), Multisectoral NCD Action Plan (2015), Guideline for Cervical Cancer

Program in Bhutan (2019–2023), Guideline for Screening of Gastric Cancer, Cervical Cancer and Breast Cancer, and Health Flagship Blueprint (2020–2023) aimed to run education campaigns in collaboration with media to enhance information access about healthy lifestyle behaviours, health services, and promote community participation in NCD programs.

Notwithstanding this, STEPS 2019 data reveal some gaps: mass awareness of blood pressure status appeared to be low. There also appears to be lack of awareness of status among those with high blood pressure with 65.1% not being aware of their diagnosis and only 5.7% of those with raised blood pressure being aware and on treatment with control. As in the case of blood pressure, mass awareness, particularly among men appears to be low as more than half of those with raised blood sugar did not know their diagnosis and 2 out of five persons no longer on medication said they were not necessary.

Emphasis had been placed on youth advocacy and outreach for cancer control – across all 20 districts of the country, as a WCO KI informed us. This had support at the highest level of the Queen Mother.

Community participation in policymaking

Furthermore, several policies made provisions to include civil society organizations and community members in the policy development and/or implementation process. The *Bhutan Cancer Control Strategy (2019–2025)* implemented a National Technical Advisory Body, partly comprised of civil society organizations to guide the program. The *United Nations Development Assistance Framework Bhutan One Programme* (2012) was developed using consultative processes with equity-deserving groups and civil society organizations. Furthermore, the *Guidelines for the Cervical Cancer Program (2019–2023)* included community participation as a guiding principle. In particular, promoted community mobilization and community involvement in knowledge dissemination efforts. While co production of policies is key area in ensuring people centered care our KI interviews revealed an important aspect: the role of cultural sensitivity, a COM KI said

> ***But we have to be mindful of one thing, … it's a very personal perspective, the cultural aspect is very important because if you go to say a rural village in Bhutan, forget rural, even in the district… culturally we are a collectivist culture. We are not like western countries, so developed, and people can openly say. But in many instances, not many actually, majority of the instances, people may not speak, they say you decide, you're the expert, we are fine. (COM KI)***

The KI further added that currently a pilot project is operational in a district where a senior person affected with diabetes or hypertension from a community is invited to health centre conducting NCD clinic and speak to people gathered there about the lived experience

of navigating though diagnosis and treatment and acts as change agent to improve NCD awareness in the community.

Moreover, while some policies, such as the Bhutan One Programme, the Bhutan Cancer Control Strategy, the WHO Country Cooperation Strategy and the Guidelines for Cervical Cancer Program in Bhutan recognized the need to ensure hard-to-reach groups have access to services introduced under the policies, they did not outline specific steps on their approach to achieving this objective. There was also little information on specific plans to reduce inequality across the population.

WHO guidance and tools

Key WHO guidance informing programs and policies within the country included the package of essential noncommunicable (PEN) disease interventions and Global Monitoring Framework on NCDs (2015) – Bhutan was an early adopter of these elements.

As early as 2014, a three-month PEN performance assessment study indicated decreasing cardiovascular disease risk, as well as improvement in blood pressure and diabetes control among over 39000 participants from PEN pilot districts.[15] Among those who participated in three follow-up visits, CVD risk declined from 13% to 7.3%. Use of medication increased for hypertension and diabetes, resulting in a decrease in the prevalence of high blood pressure from 42.3% to 21.5%.[15] As early as 2014, a three-month PEN performance assessment study indicated decreasing cardiovascular disease risk, as well as improvement in blood pressure and diabetes control among over 39000 participants from PEN pilot districts.[15] Among those who participated in three follow-up visits, CVD risk declined from 13% to 7.3%. Use of medication increased for hypertension and diabetes, resulting in a decrease in the prevalence of high blood pressure from 42.3% to 21.5%.[15] Furthermore, a more recent PEN HEARTS assessment demonstrated decreasing treatment gaps and higher retention of patients in care.

The WHO also provided support for implementing NCD-focused programs and initiatives through the *WHO Country Cooperation Strategy (2020–2024)*, as well as input and support in the development of initiatives such as the *Bhutan Cancer Control Strategy (2019–2025)*.

Bhutan showed great commitment and alignment to WHO norms and guidance, having implemented PEN early on, carrying out STEPS surveys as recently as 2019, and aligning with many of the offerings and frameworks of this and other development partners. In addition, a bespoke model of service delivery was being developed in the country, based on an ethos of compassion – which reflects a Bhutanese cultural perspective on people-centredness. A collectivist approach is being pursued, one that affects even training of health providers as well as the nature of support offered, and while there is a need to impart greater information on NCD risk and provide opportunities for counselling etc., the country is on track to use its own cultural model as a base, bringing in WHO and other elements and good practices into the design. Cervical cancer programming is a model in this country and has support and funding at the highest levels; this kind of support may be parlayed for other NCDs.

Democratic People's Republic of Korea

Governance

Policies and Strategy

In 2014, the Democratic People's Republic of Korea (DPRK) introduced the National Strategic Plan for the Prevention and Control of Non-Communicable Diseases (2014–2020) [16] . In the same year, the WHO Country Strategic Plan (2014–2019) aimed to build capacity for the implementation of the National Strategic Plan and other multisectoral NCD policies and programmes [17]. Further, in 2017 the UN Strategic Framework for Cooperation between the United Nations and the Democratic People's Republic of Korea (2017–2021) aimed to address NCDs particularly cardiovascular diseases, hypertension, and cancer through improved social determinants of health, such as food security, as well as environmental and institutional sustainability [18].

Governance and Resources

Under the WHO Country Strategic Plan (2014–2019), the Ministry of Health (MoH) was assigned to lead action on strategic objectives with support from WHO Country Office and international organizations including GAVI, UNICEF, and FAO [17]. The Strategic Plan aimed to support governments in identifying the financial resources needed to implement NCD policies and programs, such as the National Strategic Plan for the Prevention and Control of Non-Communicable Diseases (2014–2020). [16] The Ministry of Health also led the implementation of the National Strategic Plan for NCDs along with partner ministries, drawing on financial resources from the state budget, donations of institutes, enterprises and social organizations, and the support of international organizations and donors. The UN Strategic Framework for Cooperation aimed to further NCD efforts through collaboration with the national government, as well as UN and international partner agencies, such as UNICEF, FAO, and WHO. Regarding financing, the Framework acknowledged the relative uncertainty regarding the financial resources available to the UN in DPRK.

Under the WHO Country Strategic Plan (2014–2019), cooperation with the Ministry of Public Health aimed to build capacity for the implementation of the National Strategic Plan (2014–2020) and other multisectoral NCD policies and programmes. The National Strategic Plan (2014–2020) also focused on initiating a multisectoral response, including organizations such as the Ministry of Finance and Ministry of Trade to address relevant social determinants of health. The UN Strategic Framework for Cooperation (2017–2021) aimed to involve a variety of domestic and international implementation partners, such as UNICEF. Financing strategies for the implementation of the policies were not always provided. In fact, the UN Strategic Framework for Cooperation (2017–2021) acknowledged the relative uncertainty regarding the financial resources available to the UN in DPRK. 40

Service Delivery

Evidence Based Protocols

It aimed to strengthen partnerships with both government and external partners inside and outside of the health sector . The National Strategic Plan for NCDs (2014–2020) focused on intersectoral response, prevention, treatment, and management of NCDs, with an emphasis on expanded screening services as well as health promotion and education. The UN Strategic Framework for Cooperation (2017–2021) aimed to focus specifically on cardiovascular diseases, hypertension, and cancer, through four strategic priorities: food and nutrition security, social services development, resilience and sustainability, and data management.[18]

Screening and Risk based Management

The National Strategic Plan for NCDs (2014–2020) commits the aimed to strengthening and improving preventive health care, to carry out actively periodical screening and registration of and medical service delivery for patients with chronic diseases including cardiovascular diseases, cancer and diabetes . Under this plan, the DPRK aimed to reach 90% coverage in cancer screening for adults above 40 years by 2025.

Healthy Lifestyle Counselling

Under the National Strategic Plan for NCDs (2014–2020), there is a component of health education programming to contribute towards NCD-related health promotion.

Access to Essential Medicine and Technology

The National Strategic Plan for NCDs (2014–2020) aimed to improve the supply of and access to the essential drugs and equipment needed to diagnose, treat, and manage main noncommunicable diseases. Specific plans to ensure sustainability of the policies and access to medicines and testing were not specifically addressed in policy documents.

Systems for Monitoring

For the WHO Country Cooperation Strategy (2014–2019), the WHO will monitor programme implementation via mid-term and final evaluations. The National Plan for NCDs (2014–2019) aimed to strengthen research and evaluation on NCDs and the Ministry of Public Health was assigned to report to the Ministry of Health on data collected. Relevant indicators to track progress were clearly outlined for both the WHO Country Cooperation Strategy (2014–2019) (2) and the National Plan for NCDs (2014–2019). Under the UN Strategic Framework for Cooperation (2017–2021), the government agreed to provide timely access to relevant and accurate NCD data. Data was planned to be disaggregated by sex and age, and any other variable necessary to identify the most vulnerable groups.

Community

Mass Awareness

The National Strategic Plan for NCDs (2014–2020) focused on enhancing the prevention and control of noncommunicable diseases and risk factors through mass media and public health reference books. Information was unavailable in all policy documents regarding best practices, program enablers and barriers, the perceived quality of care by the community, and the steps taken to ensure community involvement in the policy process.

Provision for access for hard-to-reach population groups

The UN Strategic Framework for Cooperation (2017–2021) aimed to apply a human-rights, people-centred approach, as well as support gender equality Despite this, specific steps to achieve this were not outlined. However, the framework did take steps toward identifying the groups most vulnerable to NCDs by entering into an agreement with the government, which would provide NCD data disaggregated by sex, gender, and other relevant variables . There was also little information on specific plans in policy documents to reduce inequality across the population

WHO guidance and tools

Under the WHO Country Strategic Plan (2014–2019), the WHO Country Office for DPRK provided direct technical assistance for the implementation of NCD policies and programmes . In addition, under the National Strategic Plan for NCDs (2014–2020), while the role of the WHO was not specified, WHO involvement in activities such as developing conventions for Tobacco Control and introducing the Package of Essential NCD interventions shaped the development of the policy.

DPRK introduced a focal document in 2014 that covered many of the aspects assessed with WHO tools appearing to be cross referenced. Information on details of program design, spending and coverage is required to ascertain more nuanced information on progress with service delivery and to have an indication on the community-related dimensions of people-centred NCD care.

India

Governance

Policies and strategy

India's Policies and Programmes on Non-Communicable Diseases (NCDs) have evolved over the years to address the prevention and control of major NCDs such as cancer, diabetes, cardiovascular diseases, stroke, and more. The National Programme for the Prevention and Control of NCDs (NPCDCS), launched in 2010, laid the groundwork for NCD policies in India.

In 2013, the operational guidelines decentralized NCD activities and expanded screening and early detection efforts. A task force on Comprehensive Primary Health Care (CPHC) in 2014 paved the way for further decentralization which was the catalyst for population- based screening and Ayushman Bharat Health and Wellness Centres (AB- HWC). The 2017–2022 National Multisectoral Action Plan for Prevention and Control of Non- Communicable Diseases introduced population-based screening for adults above 30 years with an emphasis on early detection and appropriate referral. From an outreach and camp-based approach, screening is now taken to the population level. The policy landscape expanded further to engage various stakeholders, including separate ministries of the Union government, state/union territory bodies, civil society, and international partners.

Additionally, the National Monitoring Framework laid down a process of accountability through collecting and storing data on 10 targets and 21 indicators on mortality, risk factors, and health systems response to NCD. In 2017, the National Health Policy emphasized people-centred care and introduced the concept of "Health and Wellness Centers" (HWCs) at the primary healthcare level. This was described as a paradigm shift by a DOH KI:

> ***If you have a hospital-based approach... any health centre-based approach, we could not achieve the population... we could not grab the population... could not provide the kind of message we would like to say in the community. After this paradigm shift parallely, establishment of HWCs, now with Ayushman Arogya Mandir approach, we could shift from hospital to community-based approach. (DOH KI)***

It was around this time that primary health care strengthening was concretized with decentralization being the pivot of NCD programming. Screening for oral, breast, cervical cancer, chronic obstructive pulmonary disease (COPD), hypertension, and diabetes was expanded under this policy. The latest policy, the National Programme for Prevention and Control of Non-Communicable Diseases in 2023, identified additional priority NCD conditions such as chronic obstructive pulmonary disease and asthma, chronic kidney disease, and non-alcoholic fatty liver disease.

Governance and Resources

Though health is a state subject, the Department of Health & Family Welfare, Government of India provides technical and financial support to the States/UTs under the NPCDCS (now the NPCNCD). The NPCDCS was allocating financial support under NHM for awareness generation (IEC) activities for NCDs to be undertaken by the States/UTs as per their Programme Implementation Plans (PIPs). State-level NCD Cells have been responsible for overall planning, implementation, monitoring and evaluation of the different activities, with corresponding district NCD cells. A shift began to appear around 2017 with the push for a more comprehensive and quality primary health care package. Beginning in 2017, HWC were developed at selected PHCs and sub-health centres, intended to become the hub of delivery of a comprehensive package

of NCD services. In the ministry health human resource nodal officers and the NHM Mission Director has been given the responsibility for HRH recruitment and management. Dedicated budgets have been earmarked for drugs and supplies, lab equipment, IEC, infrastructure, referral transport, diagnostics, training and compensation for ASHA.

Building on this, the 2023 guidelines see the integration of the Fifteenth Finance Commission support for diagnostic infrastructure in rural and urban areas based on the mandate to achieve universal health coverage. It also emphasizes the role of Pradhan Mantri- Ayushman Bharat Health Infrastructure Mission (PM-ABHIM) to develop the capacities of institutions including critical care blocks and integrated public health laboratories) across the continuum of care at all levels of the health system.

> ***NCDs needs political and administrative will...NCDs like tobacco control is beyond health sector alone... for this to happen you need to monitor at the highest level... PM monitors the NCD Indicators (DOH KI)***

Service Delivery

Evidence based protocols

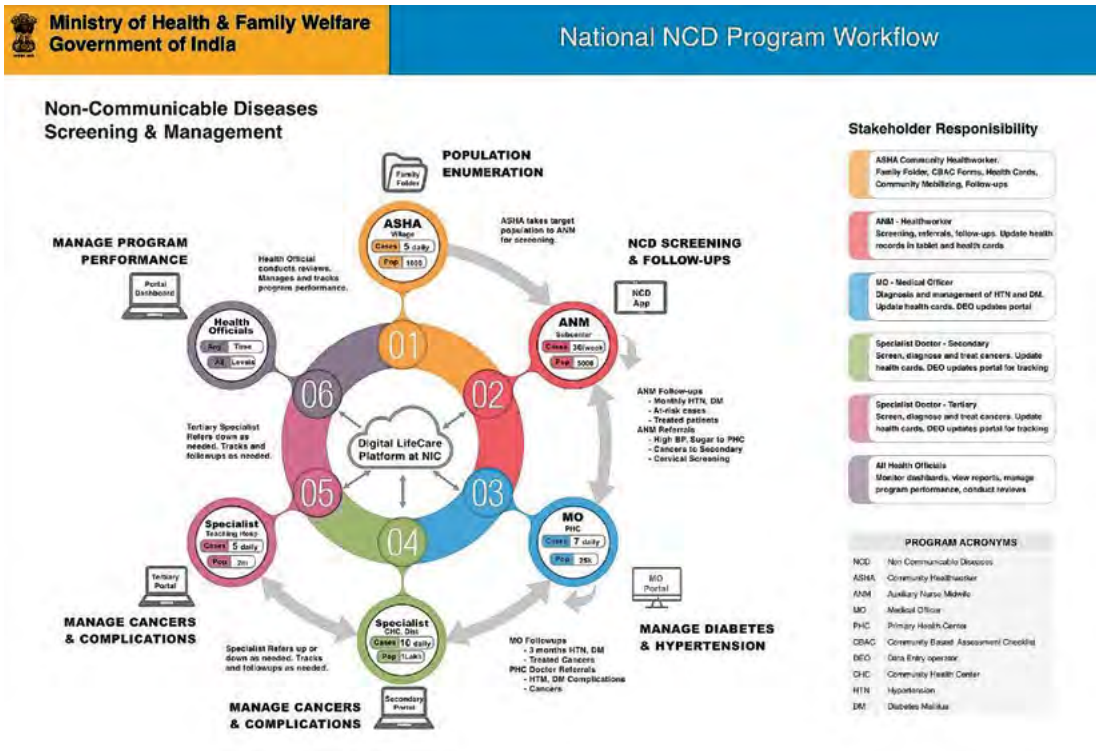
The service delivery model of NCD includes population- based screening of hypertension, diabetes and common cancers under NHM at the primary health care level. Screening of these common NCDs is an integral part of service delivery under Ayushman Bharat – Health and Wellness Centres (AB-HWC). The role of HWC has expanded also to health education, referral, dispensing medicines, teleconsultation and maintaining electronic health records. Concerned Auxiliary Nurse Midwives (ANM), staff nurses, mid-level medical officers are trained on oral, breast and cervical cancer, the latter through visual inspection using Acetic Acid (VIA). Confirmation of diagnosis, treatment initiation, and management is intended to be done at the primary health canter (PHC) and the Community Health Center (CHC). The CHC could offer colposcopy, wherever possible, for those that are VIA positive and cannot be managed by cryotherapy at the level of the PHC. Complicated cases are to be referred to district hospital (DH) and follow up and risk management is provided at the HWC/PHC.

The Indian Public Health Standards (IPHS) for Primary Health Centres (PHCs), published in 2007, revised in 2012 and most recently in 2022, are a set of uniform standards envisaged to deliver quality services to citizens with dignity and respect and is a reference point for public health care facility planning and up-gradation. Concomitant to the many new initiatives and programmes, the revised 2022 IPHS focus on service delivery at every level which will further strengthen components viz. infrastructure, human resources, drugs, diagnostics/equipment, quality improvement, monitoring/supervision, governance, and leadership. Until recently, well-functioning PHCs were providing services that are limited to reproductive, sexual and child health along with some of the National Disease Control Programmes. Ayushman Bharat with its

two inter-related components of Health and Wellness Centres (HWCs) and the Pradhan Mantri Jan Arogya Yojana (PM-JAY) represents a paradigm shift towards India's path to Universal Health Coverage (UHC). HWC have been introduced to play an important role in prevention of communicable as well as non- communicable diseases with guideline specifications for urban and rural areas. Under this classification, all PHC conducting deliveries are envisaged to be converted to HWC that offer preventive and promotive health interventions and functions, including those related to NCDs.

With the vision to make Universal Health Coverage a reality in the country, the Government of India has started many initiatives, development of Standard Treatment Workflows is a catalytic step in this direction (see Fig. 5).[19] The Indian Council of Medical Research has made available its Standard Treatment Workflows (STWs) in three volumes which contain 11 specialities with 52 diseases. [19] The Indian Council of Medical Research has made available its Standard Treatment Workflows (STWs) in three volumes which contain 11 specialities with 52 diseases. A continuum of care has been established through referral linkages. A Primary Health Centre (PHC) that is linked to a cluster of HWCs serves as the first point of referral for many disease conditions for the HWCs in its jurisdiction. The patients referred from the sub-center/HWC to the PHC are to have confirmatory tests prescribed by the medical officer who is supported by the staff nurse and lab technician. Health education and monitoring of records is also done at the PHC. In case of cancerous lesions, the CHC is to offer cryotherapy and for complicated cases, management is to be done at the district hospital. This was a base upon which customizations would have to be laid, as described by a ministry KI:

Fig. 5. India's National NCD programme workflow



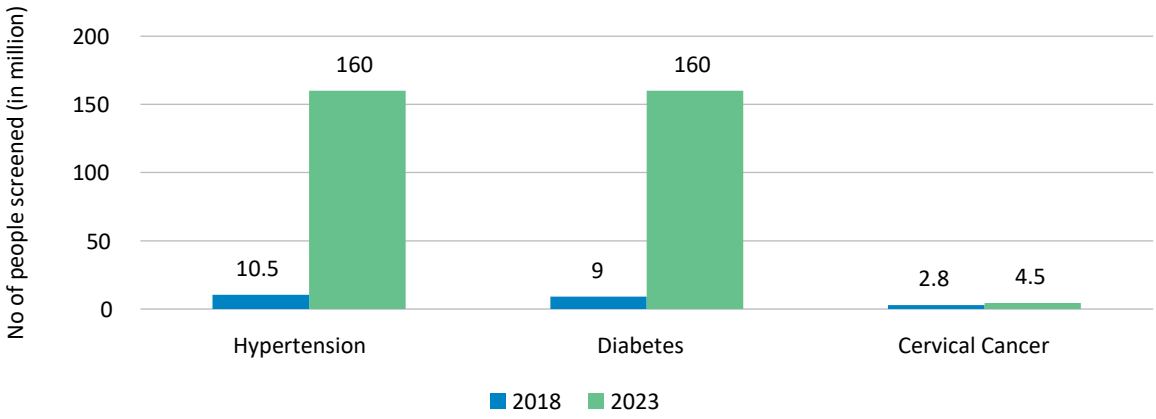
Source: Ministry of Health and Family Welfare, Government of India

We have limited resources, guidelines are considering all challenges, it is minimum benchmark, if states are capable and are able to provide services beyond the guidelines they are always welcome. (DOH KI)

Screening and Risk-based Management

Population based screening in India has been designed with population enumeration through individual health cards identified by Aadhar or the National Population Register (NPR), or the Socio-Economic Caste Census (SECC). This is done by ASHA through a community-based assessment checklist (CBAC) that scored an individual's risks for NCD. Screening for cancers is planned for once in five years, and once in a year for hypertension and diabetes for all adults 30 years and above**.** While hypertension, diabetes, oral and breast cancer screening is ensured at the subcenter and outreach level, cervical cancer screening is done at the HWC/CHC/DH where speculum examinations and visualization with acetic acid can be done, including facilities for sterilization of equipment. Some encouraging increases in coverage have been seen (see Fig. 6) over the past half decade.

Fig. 6. Screening Coverage for Hypertension, Diabetes Mellitus and Cervical Cancer in India (2018, 2023)



Source: India Country Presentation. Workshop for implementing South-East Asia Regional NCD Roadmap, 2022–2030, Dhaka, Bangladesh. Used with permission.

Healthy Lifestyle Counselling

At every level of the primary health care system, lifestyle counselling is intended to be incorporated in service provision. Counselling to help modify behavioural risk factors is done by ASHA and ANM at the community level, and by doctors, nurses, counselors and community health officers at the PHC and CHC level.

Access to essential medicines and technology

With the launch of universal screening and comprehensive primary health care, long term dispensing (one to three months) of drugs for the management of chronic illnesses such as diabetes and hypertension has been initiated. The 2023 guidelines ensure regular updating of drug inventory along with buffer stocks. Provision for glucometers, glucose strips and lancets is also ensured for screening at all levels of health facility while laboratory investigations and diagnostics such as common blood examinations, spirometry, X- Ray, ECG, USG is recommended to be provided at CHC. Under the Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP), stores are set up to provide generic medicines including insulin at affordable prices. Further, integration with the "Affordable Medicines and Reliable Implants for Treatment (AMRIT)" is intended to widen access to affordable medicines for treatment of cancer, cardiovascular disease and other NCDs.

> ***Focus now is on point-of-care technologies... for assessments, screening and diagnosis... example, spirometry was available only at district hospitals, now through make in India initiative, spirometry is done at doorstep and telemedicine helps start the treatment immediately. (DOH KI)***

Along these lines, e-Sanjeevani offers teleconsultation services at the primary health care level with specialists by way of a cloud-based offering that comprises a provider-to-provider platform to deliver assisted teleconsultations for HWC patients, giving them access to specialists, as well as an OPD platform that gives citizens to access health information and services at home through smartphones and laptops.[20,21]

The Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (PM-JAY) aims to undertake path breaking interventions to holistically address prevention, promotion and ambulatory care at the primary, secondary and tertiary level. PM-JAY is the largest health assurance scheme in the world which aims at providing a health cover of Rs. 5 lakhs per family per year for secondary and tertiary care hospitalization to over 12 crores poor and vulnerable families (approximately 55 crore beneficiaries) that form the bottom 40% of the Indian population. The benefits of INR 5,00,000 are on a family floater basis which means that it can be used by one or all members of the family. Disaggregated data from the national NCD monitoring survey revealed gaps in awareness and access to medicines: data suggest that for diabetes, essential medicines were available in one fifth of PHC and in half of CHCs in 2018.

Team-based care and human resources

At the HWC level, a team of ASHAs, ANMs, and Community Health Officer (CHO) are seen to be the main "team" handling NCD primary and secondary prevention and management. At PHCs, this team is to be supported by additional staff, namely, lab technician and pharmacist, and, at the sub-center, the ANM is to be supported by multi-purpose worker wherever possible.

Additional skill requirements for Multipurpose worker (Female/Male) include screening for common NCDs-Hypertension, Diabetes, three common cancer-Cervix, Breast and Oral Cancer and timely referral and provision of follow up care, enabling periodic monitoring of BP, Blood sugar for patients on treatment. Medical Officer, Staff Nurses, Lab technician, Pharmacist, Lady Health Visitors to undergo Five days training in Population-based screening, prevention and management of NCDs. ASHA's focus of work now encompasses wider range of services and includes screening and management of common NCDs. HRH availability gaps were seen in the 2018 NNMS data: nearly 15% of PHCs (similar among urban and rural), 8% CHCs and 7% DHs had no MBBS duty doctor. This base has variations that states have introduced. For example,

> ***One state (Tamil Nadu) has implemented a programme called 'Makkalai Thedi maruthavam' A team of ANM, ASHA, Palliative care worker, Physiotherapist go to the community and thus bring services to the doorstep. (DOH KI)***

At the HWC level, a team of ASHAs, ANMs, and Community Health Officer (CHO) are seen to be the main team handling NCD primary and secondary prevention and management. At PHCs, this team is to be supported by additional staff, namely, lab technician and pharmacist, and, at the sub-center, the ANM is to be supported by multi-purpose worker wherever possible. Additional skill requirements for Multipurpose worker (Female/Male) include screening for common NCDs-Hypertension, Diabetes, three common cancer-Cervix, Breast and Oral Cancer and timely referral and provision of follow up care, enabling periodic monitoring of BP, Blood sugar for patients on treatment. Medical Officer, Staff Nurses, Lab technician, Pharmacist, Lady Health Visitors to undergo 5 days training in Population-based screening, prevention and management of NCDs. ASHA's focus of work now encompasses wider range of services and includes enumeration, screening and management of common NCDs.

Training modules for medical doctors (2017), staff nurses, ASHA, multi-purpose workers and the NCD application user module for ANM have been developed. Additionally, as the primary service provider for NCD solutions in comprehensive primary health care, a PHC Medical Officer User Manual was developed while the Handbook for Counsellors- reducing risk factors for non-communicable disease was introduced in 2017. Guidelines on prevention of stroke we launched in 2019 which reiterated the role of HWC in service delivery of NCD.

Systems for monitoring

The national NCD portal is used by CHO/ANM/MPW at HWCs to generate Ayushman Bharat-Health Account (ABHA) IDs for population-based statistics. ABHA helps to digitize health records and eliminate the hassle of carrying physical copies to doctor visits. The ABHA number is used for identifying and authenticating persons and linking their health records across multiple systems. Digitalization of the data from physical registers is done at the PHC-HWC/UPHC/HWC level through entry of data on screening and management of NCD by CHO/ANM on the NCD portal. Moreover, Ayushman Bharat Digital Mission (ABDM) is also providing other

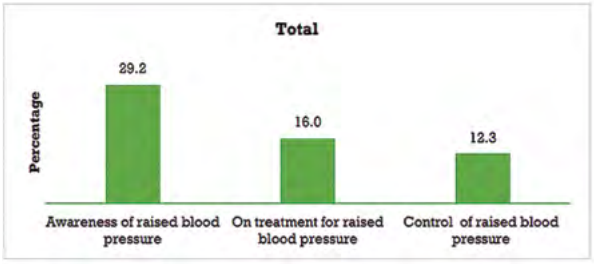
facilities through ABHA such as hospital discovery, faster appointment booking, and so on[22]. The coverage of this portal over time has been impressive, as described by a KI:

> ***NCD-portal is a success story, 500 million people are enrolled in the system... tracking of screening of persons can be followed-up using the portal...earlier we were not able to get numbers, now this portal has brought all states on to a common plane. (DOH KI)***

Digitalization of records has been gradually integrated into the monitoring system since the 2013–2020 guidelines. India committed to the Global monitoring framework with the distinction of being the first country to sign and adopt and the national NCD monitoring framework of 10 targets and 21 indicators on mortality, risk factors, and health systems response to NCD. However, gaps in the data on these indicators became evident, and therefore, the National Non-Communicable Disease Monitoring Survey (NNMS) was conducted in 2018–19 to measure and arrive at national estimates for the identified indicators for prioritization of actions (see Fig. 7). [23] It is the first comprehensive fully digitalized national level survey that provides key estimates on NCD risk factors according to the National NCD framework and action plan of India. [23]

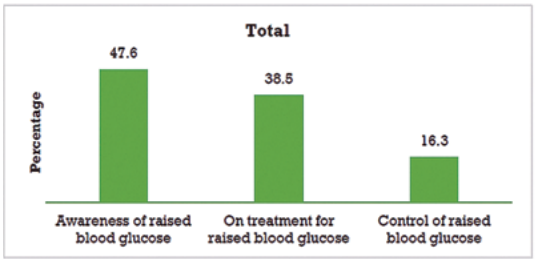
Fig. 7. Treatment Cascades as per India's National Non-Communicable Disease Monitoring Survey

Hypertension Treatment Cascade, India (2018)



Source: NNMS, 2018

Diabetes Treatment Cascade, India (2018)



Source: NNMS, 2018

The NNMS has revealed that of those with raised blood pressure under a third were aware of their status, 16% were on treatment and only 12% had controlled blood pressure. The overall pattern was similar for diabetes although awareness, treatment and effective coverage for raised blood sugar was higher. One difference in the pattern was that blood pressure coverage was greater among women and blood glucose coverage was greater among men. There was a rural coverage gap in both cascades.

With the launch of the National Quality Assurance Programme (NQAP), National Quality Assurance Standards (NQUAS) have been developed keeping in mind the specific requirements for public health facilities as well global best practices. NQAS are currently available for District

Hospitals, CHCs, PHCs and Urban PHCs. Standards are primarily meant for providers to assess their own quality for improvement through pre-defined standards and to bring up their facilities for certification.

To ensure provision of quality care at the primary level, standards of care for HWC have been framed. For a facility to apply for the state and national certification it is mandatory to apply for at least 7 packages of the Comprehensive Primary Health Care Packages, one being, screening, prevention, control and management of NCDs.

Community

Community involvement in policymaking

At local levels, the mechanisms of Jan Arogya Samitis (JAS) and Mahila Arogya Samitis (MAS – in urban areas), as well as Village Health, Sanitation, and Nutrition Committees have financial allocations and are empowered to expand their focus from reproductive, maternal and child health to NCDs. As a KI from a government agency informed us "JAS is not only a link between healthcare workers and community, it is there for getting inputs of community needs…some things are needed to make them actually effective and efficient, we are now trying to see what is really involved." In addition to these, Rogi Kalyan Samitis (RKS) place particular attention on facility level improvements and provide inputs on functioning, while in many states, Self Help Groups are also involved alongside Panchayati Raj (local governance) Institutions and Urban Local Bodies whose capacity is being strengthened to spend the allocations now being awarded to them. That said, the specific involvement of communities and civil society organisations in NCD programming (as compared to HIV/AIDS, for example), has been limited, as another KI indicated:

> ***[The] involvement of community and civil societies in NCD programme design is minimal unlike other programmes…but, we know that this is important, as it will help us understand the plight to accessing services and improve patient centredness. (DOH KI)***

Reducing inequalities/leaving no one behind

India's NCD policy has seen a progressive aspiration of inclusivity and reduction in inequality. The National Health Policy of 2017 prioritizes healthcare among urban, tribal and vulnerable populations by allotting higher cost inclusion in these areas to address NCD. The 2023 operational guideline builds on this to make access to quality healthcare for NCD equitable among urban poor populations. Provision of affordable medicines and treatment is sought to be made widely available via AMRIT and PM-JAY under universal health coverage. In tribal

and remote areas, membership of JAS is intended to include these historically underserved communities; efforts are underway to truly operationalize this, with some exemplar states offering insights on how this may be done.

WHO guidance and role

India was the first country to adopt the national action plan with 10 targets and 21 indicators following the launch of the WHO Global Action Plan for the Prevention and Control of noncommunicable diseases 2013–2020. Corresponding to the Colombo Declaration of Strengthening Health Systems to accelerate NCD services at the Primary Health Care level, the revised operational guidelines expanded screening services to the community level and strengthened the role of primary health care providers through trainings and delegation of responsibilities. The WHO India Country Cooperation Strategy of 2019–2023 builds on the National Health Policy of 2017 and initiatives like the Ayushman Bharat and the promotion of digital health amongst others, with a special focus on the prevention of NCD. As a number of ministry KIs noted,

> ***"WHO's information helps us push the NCD agenda in the ministry... supports us with consultants... WHO supports us organize review meetings, workshops and conferences. (DOH KI)***

> ***It is imperative to acknowledge the foundation [the WHO provides]...Technical Report Series used to be there, they were excellent to understand issues in depth. Global strategies provide a road map to Member States...and it is flexible and depends on Member States. Not a binding thing. That is a unique strength and they should continue with that. (DOH KI)***

India has focused in the 2014–2021 period on building system level reforms – in terms of human resources, outreach, and creation of data capture and use mechanisms, which has seen massive gains in screening coverage. These are being consolidated and refined in the post COVID context with major PHC reform measures; de-verticalisation of NCD and other programming under a PHC umbrella, supported by infrastructure enhancements, as well as drug and diagnostics availability will certainly help universalise access. Community outreach mechanisms and local decision-making mechanisms, empowered by recent financial reforms may help enhance participation and voice in decision-making, although tracking and addressing gaps in coverage (for left behind populations, urban areas, remote geographies, etc.) will require constant vigilance. Backstopping support from WHO, in addition to support on research and monitoring, may help enhance achievements.

Indonesia

Governance

Policies and strategy

Indonesia's National Action Plan on Prevention and Control of NCDs (2015–2019) had the precedent of existing reforms in primary care service delivery – such as Posbindu and village level Posyandu integrated health posts created as early as 2011, and linkages to the community health centre model of Puskesmas introduced in the 1960s. The Multisectoral Action Plan on Prevention and Control of NCDs was also being operationalised at this time, with express linkages to the Ministry of Human Rights. This tracked with the 2014-released WHO Country Cooperation Strategy which had an emphasis on health systems, uptake of the PEN model and linkages to UHC. In 2018 Cervical Cancer management guidelines followed.

While formulating a policy or guideline, due care was taken to consider feedback from different representatives. It was crafted through global guidelines such as of WHO, consultation with field experts, including clinical and public health professionals, health associations pertinent to the policy, and primary-level physicians within the community. Subsequently, regional leaders adapted and tailored these guidelines under a model of decentralization tailored to the highly variable contexts across the country.

Certain global guidelines proved impractical within the country's context, necessitating the development of country specific guidelines. For example, while WHO advocates the use of mammograms for breast cancer detection, however, USGs were adopted in the country due to the unavailability of mammograms in all hospitals.

> ***...about 100 hospitals among 4000–5000 have mammography in the hospital. We cannot invite all women to check with this mammography so the scope will be lower. In the beginning we used the breast examination but then coincidently we could make more than [physical] breast examination, by using USG and find cyst below 2cm by using it. Then it would be accurate. We know that USG cannot have diagnosis for cancer, but we still do a screening and if there is a cyst refer them to hospital for screening. (DOH KI)***

Governance and Resources

The year 2015 was a watershed for NCD service integration with the Posbindu reform legally introduced, alongside a 200% increase in budgetary allocation for NCD programming. A representative from MoH commented, "From the MHA, the budgeting for NCDs is quite big- almost 60% of the total healthcare budgeting in 2021 and this is our source for making decision for following year."

Posbindu PTM was created specifically for NCD monitoring and counselling in communities; they target people aged 15 and up, whereas Posyandu Lansia is concerned with the health of the older people (65 years and older). A key informant from MoH highlighted that despite a substantial budget allocation for NCDs, the majority is directed towards universal health coverage (UHC) for diabetes. There is a pressing need for greater attention to its risk factors.

Service delivery

Evidence based protocols

On the service delivery side, NCD packages began to be introduced into the Permenkes health insurance scheme as early as 2014 with guidelines and training of trainer modules following by 2016. Healthy lifestyle counselling was introduced in 2016 under Presidential instruction. The main activities in the Posbindu PTM and Posbindu Lansia include: (1) screening for NCDs, mainly hypertension and diabetes; (2) assessing risk factors, i.e., smoking behaviour, diet, and physical activities; (3) health education. (4) The government underscored the importance of widespread implementation of screening and early detection for NCDs and its risk factors across various levels, encompassing workplaces, schools, and communities. There are also Telemedicine services, known as Temenin, were implemented by Indonesia's Ministry of Health in 2017, allowing remote access and improving healthcare access to better control NCDs [24].

Healthy Lifestyle Counseling

The country has a well-connected system for involvement of community in the screening and monitoring process. Health promotion stood as a key strategy employed by the government to mitigate risk factors associated with NCDs. Collaborating with health associations and universities, efforts were directed towards community outreach to enhance awareness regarding the prevention and management of NCDs. The rampant use of social media in the country was used as an opportunity for health promotion in addition to webinar conducted for the public.

> ***"The first pillar is to do the promotion related to hypertension especially. When we promoted it to the public through the social media like Instagram, Facebook, Twitter and also the YouTube channels... also give some education and some of the contents, health content related to hypertension, the risk factor of hypertension." (DOH KI)***

Access to essential medicines and technology

Notably, within the diabetes coverage, the cost of insulin was not covered for many patients diagnosed with type 1 diabetes. Another KI, who is a clinician and academician, shed light on

the distinctive trajectory of diabetic progression in children compared to adults, particularly focusing on Type 1 diabetes. Supply chain issues were a challenge at Puskesmas and within the households.

> ***I'm sharing you an example of a friend of mine who live in the remote island. Yes. She stored her insulin in the well, because it's much cooler in the well. So what she did was she put her insulin in a bucket and put it under the well every night to store the insulin. if you if it's if you talk about in insulin storage, it will be also another issue, because, in some islands they also having difficulty in electricity access as well. Especially for people with diabetes who are using insulin therapy. It will be another challenge. (COM KI)***

Team based care and human resources

Each Puskesmas has a 6–8 member Kader who are members of the community and work part time. They are involved in outreach activities which has strengthened the system's efforts towards better health promotion and screening activities for NCDs. Trainings have been provided for the healthcare workers and Community health workers (known as *Kaders)* on screening and management of NCDs. Skills based training was introduced for the Kader education them on basic skills including screening to be implemented at the ground level.

Geographical variation has emerged as a challenge in the distribution and accessibility of medicines within the community. This geographical variance also affects the availability of healthcare practitioners, posing difficulties in adhering to the WHO recommended guidelines regarding the physician-to-community ratio. The medicines were produced in Jakarta and distributed to all regions in Indonesia

> ***Now the issue at hand is that PHC is not ready... because they can't work on their own. This is a bit of criticism about the availability of medicines in the regions. especially the eastern part of Indonesia there are significant lack of medicines in these areas, even in Java availability of medicine to provide proper treatment is sometimes incomplete. So the result of that is that what the PHC can give is not much. (COM KI)***

Systems for monitoring

Indonesia used to have separate STEPS surveys which were then integrated with ongoing surveys such as Riskesdas 2018 with NCD risk factor data and Sirkenas 2016 which has data on cervical cancer screening. The KIs mentioned that they prepare a report quarterly and an annual

monitoring is done by the regional office. Monitoring of global NCD indicators is underway through the Puskesmas and Posbindu systems as well and the country is moving towards digitalisation of records which is at different stages in different Puskesmas.

The KIs from PHC mentioned that an application was in place for monitoring of the screenings at the primary facility. While a nationwide app was introduced, certain regions had adapted it in their own way. For example, KIs from a Puskesmas said that they do not use the official app, "My Healthy Indonesia" as they have their own recognised system in place for reporting. The KIs emphasized that although a screening audit system was established at the Puskesmas, the data recorded in the app was inaccessible to the healthcare workers within the same Puskesmas. The patients however maintained a book which had records of their previous consultations thereby contributing to continuity of care.

Community

Addressing inequalities/Leaving no one behind

The government's Nusantara Sehat plan, introduced in 2014 to specifically target remote and border islands, places special emphasis on equity.[25,25] The government's Nusantara Sehat plan, introduced in 2014 to specifically target remote and border islands, places special emphasis on equity.[25] In addition the Healthy Indonesia Program (2015–2019) builds on the Puskesmas network and seeks to foreground preventive and promotive care, optimize referral and ensure community empowerment; NCD indicators monitored include hypertension therapy, mental illness monitoring and smoking cessation, However, further details on operational linkages between these schemes and programs and NCD related services as well as the coverage of these programs warrant further exploration. Women were identified to be double burdened among the diabetic patients because of their vulnerability due to the disease and due to their gender. The Women's project implemented by the Persaida/ diabetic association, contributed to empowering women. When a woman was detected with diabetes, they were connected to the association through the treating doctors which helped them form a social support group.

A key informant highlighted that despite the coverage of service costs, communities often incur additional expenses for transportation to the facility. The prohibitive expense of transportation serves as a deterrent, especially for those residing at a distance from the healthcare facility, creating a notable challenge for follow-up engagements. Like other LMICs, frequent power cuts were a common phenomenon across the country, especially in remote areas.

Community involvement in policymaking

Efforts to engage civil society have been underway in 2016 and include major players like patient welfare groups like Lembaga Kesehatan Nahdlatul Ulama (LKNU), family welfare organisations like Pembinaan Kesejahateraan Keluarga (PKK), and development organisations like Yayasan

Peduli Kemanusiaan (YPU) and other women's organisations. The specific nature and impact of engagement warrants further study. Efforts in 2017 were revitalised to implement Law 23/2014 calling for local government steer or defined services at the community level.

Civil society organisations highlighted that through their advocacy they were successful in bringing changes for the benefit of the community. For example, the policy earlier was to provide diabetic patients with medicines for one month. During COVID, where regular access to the hospital was a challenge, there were demands to provide medicines for a longer period. This was later accepted by the government and since then medicines are being provided for three months at each visit.

Mass awareness

A challenge common to the region is low awareness in communities about NCD risk factors and service availability. This was raised by Kis in Indonesia as well. It was also highlighted that the uptake of cervical cancer screening was very low because women were hesitant to do so. In order to increase the coverage of screening, VIA testing was introduced at place of work.

> ***The challenge is that because it depends on the willingness of patients. Some of the patients feel a bit less comfortable for these checks. Hence for VIA it is little bit of a challenge… We still conduct education, we still conduct checks [after which] some of the patients are willing to go through the test. (PHC KI)***

Despite concerted efforts to enhance healthcare accessibility, service users reported avoiding visits to Puskesmas due to prolonged waiting times and dissatisfaction with the services offered.

Broadly, primary health service delivery reforms in Indonesia have been in place as early as 2011 and were harnessed for NCD service delivery, adapting and modifying global guidelines to country needs. With early investments providing fillip in 2015, NCD packages were brought into Posbindu and Posbindu Lansia facilities with telemedicine services being added on by 2017 and training following and local data systems being developed to capture and monitor progress. Gaps in medicine availability and costs incurred by communities are a challenge, particularly in remote island locales, although demonstration projects have shown the way in terms of possible service design for inclusion. Gaps in awareness remain the country and uptake of services, particularly for cancer screening, is being given more emphasis of late.

Maldives

Governance

Policies and strategy

The National Health Master Plan (HMP) (2006–2015) prioritised the prevention of non-communicable diseases (NCDs) as a significant policy objective. It recommended integrating health promotion and preventive health services across all levels of care and establishing primary health facilities equipped with trained staff and equipment to provide comprehensive primary healthcare [26]. The national strategic plan for NCDs (2008–2010) made progress in NCD prevention and control by implementing STEPS surveys, strengthening tobacco laws, piloting PEN interventions, and raising awareness among political bodies[27]. The Health Master Plan HMP (2016–2025) included interventions focused on preventing and controlling NCDs through health promotion, early detection, and management using standard treatment guidelines[28]. The HMP 2016 plan also called for delivering primary care through the public sector in all islands. The Multisectoral Action Plan (MSAP) for Prevention and Control of Non-Communicable Diseases (2016–2020) identified four strategic action areas for NCD control. These areas include building partnerships across sectors, improving advocacy for NCD prevention, strengthening legislative measures for risk factor reduction, scaling up PEN interventions, and continuing ongoing STEPS surveillance. The plan also suggests conducting a "walkability survey" and establishing a cancer registry in Male[29].

In recent years, the Maldives' primary healthcare approach to addressing NCDs, known as the Faafu Atoll PHC Demonstration Project, has been re-modernized. A WCO KI discusses how this project has impacted NCD care, as noted:

> ***We have been implementing Faafu Atoll PHC demonstration project where the HEARTS package [have] been integrated into a primary healthcare demonstration model where NCDs [have] been targeted… and we have built the information system, … monitoring and evaluation framework… built standard treatment guidelines [and] protocol for NCDs… built a training package around NCDs… [and] planning to take up telemedicine services. (WCO KI)***

The Ministry of Maldives revised their National Cancer Control Plan (NCCP) from 2022 to 2026 with the assistance of the World Health Organisation. The primary objective of the revised plan was to reduce cancer incidence and mortality by enhancing the accessibility and availability of cancer services and strengthening the surveillance and monitoring system .[30]

Furthermore, the implementation of mental health integration in PHC at Faafu Atoll has commenced, accompanied by ongoing efforts to incorporate mental health indicators into

the Demographic and Health Survey. The completion of structured reporting is anticipated to complete by end of 2023. Notably, substantial progress has been made in the mental health domain over the past year and a half, focusing on developing a comprehensive strategy plan, addressing drug rehabilitation and addiction, and adapting training materials and treatment guidelines to the local context.

Governance and resources

In the Maldives, the healthcare delivery system operates on a tiered structure. Primary health centres are on all the islands, while atoll-level health facilities offer specialised care. Urban areas have tertiary care facilities. The regional or atoll hospital provides primary and curative care for 5,000 to 15,000 people in each atoll. Primary care services, including medicines, are provided free of cost to Maldivian citizens.

The MSAP 2016 was proposed to be implemented in two stages and an elaborate governance structure is designed to implement the program. The plan's first phase from 2014–2016 involved piloting interventions, launching a national campaign, training health human resources, and improving supply chains. A mid-term evaluation was planned in 2017, and the focus would shift to scaling up successful interventions and enhancing service delivery in the second phase from 2018 to 2020. To oversee the plan implementation under the directive of the president a high-level NCD task force was proposed. The duties of the task force were to guide stakeholders, inform the government on policy and legal issues, and explore ways to allocate more resources for NCD response.

The Ministry of Health (MOH) oversees the efforts to address Non-Communicable Diseases (NCDs), with the NCD Unit as the main coordination point for the MSAP 2016. The plan proposed supporting the unit with additional resources to support its duties. Several subcommittees were set up to advise and support the task force. The MSAP 2016 for NCD control at the national level has created a thorough strategy to establish partnerships and convergence among various ministries and departments. This involves creating specialised subcommittees that can guide the high-level NCD task force. For example, the Ministry of Education must form the School Health Promotion Board to implement NCD-related health programs in schools. Similarly, the Workplace Health Promotion Board and the Urban Planning Board will integrate MSAP guidelines into workplace health programs and urban planning. The Enforcement Board, led by the police department, will coordinate efforts related to tobacco control, food labelling, and other related matters.

A WCO KI pointed out the necessity to augment resources in need for a shift in funding focus for long-term cost savings, citing the current national health budget allocation to the preventive sector at less than 1% as insufficient. In addition, he stressed the geographical challenges inherent in an archipelago of 1200 islands, necessitating efficient referral pathways for successful PHC.

Currently, the NHA says [the] primary healthcare or preventive sector gets less than one percent of the national health budget, gradually, this will have to be increased, and from a curative or tertiary-focused model, once you divert funding to [the] primary health centre model in the long run, it will be cost-saving for the Maldives, but the long run means a couple of years or one decade later. Therefore, the government buying and financing part will [also] have [to] be taken up. (WCO KI)

Service delivery

Evidence based protocols

A 2017 report by the Ministry of Health mentions that the country has implemented the WHO Package of Essential Non-communicable (PEN) Disease Interventions for primary healthcare in two regions with plans in the country with expansion plans[31]. Curative services for chronic diseases and cancer are available in all major hospitals in the country, and the treatment, including medicines, is covered under "Aasandha", the national health insurance scheme. The MSAP for NCDs 2016 proposed establishing NCD clinics offering diabetes care and built a referral network connecting health facilities within and outside the country. Delivering necessary medical supplies and services to remote islands remain a challenge, particularly when the private sector involvement is limited in these smaller islands.

The HMP 2016 recommends using standard treatment guidelines healthcare providers were trained to detect and manage NCDs and those with comorbidities. The 2016 MSAP for NCD control recommends capturing data of patients with non-communicable diseases (NCD) treated and counselled according to NCD protocol, using clinical audit reports occurring every three years.

In 2016, the HMP emphasized the importance of prioritizing the quality of healthcare services in the Maldives. To ensure this, legislation has been put in place regarding the licensing of healthcare institutions and the professional registration of healthcare workers. The Ministry of Health has also developed quality standards for institutions and protocols for clinical care delivery.

Screening and Risk-based Management

The MSAP 2016 for NCDs suggests strengthening the primary care system as a crucial strategic action area. This includes enhancing the capacity of healthcare workers to address NCDs and promoting self-care awareness among communities. Scaling up the WHO Package of Essential NCD interventions is a significant element of this action area.

There is an ongoing effort towards the elimination of cervical cancer in the Maldives, particularly focusing on a plan directed at this objective with undergoing revision. A WCO KI noted that the current screening practices are not fully integrated into the health services, functioning more as ad-hoc screening across the Maldives. Nevertheless, the KI expressed optimism that in the future, these screenings would be more seamlessly integrated into the healthcare system and the services provided at the island level.

> ***We are actually working on a plan for cervical cancer elimination in the country. We have had a program for cervical and breast cancer screening [that] was under revision for some …The issue is that the cancer screening is not integrated into the health services as of now, so it is kind of an ad hoc screening that is happening in the country, but I think in the future, it will be more integrated into the health system and the services that are being provided at the island level. (WCO KI)***

Healthy Lifestyle Counselling

The National Policy on Physical Activity for Healthier Living 2022 highlights the government's dedication to enhancing physical activity and fostering positive health within communities. The policy aims to achieve a 10% decrease in the prevalence of insufficient physical activity by 2030, through a societal shift in attitude towards physical activity, political commitment, health system responses, and partnership building[32].

Furthermore, the effort to enhance tobacco cessation have been reinforced since 2016 by introducing a tobacco cessation toolkit for doctors and health professionals.

Access to essential medicines and technology

The HMP 2006 proposed setting up pharmacies on every inhabited island with private and community partnerships to provide affordable essential medicines. The policy also suggested introducing legislation to ensure the accessibility of essential medicines under TRIPS agreements. HMP 2016 proposed creating a centralised supply chain of essential medicines and supplies as well as maintenance of medical equipment. The policy recommended improving the quality control mechanism of drugs and control of essential medicine costs by including generic medicines in public drug supply and covering the cost through social health insurance. The MSAP for NCD Prevention and Control 2016 have included the availability of essential medicines and basic technologies to treat NCDs in 80% of public and private health facilities as a country goal to achieve by 2025. The MSAP further stresses streamlining the central procurement of medicine and equipment as a priority area to be implemented in the plan's first phase by 2017.

Team-based care and human resources

According to HMP 2016, the Maldives currently has 23 doctors and 66 nurses per 10,000 population. To improve the human resource for the health situation, the policy outlines detailed strategies such as increasing incentives, creating a safe working environment, providing appropriate training, and establishing additional medical education facilities for local communities. The Maldives though has a fairly good distribution of health workers the country depends on expatriate health professionals, only 23 % of doctors and 50% of doctors in the country are locals.

Systems for monitoring

The MSAP 2016 aims to improve the availability and quality of data through NCD surveillance and continue conducting population-based surveys like STEPS and the Global School-Based Student Health Survey (GSHS(to improve evidence-based policies and NCD programs. The policy recommended monitoring tobacco rules, additional staff for NCD surveillance, monitoring food content, establishing a cancer registry, and conducting a mid-term evaluation in 2017 to assess the progress of the first stage of MSAP implementation and an end-term evaluation in 2020.

Community

Provision for hard-to-reach population groups/ Reduction in inequalities

In 2006, the HMP recommended a health insurance scheme to provide social security for the poor, particularly those in need. The HMP 2016 emphasised the importance of addressing the health concerns of vulnerable groups, such as pregnant women, children, migrant workers, adolescents, and people with disabilities. The policy also stressed the need to ensure preventive and curative services for at-risk groups, such as drug users, while tackling the associated stigma and legal issues. The policy noted that welfare schemes, allowances, subsidies, and old-age pensions were in place, supported by the government, but could add to the country's fiscal deficit. The MSAP for NCD Prevention and control 2016 has equity as a guiding principle and proposes different approaches that would reduce inequalities in the burden of non-communicable diseases caused by socioeconomic determinants, such as gender and economic status. It also recommends ensuring universal access to essential health services, including diagnostics and medicines, for all people in the country, especially vulnerable groups, without causing financial hardship.

Mass awareness

In line with the objectives outlined in HMP 2016, primary care centres were anticipated to establish connections with every family within their respective island or neighbourhood. This

initiative aimed to enhance public health awareness and broaden service coverage across communities.

Simultaneously, the policy aims to empower these communities by enabling them to demand quality assurance measures for both drinking water and food products. Creating opportunities to educate and empower families about healthy practices was considered crucial for sustaining healthier living standards. The integration of modern Information Communication Technologies (ICT) emerged as a powerful tool in inducing behavioural changes within these communities. Additionally, the policy emphasizes the significance of collaborative initiatives with schools and higher education institutions to promote health awareness among younger demographics.

Over the past three to four years, the Maldives has elevated public awareness regarding NCDs through communication campaigns employing web stories and documents. Dependence solely on imports for food products raises a challenge in promoting healthy eating practices

Community Participation in the policy process

The MSAP 2016 identifies community-based organisations as a stakeholder in preventing non-communicable diseases. They are tasked with promoting NCD services and providing health education.

Robust community mobilization efforts were undertaken in the Faafu Atoll demonstration site by conducting house-to-house outreach, resulting in high participation rates. Approximately 90% of the population in the Atoll were enrolled in PHC registry, and more than 90% underwent screening. The high level of community involvement proved highly successful, attributed to engaging individuals at their homes, addressing concerns, and highlighting the benefits of participation. A WCO KI highlighted the vital support of island councils and government officials in Faafu Atoll's successful program.

> ***The mobilisation is quite high [on] all 5 islands. It is required that we get into their homes, talk to them, and could remove their fears, answer their questions, and let them know the benefits that they will have [from] getting involved and being screened and what they should expect in return when they get to the facility. [This] really changed a lot of things. … Government officials and politicians are very keen [on] the success of the program that we have in Faafu Atoll, both at the island and at the atoll. (WCO KI)***

There are collaboration among key NGOs – Diabetic Society of Maldives, Cancer Society of Maldives, and Tiny Heart – focused on combating NCDs in Maldives. These organizations actively participate in advocacy, conduct island-based screenings, and are partly involved in clinical management practices related to NCDs.

Furthermore, A WCO KI highlighted the lack of integration between NGO initiative and government programs, characterizing them as standalone initiatives. Integrating NGO activities into governmental framework is crucial for better alignment with official guidelines and systems. Challenges in data integration emerged due to non-alignment of some screening programs with government protocols, hindering their incorporation into the healthcare system, as she noted:

> ***Right now we don't have a mode of integration. Actually, what they are doing is quite separate from the government programs, it's kind of standalone programs but what we are trying to do is [bring] them together, so that we could have collaborative programs so that some of the efforts are not duplicated as well, some of the funds are not duplicated and it could be more efficient because some of the screening programs are also not as per the government guidelines so there are some issues with the data, [which are] not integrate-able into the system that we have right now. (WCO KI)***

WHO guidance and role

The Maldives' WHO country office has offered technical assistance to the government in creating the HMP 2016 and MSAP to prevent and control NCD 2016. The WHO PEN disease interventions are currently piloted, and the country plans to expand them to the whole region. WHO also supports the conduct of STEP surveillance surveys for assessing NCD risk factors.

In the Maldives, while various policy moves were made in the period under evaluation in relation to health in general and NCDs in particular, 2022 was a watershed year for implementation with the Faafu Atoll PHC Demonstration Project being launched with embedded NCD packages. With long term investments being prioritised at this juncture for this demonstration and its scale-up nationwide, directives and legislation have paved the way for substantial expansion of secondary prevention and service cascades. The country is helped by favourable distribution of health workers and early steps to establish a cancer registry. At risk and left behind groups will require additional investments, and, like other countries in the region, there is a need to leverage technology and outreach to enhance this. NGO and civil society partners may support this although integration is also sorely needed between their and state programming.

Myanmar

Governance

Policies and strategy

The government of Myanmar has consistently focused on addressing non-communicable diseases (NCDs) since the early 2000s, as the burden of these diseases began to increase in the country. The Myanmar Tobacco Free Initiative was launched in 2000. Myanmar become a party to the WHO Framework Convention on Tobacco Control (FCTC) in 2005 and signed the protocol to eliminate illicit trade in Tobacco products in January 2010[33]. Since then, Myanmar implemented several tobacco control policies and programs, including the Tobacco Control Law in 2006. The formulation of the National Health Plan 2011–2016 was an important step towards improving the health of the people of Myanmar and it set the stage for subsequent health plans and policies in the country after decades of isolation[34]. In May 2013, the WHO developed the Global Action Plan for the Prevention and Control of NCDs, and Myanmar endorsed the Global Action Plan in 2013. WHO CCS for Myanmar (2014–2018) targets NCDs as one of the strategy priorities aiming to strengthen the health system, multisectoral support to expand national efforts for preventing and enhancing the achievement of NCDs targets and calls for a cancer registry to be established. In early 2015, a dedicated NCD Unit was established under the Department of Public Health. Myanmar National Health Plan (2017–2021) recognizes NCDs as a major public health challenge in Myanmar and action requires a multi-sectoral approach with strategies to strengthen primary health care, promote healthy lifestyles, improve access to essential medicines, and strengthen health Information systems and partnerships[34].

To address this challenge, the government developed the Myanmar National Comprehensive Cancer Control Plan (2017–2021) and Myanmar National Strategy Plan for Prevention and Control of NCDs (2017–2021) through a consultative process involving various stakeholders including government agencies, civil society organizations and international partners.[35,36] It provides a framework for coordinated action across sectors and stakeholders to address the NCD burden in Myanmar. Furthermore, the government of Myanmar developed its first National Road Safety Strategy in 2016, the National Occupational Safety and Health Policy in 2017, which aims to improve workplace safety and prevent injuries and illnesses among workers and developed its first National Salt Reduction Strategy in 2018, with technical support from the WHO. United Nations Development Assistance Framework (UNDAF) for Myanmar 2018–2022 further emphasized the importance of addressing NCDs as a key priority area for sustainable development in the country and outlines the comprehensive approach for UN agencies to support Myanmar in addressing this challenge[37]. Although all the policy documents mentioned the requirements of a multi-sectoral and coordinated approach, with the allocation of resources and delegation of responsibilities across various levels of the health system and other sectors, no clear service model highlighting the allocation of budget and human resources specific to NCDs is laid out.

Governance and resources

WHO CCS for Myanmar (2014–2018) calls for strengthening the capacity of the health workforce to address NCDs, including training health providers in diagnosis and management. National Health Committee formed in 1989 and recognized in April 2011 takes the leadership role and gives guidance in implementing the health programs systematically and coordinates intersectoral collaboration as well as regional and local NCD coordinating committees. Overall, the prevention and control of NCDs in Myanmar require a multi-sectoral and coordinated approach, with the allocation of resources and delegation of responsibilities across various levels of the health system and other sectors. Myanmar National Strategy Plan for NCDs 2017–2021 calls for increased allocation of human and financial resources with the estimated budget for the implementation, the potential budget source from the World Bank, the Ministry and WHO. Myanmar National Comprehensive Cancer Control Plan 2017–2021 cost in detail by year with allocations across primary prevention, detection, diagnosis and treatment, documentation, surveillance and radiation safety to the potential donors, MOHS, WHO and International Atomic Energy Agency (IAEA). Furthermore, UNDAF identifies a general budget for health-related priorities, including addressing NCDs in Myanmar. However, no specific dedicated budget for NCDs is mentioned.

According to a WCO key informant, in 2018 NCD services accounted for 22.6% of government health care expenditure with out-patient and in-patient services being mostly out-of-pocket at the patient's own expense. There is little financial support for health care from the government and currently only a small research fund. NCD funding has been difficult to find even from donor organisations.

Service Delivery

Evidence based protocols

The WHO CCS for Myanmar (2014–2018) aimed to improve the prevention and control of NCDs in the country through a comprehensive approach that involved strengthening the health system's capacity to provide essential NCDs services, promoting healthy lifestyles and behaviour and improving policy development and advocacy for the prevention and control of NCDs. Integrated guidelines for the management of hypertension and diabetes with specific medicines indicated (2014) was launched. Also, National Strategy Plan for NCDs (2017–2021) is based on a comprehensive and multi-sectorial approach. Prioritizing the strengthening of the capacity of primary health care providers to deliver essential NCD services including screening, diagnosis, treatment, and follow-up care. It also called for the integration of NCDs services into routine primary health care with a focus on providing patient-centred and community-based care.

Integrated guidelines for the management of hypertension and diabetes 2014 indicated the process of selection criteria with specific medicines. National Strategy Plan for Prevention and

Control of NCDs (2017–2021) provides a framework for the prevention and control of NCDs in Myanmar. It outlines key priority areas for action, including the strengthening of primary health care services, the promotion of healthy lifestyles, the integration of NCD services into other health programs, and the coordination of multi-sectoral efforts.

Since early 2021 there have been humanitarian response plans (HRP) put in place due to the protracted political crisis, in an attempt to continue offering health care services in a very challenging environment. Multiple attacks on health care infrastructure and providers, as well as ongoing conflict, bureaucratic obstacles and underfunding has meant that access to health care is limited with only critical services being prioritised[38].

Myanmar has a tiered health system. Health care services are delivered from sub rural and rural health centres (RHC) by Basic Health Staff (BHS) made up of midwives, Lady Health Visitors and Health Assistants (HA) where they offer comprehensive services including prevention, control and management of NCD's. BHS also provide services at the Township level.[39] Community Health Volunteers (CHV) help to deliver healthcare services to the 64,134 villages. If necessary, referrals are made up the chain to the Station Hospital, Township Hospital, District Hospital and Specialist Hospital. Station hospitals have general medical, surgical and obstetric services. Township hospitals can offer major surgical procedures, laboratory services and dental. District and Specialist hospitals may include intensive care units. Regional/ State Level hospitals, Central and Teaching hospitals offer advanced secondary and tertiary services.[40] A key informant confirmed the ability of tertiary level hospitals in Yangon, Mandalay and Nay Pyi Taw to be able to treat ischaemic heart disease and stroke.

Treatments or medication are dispensed at the primary health care level, rural health centres and Township hospitals. Cases of severe stroke or ischaemic heart disease will be referred to the district medical officer at the District Hospital. At the sub centres NCD screening is available through the Wednesday clinic. Patients with hypertension are identified at the RHC by the health assistant and other basic health staff who are trained to screen as well as prescribe medicine. Initial treatment is initiated at the PHC level with referrals going to the Township medical officer (MO). However, Wednesday clinics have been unable to operate since mid-2020 due to COVID19 and political instability leading to disrupted NCD prevention and care. Myanmar implemented the Package of Essential Non-communicable Disease (PEN) interventions into primary health care services in 2017 and by 2020, 232 of 330 townships were covered. This includes screening, treatment and referral for diabetes, hypertension, chronic respiratory diseases as well as screening for breast, cervical and oral cancers. 9,518 of 11,004 health facilities provided PEN services through to April 2020 at the Wednesday NCD clinics staffed by basic health staff s [41]. Our After the 2021 military coup many healthcare staff left government employment to join the civil disobedience movement. Currently the health system in Myanmar is under immense pressure due to political tensions, the aftermath of COVID-19, and difficulties receiving humanitarian aid, leading to challenges with access to essential medications, and interruption to all NCD related prevention and delivery.

The convergence for NCDs involves the coordination and integration of efforts across the health sector, as well as other sectors such as education, agriculture, finance, and urban planning, among others. The National Strategy Plan for Prevention and Control of NCDs (2017–2021) in Myanmar emphasizes the importance of a multi-sectoral approach to address the NCD burden in the country and draw on intersectoral collaboration to implement NCD prevention, detection, and treatment initiatives. A new economic policy was launched in 2016 to support a people-centred approach.

Screening and risk-based management

National Cancer Control Programme includes the goal to increase the percentage of women aged 30–49 years who had ever had a screening test for cervical cancer. National Strategy Plan for Prevention and Control of NCDs (2017–2021) also proposed to draft national guidelines of screening for selected NCDs and conditions. However, opportunistic screening is an effective approach for identifying individuals with hypertension because it leverages existing healthcare services and does not require significant additional resources or infrastructure where access to health care services is limited and where there is a shortage of healthcare providers. There is currently no national screening program in Myanmar for cancers of the breast, cervix, prostate or colon and utilisation of available screening services is low. In 2019 1.67 million people were screened for NCD risk factors with 205,495 people treated for diabetes along with 429,400 being treated for hypertension[41].

Healthy lifestyle counselling

Since 2012 health professionals have been providing counselling to people to help them quit smoking in some pilot townships[42].

Access to essential medicines and technologies

National Strategy Plan for Prevention and Control of NCDs (2017–2021) called for the need to advocate and establish a technical working group for NCDs. Myanmar National Comprehensive Cancer Control Plan (2017–2021) aimed to ensure the availability of the required essential drugs (e.g., Oral Morphine, Codeine, Tramadol, Fentanyl Patch) to improve the quality of life of cancer patients. However, there are no specific policies or procedures to address access to essential medicines and technologies related to NCDs. In 2019–2020 basic health staff in primary care facilities were able to prescribe NCD prevention and control medicines including anti-diabetic medication (metformin, sulfonyl urea), anti-hypertensive drugs (ACE inhibitors, ARBs, calcium channel blockers, beta blockers), cardiovascular drugs (Aspirin, statins), bronchodilator, benzathine penicillin injection, HPV vaccination. NCD drug supply has since been hampered due to COVID19 and political instability[41].

Team-based care and Human Resources

WHO CCS for Myanmar 2014–2018 calls for strengthening the capacity of the health workforce to address NCDs, including training health providers in diagnosis and management. National Strategy Plan for Prevention and Control of NCDs (2017–2021) further highlights the importance to strengthen the capacity and workforce to deliver NCD services. It also called to revise the competencies for all levels of the health workforce based on their roles and responsibilities. Myanmar National Comprehensive Cancer Control Plan 2017–2021) mentioned the required human resource for the establishment of Palliative care clinics in tertiary hospitals to improve the quality of life for cancer patients. However, there is no clear justification for the roles and responsibilities specific to NCDs.

According to the WHO Global Health Observatory, Myanmar has 7.51 doctors, 11.03 nurses and midwifery staff, 0.72 dentists and 0.79 pharmacists per 10,000 population[43]. Distribution of staff varies considerably between States and regions with a higher concentration of doctors in teaching hospitals and super-tertiary hospitals in main cities. Basic Health Service Professionals which include Ladies Health Visitors and Midwives usually work in rural areas and numbers of staff vary between 3.3 to 12.8 per 10,000. Health Assistants (HA) and Public Health Supervisor (PHS) staff are between 2.7 and 12.0 per 10,000 population[44].Treatment, follow up, and monitoring of diabetes and hypertension is facilitated at the primary health care level. In 2019, 700,000 people sought care from primary health providers for hypertension, and 290,000 people received care for diabetes[44].A WCO KI informed that Basic Health Staff are the main service providers particularly at the Township level. At the RAC midwives are the main service providers. During busy times syntax shifting takes place where the midwives workload is taken up by the Health Assistants in the area. At the rural and Township levels, staff are integrated together to provide NCD care. The health facility to which patient referral is done depends on the feasibility of available transport. This makes referral systems challenging to engage.

As detailed by a key informant, midwives play an integral part in the NCD healthcare system. They screen patients according to risk behaviours and then if needed refer them to a primary healthcare centre, and onto the Township hospital if required. They are also able to prescribe medicines for straight forward cases and when more complicated cases arise they report them to the Township medical officer or tertiary level hospital. Limited staff and the ongoing crisis meant PEN services have decreased. Some NGO's have been trying to fill the gap in NCD service delivery with programs such as the one offered by the global NGO PATH that relied on training health volunteers and limited health staff to be able to offer NCD screening and referral as well as lifestyle modification education[45]. As confirmed by a key informant, PEN training was conducted by the MOH up to 2019. PEN training guidelines were established for PHS and Medical Officers to implement at the Township level, as well as at the grassroots Rural Health Centre and health centre levels. In 2019 PEN guidelines were updated to include preventive cardiology guidelines for medical officers and PHSs. Refresher courses were conducted for the PHS and MOs in 2019 and 2020. Only a few Townships completed the training prior to the onset of COVID19 and then the military coup resulting in the stalling the preventive cardiology program.

Systems for monitoring

National Strategic Plan for Prevention and Control of NCDs (2017–2021) aimed to incorporate the data needs of NCD programs into existing health management information system and develop a web-based system for reporting and compiling all facilities and called for strengthening of monitoring and evaluation efforts by improving a newly established national cancer registry.

According to a WCO KI, NCD health data is collected by health assistants and midwives using a handheld tablet. The data is then sent to the office of Township medical officer, on to the District Medical Officer, then to State and Regional levels and to the Ministry of Health (MOH). Three different departments of the MOH collect the data which can lead to different interpretations of indicators. Only data for 2 indicators are collected including prevalence of hypertension and smoking. There is data from the HMIS and paper-based data from the rural health centres. However, there is a challenge with lag time in the collection of data through each step of the system and in the compilation of the data. It is therefore difficult to get accurate data on the number of people screened and undergoing care for NCDs. Although the WHO STEPS survey is critical for monitoring NCDs, due to COVID19, it was put on hold in 2020 with no implementation date set at this stage. No specific monitoring system are mentioned in NCD policies for the evaluation of the programs instead they mention the need to establish research centres and the need to impart the NCDs-related data into the existing Health Management Information System.

A key informant mentioned that some quality assessment tools and checklists were developed in collaboration with the NCD team and WHO including feedback mechanisms and patient satisfaction data to come from the hospital level but it is yet to be operationalized.

Community

Mass Awareness

Although WHO Country Cooperation for Myanmar (2014–2018), United Nations Development Assistance Framework Myanmar (2014–2018) and National Health Plan (2017–2021) calls for the need to run education campaigns, only National Strategic Plan for Prevention and Control of NCDs (2017–2021), Myanmar National Comprehensive Cancer Control Plan (2017–2021) provide their aims and plan to run education campaigns in collaboration with media to enhance information access about healthy lifestyle behaviours, health services, and promotion.

A WCO KI informed that a sticker campaign was launched to raise awareness of NCDs at the community level. Messages on hypertension, diabetes, tobacco, nutrition and physical activity were covered. Volunteers put the stickers in prominent areas in villages so that the community members could see them and learn more about risk factors and how to avoid NCDs.

Reduction of inequalities

Myanmar's National Health Plan (2017–2021) includes strategies to reduce health inequalities, including those related to NCDs. The plan prioritizes improving health services in rural and remote areas, strengthening primary healthcare systems, and increasing access to essential medicines. Further, UNDAF for Myanmar acknowledges the need to expand coverage of health services, including for NCDs, to the most disadvantaged populations.

Provisions for hard to reach groups

As discussed by a key informant, the WHO have worked with the government on matters relating to the health of immigrants but there is currently no cross-border collaboration to address this issue apart from intermittent communication between offices in Bangladesh and the Ministry. While some policies recognized the need to ensure hard-to-reach groups have access to services introduced under the policies, they did not outline specific steps in their approach to achieving this objective

WHO guidelines and tools

The WHO provides support for implementing NCD-focused programs and initiatives through the WHO Country Cooperation Strategy (2014–2018), as well as input and support in the development of initiatives such as the Myanmar National Comprehensive Cancer Control Plan 2017–2021 and Myanmar National Strategy Plan for Prevention and Control of NCDs (2017–2021). WHO Myanmar CCS (2014–2018) includes a specific focus on controlling the growth of NCDs and outlines a set of priority interventions and strategies that can be adapted to the local context in Myanmar. WHO Package of Essential Noncommunicable Disease (PEN) Interventions for Primary Health Care in Low-Resource Settings provides a comprehensive set of evidence-based interventions for the prevention and management of NCDs at the primary health care level, including screening, diagnosis, treatment, and follow-up care for hypertension, diabetes, and other NCDs. Global Monitoring Framework on NCDs (2015) is also another important key guideline for Myanmar. WHO's Stepwise approach provides a standardized method for collecting and analysing data on the major risk factors for NCDs, such as tobacco use, unhealthy diets, physical inactivity, and hypertension.

Myanmar's policy momentum around NCD service delivery in PHCs was enhanced significantly in 2017 onwards, with a number of strategies following soon after. Near a quarter of health care expenditure is on NCDs and financial constraints are a significant hurdle in expanding and universalizing services. In 2021, the humanitarian response plans have attempted to retain continuity of the country's three tiered system with Wednesday clinics focused on NCDs and the use of midwives in service delivery. Access to essential medicines is another admitted challenge. Still PEN training continues to skill teams and notwithstanding technological hurdles, political challenges and COVID disruptions, efforts have been made in earnest to skill and assess progress in the country. Greater emphasis on service operationalisation and optimising given the current

scenario was advised with community outreach needing to be a key component of reforms going forward.

Nepal

Governance

Policies and strategy

The policy precedent for primary care level intervention on NCDs in Nepal was set by prevention and control activities underway prior to 2014, but with specific mention of integration of the WHO PEN package in Village Development Committees (VDCs) and Primary Health Centres (PHCs), in alignment with the SE Asia Region Action Plan under its Multisectoral Action Plan (2014–2020). [46] In 2016, the Health Ministry launched the WHO PEN in two districts. To strengthen the PEN intervention, the Ministry of Health and Population (Primary Health Care Revitalization Division and National Health Training Center) and WHO built a pool of national trainers in 2016 and early 2017. The Nepal Health sector strategy plan of 2017 further expanded the role of primary health care in NCD prevention and control by proposing referral protocols between primary, secondary and tertiary care, and through scaling up PEN implementation in all the districts. [47]The PEN programme was scaled up in 51 districts by 2021 and aimed to cover all 77 districts by 2022. The national plan expanded screening to integrate gestational diabetes and through establishment of screening camps in hard to reach areas. Screening and treatment of cervical cancer was also mentioned. While the role of community health volunteers in health promotion was initially expanded in the 2014 national action plan, by the time of the 2017 strategic plan, the focus also shifted to capacity building and sanctioning of doctors in primary health centres. The Multisectoral Action Plan for the prevention and control of NCD (2021–2025) has been recently launched with the goal of strengthening the NCD prevention and control in the country. The role of national policies and the priority for NCD in the country was highlighted by a COM KI

> ***Previously we had multi sectoral action plan which was from 2014 to 20. Now we have from MSAP from 2021–25 and we have Nepal National Health policy, 2014, this is the latest our health policy which also addresses NCDs, the previous health policies did not address NCDs. Now it is being addressed. Now we are in the third Nepal health sector plan which is from 2015 to 2020. Now we need to update this health sector plan, so all these government plan, policies are now geared up to address the NCDs (COM KI)***

A DOH KI spoke to us about the priority that NCD programs receive now and the shift of NCD program implementation from purely clinical approach to investments in preventive care following the Multi sectoral Action Plan.

Regarding the non-communicable disease and mental health And I have to say ministry of health and population initially before 6 years there is no such community-based activities in the country throughout the country. Yeah, we do have a clinical and hospital-based service through the non-communicable disease. it is developed with in reference to the guiding document that is the multispectral action plans and, NCD's in 2014 It is the MSAP and in vision of these documents it is stated there would be the one focal point in ministry of health and population.(DOH KI)

Governance and resources

The action plan laid down a governance structure by ensuring that a National Steering Committee provide planning and monitoring, while Regional and District NCD Prevention and Control Committees coordinated the implementation. Increased funding for NCDs was supported through tax funds from tobacco and alcohol. The PEN package for NCD control was piloted in 2016 with the support of WHO in the country and the policy makers recognising the importance of the program decided to scale up the program across the country and allocated financial resources from the national budget. A WCO KI felt that the governance structure in place with multilevel stakeholder involvement and high level committees was key factor behind this successful implementation.

When we had the first High Level Committee, the Chief Secretary who chaired this committee, recognised that PEN was very important to have supported 2 districts. He directed the(Health) secretary that they should expand it. So immediately in the same year, 8 districts were taken in from the government funds. It was documented, mediated and further the government took it as their in their annual work plan budget. (WCO KI).

The National Health Insurance program (NHIP) implemented by Health insurance Board of Nepal cover around 5.6 million Nepali citizen has helped the population from Out of Pocket expenditure[48] and also helps the patient in receiving NCD medicines not available in public hospitals. A WCO KI narrated an experience:

when I visited one off health facilities in the southern part of Nepal.. one of the remote health facilities , I saw a patient who is insured under health insurance there and he needed some cardiovascular drugs which are not available in the (public) health facility. But it was available through health insurance and it was delivered at the health facility. So the health insurance medicines do cover NCDs (WCO KI)

Our KI interaction indicated the role of decentralised governance structures especially the elected government in municipalities in Nepal had a key role in improving the NCD service and engaging with these local governments can be beneficial.

> ***The municipalities have elected governments, elected mayors. There are 753 municipalities. Constitutionally, they have a lot of leeway to plan and implement their programs. I think in the governance structure and the approach NCDs are already benefiting. A lot of mayors have realised the role that they can play in improving these services and from our experience and interaction with the mayors nearby, they are very quick to recognise their role and that's in place. In some districts we see that they are actually providing additional resources to implement the NCD service and improvement. (WCO KI)***

Service Delivery

Evidence based protocols

The primary care system in Nepal consists of health post managed by field health workers assistant health workers, health assistants and auxiliary nursing midwives. The PEN package is currently operational in all 77 districts of the country and health facilities are upgraded with infrastructure, medicines and diagnostics and health workers being trained in clinical protocols to deliver the services . Capacity building at the central and provincial levels has resulted in a trained workforce in the primary health centres and health posts capable of providing promotive, preventive and curative services for NCD. In 2015, the federal structure propounded in the new Constitution of Nepal further revitalized the primary health care which was reiterated in the Nepal Health Sector Strategy Implementation Plan of 2017. The plan expanded the coverage of unreached urban populations and increased the NCD service package. It extended screening camps in hard to reach areas and strengthened the development and implementation of referral guides for primary, middle and tertiary levels.

In 2021, the Ministry of Health and Population adopted the Nepal Integrated NCD Care (NINCM) Project to improve people centred NCD services in eight districts in seven provinces. The project covers a total 1.7 million population and builds on the current PEN and mental health interventions to focus on strengthening a continuum of care at the primary care level with linkages to higher facilities or hospitals. Keeping the patient at the centre of a comprehensive care service delivery system that includes early detection and management, and long-term care for common NCDs is the focus of the project. The priorities at the primary health care will include hypertension, diabetes, chronic respiratory diseases, basic palliative care and stroke referral and care pathway. Early diagnosis and referral pathways for cervical cancer, oral cancer, and breast cancer is sought to be improved. In addition, a stroke care centre and, national demonstration centres for tobacco cessation clinics will be established. Additionally, availability

of telemedicine services is ensured, and three or four medical colleges are proposed to be engaged to build a collaborative partnership with the NINCM Project.[49] A COM KI we interacted with mentioned about the need for focusing more on preventive care in service delivery model of Nepal

> ***Curative service is there, preventive service is also there. But preventive service is a very young, it is scanty, see, the more focus of these , NCD service in Nepal is now in diagnostic and curative, these are the most focussed area, but the preventive has less focus but it should be more focused. (COM KI)***

The delegation of role and responsibility is clearly laid out for higher levels of governance but not for those at the primary health care level, which this same study found is associated with a lack of coordination across levels. As regards human resources, the development of referral guidelines from the primary to secondary care was underlined but we did not get a sense of the steps involved or the specific cadre of health workforce engaged in the process, which a 2018 report indicated was a gap.[50]

Screening and Risk-based Management

The action plan specifies the expansion of screening program for cervical cancer, breast cancer, and oral cancer. It also aims to integrate and expand screening program for gestational diabetes fasting and PP blood sugar at 24 weeks and 28 weeks of pregnancy in the reproductive health care service standards. At the population level, STEPS data indicate that 55.9% respondents aged 15–69 reported having their blood pressure measured by a medical provider at some point of time among all respondents in 2019, which has slightly reduced from 57.3% in 2013. The introduction of PEN protocols had an impact on improving the quality of screening services and referral system .A WCO KI spoke about the advantages and areas of improvement the NCD service delivery system can have post PEN protocol implementation:

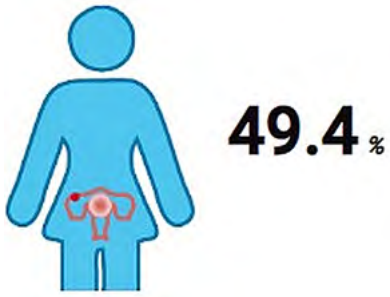
> ***One thing that PEN emphasised is to improve the care cascade. It introduced the protocols, it brought about, I mean, at least for diabetes and hypertension it brought about the protocol-based management and it got the medicines in place or at least advocated for the medicines. It was also supposed to look at the referrals and coordination, but what we found was that the referral pathways and coordination was not fully optimised even with PEN. (WCO KI)***

Protocols and Guidelines

Development of screening protocols for breast cancer, development of oral cancer screening programmes in the community, and integration of mental health and NCD screening in the

infectious disease screening programme for Nepali migrants are other key milestones laid down in the action plan. These interventions are much needed as in 2019, STEPS data suggest that only 5.4% of women aged 15–69 had ever been tested for cervical cancer (about a fifth of whom said this was part of routine examination, while another 49% said they experienced symptoms – this suggests we are not identifying women early enough) (see Fig. 8).

Fig. 8. Proportion of those screened for cervical cancer who got tested after experiencing symptoms, Nepal (2019)



Source: Regional NCD Dashboard (STEPS 2019)

The introduction of protocols and tools for the management of NCD has standardized the treatment for hypertension and diabetes at the primary health care level.

Health counselling

At present, health counselling is not offered at the primary care level; lifestyle health counselors and counseling units are slated for district hospitals, regional and zonal hospitals. The Health Sector Strategy of 2017 also prioritizes the development of lifestyle counselling curriculum.

Access to essential medicines and technology

The implementation of the PEN package has led to the improvement of the availability of essential medicines and basic diagnostics in primary health facilities. Provision of essential drugs for CVD, COPD, diabetes and cancer is ensured free of cost at all levels of health care and procurement of supplies for urine testing for glucose and glucometer for testing blood sugar is ensured at all health posts. This is starkly manifest in STEPS data rounds which suggest that from 0% in 2013, 41.9% of those with raised blood pressure had taken medication (see Fig. 9). The case of those taking medication to control blood glucose similarly rose from 0% in 2013 to 70% of those with raised blood glucose in 2019.

Fig. 9. Proportion of those with Raised Blood Pressure taking Medication, Nepal (2013, 2019)

Source: Regional NCD Dashboard (STEPS 2013,2019)

The price of essential drugs is proposed to be regulated through pricing regulatory mechanism. The policies include fulfilling sanctioned posts of four doctors in primary health care, and capacity building of health workers on PEN package. Reviewing and expanding the role of community health volunteers (CHV) to NCD education is another strategy outlined in the 2014 action plan. Furthermore, the plan lays down creating health counselor positions and counselling units in the middle tier health care level,

while at the primary care level, it outlines the development of incentive level and pay package based on the qualification and specialty for PHC workers. As regards medicines, a 2014 policy ensured the free provision of essential drugs through price regulatory mechanisms, but it was unclear what level of funding was laid out for NCD and, except for increase in taxes on alcohol and tobacco, how the funds would be channelled. Multiple studies as well as the 2018 Lancet NCDI Poverty Commission of Nepal and the WHO Country Cooperation Strategy suggest that drug and commodity supplies are hampered in the country at present and warrant further attention.[50–53].

Systems for monitoring

A results based action framework forms the core of NCD operationalization in Nepal, and hence certain steps have been taken toward this. The five yearly STEPS survey is aimed at assessing the progress of the NCD action plan. Data and information on NCD are proposed to be integrated in the HMIS. The 2015 strategy highlights the development of reporting tools for NCD and incorporating urban health reporting format to HMIS. It also lays down the critical role of data management training to all healthcare staff.

There is a need to strengthen reporting and recording systems. For raised blood pressure, there appear to have been declines in screening coverage (2013: 57.3%, 2019: 55.9% of respondents aged 15–69 reported having their blood pressure measured by a medical provider), diagnostics (2013: 84.2%, 2019: 67.9% of respondents aged 16–69 with blood pressure measurement who reported a diagnosis), and access to medicines (2013: 53%, 2019: 32.8% of those with raised BP who reported being on anti-hypertensive treatment) in the periods assessed by STEPS. In the case of diabetes moreover, the proportion of those with raised blood sugar on insulin was only 55% in 2019 as compared to 63.4% in 2013

Community

Mass awareness

The 2014 action plan outlines the structured media campaign strategy based on dose, medium, and timing of NCD messages. The plan aims to mobilize women's groups, female community health volunteers (FCHV), celebrities and community people for awareness campaigns. Additionally, the plan envisages creation of health information and education campaigns among consumer forums, ward citizens forums, patient groups, schools and the creation of citizen awareness centers. National-level mass media campaigns in Nepal is designed and developed by a dedicated government agency the National Health Education Information Communication Center in Nepal. They campaigns are aired in Mass media and social media and also disseminated as announcements during public events. The agency coordinates campaigns in line with observation of important health events and different thematic days on health like World Tobacco Day, World Cancer Day, you know, World Cancer Day. A WCO KI noted that

though there is still room for improvement in improving the mass media awareness campaigns in terms of making it more nation wide and consistent, especially on improving the awareness of screening and treatment for hypertension and diabetes.

Community participation in policymaking

Community participation is envisioned through mobilizing women's groups, consumer forums, ward citizen forums and citizen awareness centers for awareness campaigns, however, it is unclear how this is going to be achieved. Provision for poor and marginalized populations is not mentioned in the plan although the 2017 health strategy takes care of this by expanding the coverage of unreached urban populations for NCD intervention and extending screening camps in hard to reach areas. It further aimed to strengthen the development and implementation of referral guides for primary, middle and tertiary levels, thus reinforcing enhanced access to NCD treatment and care. Steps to ensure quality of care are also absent from the policy, and can be given greater emphasis going forward.

WHO guidance and role

Nepal's policy on NCD is influenced by the Global Strategy for the Prevention and Control of Non-Communicable Diseases (2000), WHO Framework Convention on Tobacco Control (2003), Global Strategy on Diet, Physical Activity and Health (2004), and more recently, the Global action plan, including indicators and voluntary targets, through resolution WHA 66.10, and the Action Plan for the prevention and control of NCDs in South-east Asia, 2013–2020. WHO country office supported the development of the multi-sectoral action plan and provided technical assistance in drafting the action framework. The WHO Package of Essential NCD Interventions (PEN) for Primary Health Care was adopted by the Ministry of Health in its health care delivery system. The WHO Country Cooperation Strategy of 2018 outlined a multisectoral approach to mobilize additional resources from UN funds, programmes and specialized agencies to achieve reduction and control of NCDs. It also underlined its role in providing technical support to NCD governance capacity and the use of social media to promote healthy lifestyle behaviors. The WHO country office has helped the health department in developing mass media campaign material for creating awareness about NCD risk factors.

Momentum in Nepal around NCDs has grown following PEN pilots in 2016 (which are now scaled up) as well as health insurance reforms, where emphasis was now turning on engaging with decentralised local government leaders, as by 2021 an integrated NCD care project has been introduced. Screening coverage remains low but is expected to increase given adoption of standard tools and protocols, and efforts to enhance drug access, which have been raised by multiple high level actors as a bottleneck. Mass awareness is being seen as another area requiring focus, drawing on the many contributions to date of development actors, including WHO. The creation of express linkages between NCD and other health strategies, i.e. greater promotion of NCDs as part of core PHC reforms will help streamline and steer the reform process.

Sri Lanka

Governance

Policies and strategy

Sri Lanka was an early policy actor on cancer in the region, launching the *National Policy & Strategic Framework on Cancer Prevention & Control (2014*) [54]to decentralize cancer control services. To achieve this goal, the provincial ministries of health with district cancer control committees were made accountable to implement cancer services in the provinces and districts. The policy focus on primary health care continued with the launch of the *National Multi-sectoral Action Plan in 2016* which proposed integrating NCD management in the primary health care (PHC) along with plans for engaging different ministries for promotion of healthy lifestyle.[55] This was also reflected in the country's Health Master Plan (2016–2025). [56] In 2018, *the WHO Country Cooperation Strategy* built on the ongoing reorganization of PHC by underlining the need for a responsive, people centred PHC model with referral linkages to higher levels of care. [56].[57] Cancer diagnosis and screening transitioned from the district level of healthcare to primary health care units (PHCU) with the launch of the *2020 National Strategic Plan on Prevention and Control of Cancer* in Sri Lanka.[58] The plan bolstered the referral system for cervical cancer by mapping colposcopy clinics and histopathology labs to link with each other.

Governance and resources

A state level NCD unit and provincial and district level multi sectoral committees were governance structures established to monitor implementation of the NCD programme, aligned with the structured referral structure already existing in the country (see Fig. 7). Funds for the NCD action plan were sourced from Government of Sri Lanka (GOSL) funds which includes the loan provided by the World Bank for health system improvement from 2013–2018 and a proposed loan from Japan International Cooperation Agency (JICA) for improving tertiary care. Three- fourth of the funds were allocated for health system strengthening for early detection and management of NCDs. A senior health official detailed the process of budgeting for NCD program using funds from government and developmental partners. A DOH KI had this to say

> ***Each activity is costed .. you know the estimates, we put a little bit., maybe more than the actual because with time the price can change. We make the plan, we make the whole plan for World Bank funding, for the WHO, GOSL, We know traditionally the work taken up by WHO, by World Bank... So whatever is left we put for GOSL funding, then we do the costing and we send it. Normally our budget gets approved, you know, whatever we request. (DOH KI)***

In the present period, there is scope for investment from multilateral financial institutions as part of the country's economic recovery package. Sri Lanka has established a robust public health system which has a dedicated public health wing with medical officers which promotes preventive health services. A COM KI mentioned this as strong point of their health system and something the South-east Asian region can learn form Sri Lanka.

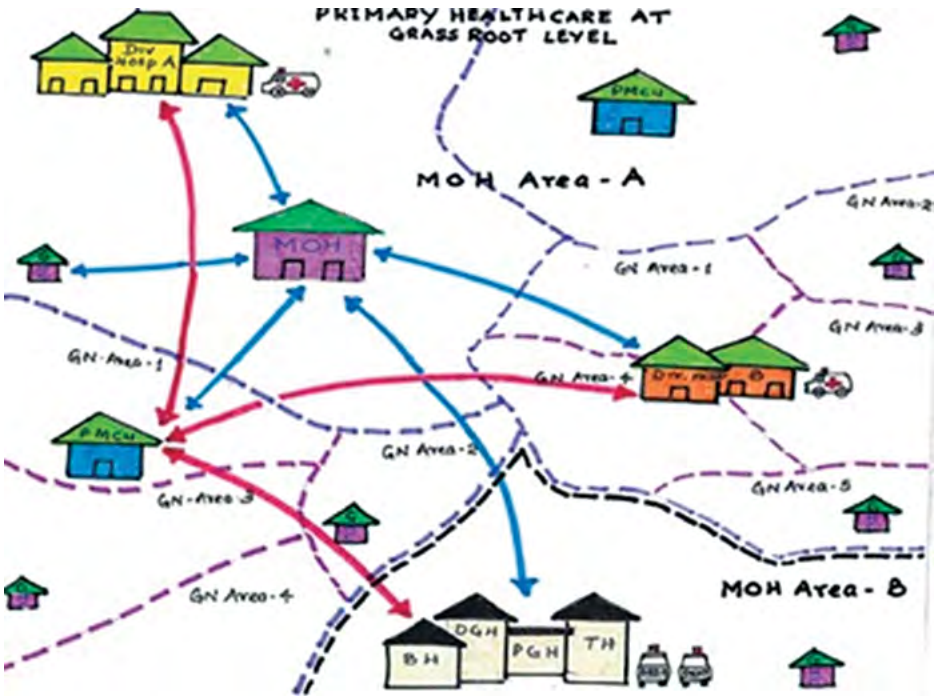
> ***The health system from the central to the provincial and district divisional levels at all levels the preventive aspect is supported. Though we say the government allocation and the funding is less for the preventive sector. The support is there, you know, not in terms of funding. For the supervision or the guidelines, and you know that that support is there. So we have a prevention-focused kind healthcare system. So that is something that I think that we can teach the rest of the countries as well. (COM KI)***

Service Delivery

Evidence based protocols

Integration of NCD management at primary care levels through Healthy Lifestyle Centres (HLCs) had been introduced at the outset of the period examined, early evaluations found some gaps in terms of inclusion of all NCDs, protocol adherence and human resource shortages, which the subsequent National Multisectoral Action Plan sought to address.[59] 'Well Woman Clinics' were another modality at the primary care level, proposed in this period. Cancer policies have well defined comprehensive cancer screening services, while readiness was influenced by features of the centres themselves. Screening for cervical cancer at the primary health care took centre stage in the latest cancer policy guideline by expanding Well Women Clinic Services for cervical cancer screening and piloting of HPV vaccination. It further proposed to map colposcopy clinics and histopathology labs in each district to link and facilitate referrals. Integration of NCD management at primary care levels through Healthy Lifestyle Centres (HLCs) had been introduced at the outset of the period examined, early evaluations found some gaps in terms of inclusion of all NCDs, protocol adherence and human resource shortages, which the subsequent National Multisectoral Action Plan sought to address.[59] a key challenge identified by multiple Kis during out interaction was that public sector clinics are mostly attended by females mostly due to timing of the clinic which often is barrier for working class population. Workplace screenings ,Saturday clinics and mobile clinics are introduced by the government to tackle this issue. A COM KI briefed to us about the role of private clinics run by Government doctors in NCD service delivery in Sri Lanka

Fig. 10. Design of primary health care services with structured referral in Sri Lanka



Source: Sri Lanka Ministry of Health, 2017

> ***I would say most patients are still being diagnosed as incidental at these General Practitioner Points.... We don't have a developed GP system. Our GP system is that the doctors who are working in the government sector, they do part time work in the private sector of work hours. So that is the first contact point for many. so that is where they are being diagnosed. (COM KI)***

Protocols/Guidelines

The policy documents emphasized the role of lifestyle counseling and accordingly training health providers. Clinical guidelines on the control and management of cancer, cardiovascular disease, diabetes, and chronic respiratory disease were launched in 2016 which furthered a patient centered cancer care protocol for a multi-disciplinary team using evidence-based cost-effective treatment pathways. Diabetes guidelines strengthened the role of PHC health providers, while inclusion of palliative care, survivorship and cancer rehabilitation were welcome steps in the cancer care guidelines.

Access to essential medicines and technology

Sri Lanka's commitment to ensuring access to essential medicines for cancer and other NCDs was evident in its policies and dates back to reforms introduced in 2011, including 16 essential

drugs being declared with allocated funding and a priority drug circular.[56] The country aimed to provide necessary drugs and equipment according to the essential drug list at all levels of care. [56] The country aimed to provide necessary drugs and equipment according to the essential drug list at all levels of care. Regular updates of the drug list and annual procurement estimates were included in the plan to strengthen the availability of essential medicines. As early as 2015, the STEPS survey found that 57.7% coverage of those with raised blood pressure were on treatment (see Fig. 11). Diabetes medicine coverage was higher still, at 69.5% of those with elevated blood sugar. Sex differences in medicine coverage were seen in Sri Lanka with hypertension medication coverage being greater among men, while diabetes medication coverage was greater among women in the period assessed. Meanwhile, this same survey found that 15.2% of women aged 18 to 69 had ever undergone cervical cancer screening.

Fig. 11. Proportion of those with raised blood pressure and raised blood sugar on treatment in Sri Lanka (2015)

Source: Regional NCD Dashboard (STEPS, 2015)

Team based care

We interacted with PHC KI who detailed to us about the human resource distribution in PHC which offers NCD care

> ***I am in charge and there are two more MBBS doctors... I have 4 nurses, 1 HLC nurse. and two development officers. They do....our chief staff is a development officer. Developmental officers (DO) help with projects. patient records. And I have 1–2 attendants... when the nursing officer draws blood, the midwife will educate on NCD and the DO will enter the data, like that.. then height and waist measurement is done by the HA. We have a team actually in the hospital. (PHC KI)***

A COM KI mentioned the quality and commitment of human resource in health sector as one of the best in the region and felt that the government investments universalizing primary education and medical education had helped the country in developing such quality workforce.

one thing is the staff commitment is high... it's a committed staff, , and very good human resource. That is something we should appreciate. Probably the reason behind it could be the free education. Free education policy or medical, paramedical....not only basic level education even the, tertiary care education. One of the things probably people feel that we should serve the state or the people, because of the free education and they have the opportunity. anyone can become a specialist as far as you have the capacity, irrespective of your financial status or background. (COM KI)

In the policy analysis it was observed that except for the duties and responsibilities defined for the public health nurse officer and the medical doctor at the healthy lifestyle centers, the national action plan of 2016 and the national strategic plan of 2020 has very little information on the other health care providers at the entry point of higher levels of care and their corresponding duties. The NCD unit at the district level is responsible for the implementation and management of the NCD programme, however, the exact provider responsible for each level of care except the HLC staff is not well described.

Standard treatment workflows

Establishment of strong referral systems from the primary health care level to tertiary treatment centres is proposed in the action plan of 2016 as well as the National Strategic Plan on management of cancer of 2020. While identifying, training and capacity building of primary care providers was stressed, the WHO CCS emphasized the need for retooling and reskilling of frontline healthcare functionaries. However, an evaluation of the national strategic plan on NCD (2010–2020) conducted by the Ministry of Health, Sri Lanka, found securing available and trained primary health care workers to be a major challenge in implementation[60].

Systems for monitoring

A monitoring framework was laid down in the action plan of 2016 in four strategic areas, each of has outcome indicators outlined with corresponding indicators and activities, responsible entities to implement the activities and the time frame to accomplish the activities. In the area of monitoring and evaluation, the action plan envisaged setting up a national surveillance and monitoring framework for NCD prevention and control, to initiate a web based data collection on morbidity, and to develop an IT system for OPD data as a pilot project. It also proposed conducting the STEPS survey every 4–5 years. The NCD program is reviewed every three months with the hospital staff at the regional level and the central level, district Medical officer NCDs (MONCDs) are reviewed monthly and the Resolve to save lives program for hypertension is reviewed every three months. A government official mentioned.

Community

Mass awareness

Mass media campaigns were proposed to create awareness and encourage the public to utilize screening services. In addition, specific guidelines were introduced to facilitate screening for diabetes targeting individuals above 35 years of age and those between 20 to 35 years with high-risk indicators. Community support for Sri Lankan public health facilities is strong through initiatives such as Friends of Hospital Committees and Hospital Developmental Committees. Friends of hospitals are constituted by respected members of community like retired government servants who can mobilize communities to better utilize NCD service coverage. The hospital development committee receives generous financial support from communities and non-residents, and has helped build ward complexes for public hospitals. A health department official mentioned the support from communities in improving the service delivery.

> ***At the hospital that I was working, the community were making these packets to dispense drugs...there was a group of ladies, they at their houses during their spare time, they make those packets and they deliver it to the hospital. So we never ran out of those. (DOH KI)***

The national strategy and plan for control of cancer aims to involve patient groups actively in the implementation and evaluation of the plan. However, the steps to be taken to initiate this activity are undefined.

Addressing inequalities/Leaving no one behind

As regards equitable access, the action plan proposed establishing community groups to be engaged in NCD activities and to build capacity in patient groups. Clinical oncology outreach clinics were established to increase accessibility for vulnerable populations. Additionally, developing cancer management plans based on the literacy level of patient is an important direction to achieve equity goals. However, the evaluation of the national programme on NCD highlighted the gaps in screening coverage of young and working people, mostly males.[60] However, the evaluation of the national programme on NCD highlighted the gaps in screening coverage of young and working people, mostly males.[60] A DOH KI mentioned that vulnerable populations like estate laborers elderly and disabled population face difficulty in accessing NCD care from health facilities.

A COM KI identified urban poor as a vulnerable population largely due to determinants of health like un health eating and lack of physical activity which push people to NCD

> ***One of the high risk categories that we see are the urban slums. Uh, especially the females. The obesity levels are very high. It's almost, uh, 50% if you take the obesity, overweight in the urban slums. Of course, their lifestyle is such that , unhealthy eating and lack of physical activity, obviously are the main reasons. And I think their carb intake is very high. (COM KI)***

Addressing socio-economic determinants through cross-sectoral policies is crucial for equitable NCD healthcare delivery, moving forward.

WHO guidance and role

In Sri Lanka, the Country Cooperation Strategy was last developed in 2018, and the economic crisis has brought new challenges in terms of fiscal space, as well as new opportunities, in terms of advancing its shared care cluster approach.[56] In 2019 a WHO evaluation of the Sri Lanka Essential Health Services Package revealed over-specialisation. [56]. Disconnected laboratory services, fragmented data and drug procurement systems.[56] This has since helped drive the direction of current support being offered by WHO to the Ministry of Health, Traditional Medicine and Nutrition in the post economic crisis period. [56]A ministry of health official mentioned about the utility of NCD management protocols and tools developed by WHO in framing National NCD program guidelines in Sri Lanka.

> ***We mainly used the WHO tools, but you know our consultants work with the clinicians and we may make some adjustments to suit our country, but otherwise, principally we always use the tools. Once the tool is introduced by WHO, we go through it, we have our working committees and then we may make small changes. But you know, principally we move with that. (DOH KI)***

Current reform efforts spearheaded by WHO are aimed at data and evidence-driven strategies that continue to hold NCD service delivery at the heart of primary care upgradation.

Sri Lanka has a robust health provision system in the public sector with strong emphasis on prevention through Healthy Lifestyle Centres and Well Women Clinic services. The other major strength of programming in the country is the strong emphasis on free drug access, reforms to procurement, such that NCD treatment access and coverage attainment is among the highest in the region. There are strong and committed teams delivering care although their skilling and orientation could be enhanced. Data systems are being enhanced to support service delivery as well. These reforms are supported by community participation mechanisms like hospital development committees. The system is also well apprised of left behind groups and their risk factors with community efforts also directed towards enhancing service delivery components. Gaps in screening however, remain with emerging challenges of reaching urban poor and other excluded populations.

Thailand

Governance

Policies and strategy

Thailand gained international recognition for its achievement in implementing UHC through its National Health Security Act of 2002; providing Universal health coverage to its citizens through Civil Servant Medical Benefit Scheme (CSMBS), the Social Health Insurance (SHI) and the Universal Coverage Scheme (UCS) providing outpatient and inpatient treatment coverage and positively impacts addressing the population's health care needs.[61] The Asia Pacific Observatory on Health Systems and Policies Review 2015 noted weaknesses in urban areas with specific reference to Chronic NCD care at the primary level, calling for improved infrastructure and proposing contracting-in approaches.[62] Soon after, the National Health Security Office (NHSO) requested that all contracted health providers register all NCD patients for better data management and support the formation of a disease registry for NCDs. The 5-Year National NCDs Prevention and Control Plan (2017–2021)[63] aimed to reduce the harm of NCDs through collaborative efforts at all levels and improve public health and economic development by 2021.

Governance and Resources

In Thailand, the Ministry of Public Health (MoPH) oversees the development of national health policies and offers medical services, particularly in rural regions. Healthcare financing in Thailand is primarily funded by general tax revenue with household contributions lowering as UCS coverage expands. The National NCD Prevention and control plan 2017 suggested that to reduce the risk of NCDs, the Ministry of Public Health should work with local administration, Thai health, businesses, and education-related agencies and other key actors to create a long-term prevention plan. The Health Promotion Department and Consumer Protection Section should coordinate in central and provincial zones. Businesses, workplaces, and educational institutions should have a systematic approach to managing NCDs and reducing risk. Policies and communication with the public should be improved, and resources should be invested in promoting the prevention and control of NCDs. Thailand has a strongly decentralised governance system with strong local governments that are key partners in advancing the NCD program at the community level, and the MoPH provides technical guidance to these governments to help them in health planning. A government official spoke about their collaboration with local administration as follows :

> ***We try to connect with the local administration, to give them knowledge, give them a connection, to make a plan, to collaborate with them....They will depend on us for knowledge only. They do not depend on us for financing or governance..; we have only the knowledge that we can share with them and make them work closely with us because family healthcare is a big part, an important part of Thailand. (DOH KI)***

Service delivery

NCD management in primary health care

Thailand started investing in health care from early 1977, starting with the fourth National Social and Economic Development Plan, focusing on primary care, district infrastructure, and referral hospitals. By 1990, district hospitals and sub-district level health centres were established, and the subsequent human resource policies promoted recruitment, training, and retention of staff in rural areas, which lead to a self-sufficient and skilled health workforce. A well-functioning primary healthcare system, backed by a strong workforce, has paved the way for Thailand to achieve universal health coverage. The district health system includes a district hospital with inpatient facilities and subdistrict health centres and serves a population of 30,000 to 50,000. District hospitals have 30 to 150 beds, each district hospital has physicians, nurses, pharmacists, dentists, and paramedics. Each hospital is connected to 8–12 Health centres covering 3,000 to 5,000 persons. The health centre team comprises 3–5 nurses, paramedics and 10 village health volunteers. A clear referral pathway is established, allowing for referrals and back referrals from health centres at the subdistrict district level to district and regional hospitals. The well-trained health work distributed across rural and urban areas, from community volunteers to specialist physicians, ensures continuity of care, although gaps in awareness of protocols have been noted. Hospital-based screening for all adult populations at risk for non-communicable diseases (NCDs) and cardiovascular disease (CVD) risk scores demonstrates the system's responsiveness in providing comprehensive and integrated care for NCDs. A WHO report on Hypertension prevention and management in Thailand identified low rate of diagnosis treatment inertia, access issues like long patient waiting times, physician centric care and limited interaction with Non MoPH and private health providers as major challenges.[64]

Team based care and health human resources

Early investments in health care reform, including a strong public health system has served as a strong foundation to build the NCD program. Thailand's density of healthcare workers slightly surpasses the WHO's benchmark of 2.28 per 1000 persons benchmark for doctors, nurses, and midwives. A PHC KI mentioned the role of primary care act in providing team based care to people. "Primary care act in Thailand is a mandate now… every single patient should have three health workers assigned to them.. one, is a village health volunteer, one is a public health nurse and one is a family physician leading that team". (PHC KI) The country is committed to providing comprehensive healthcare services to rural communities through various initiatives such as recruiting students from rural areas, integrating rural health issues into the curriculum, and mandating rural services for healthcare practitioners. National licensing exams and continuing education requirements are in place to maintain quality.

Screening and Risk-based Management

Community-based screening for hypertension, diabetes and other NCD risk factors is covered under the essential health services package of UHC crucial for UHC. Nurses and health volunteers

organize annual screenings for adults over 35 years who have not been diagnosed with hypertension or diabetes. Village Health Volunteers (VHV) mentored by health professionals perform initial screening of population in villages and record NCD risk factors. A medical officer in PHC summarized the role of VHV as

> ***The Village Health volunteers screen DM patients, and they can interpret the results as well. Secondly, they do HT screening, for those who have a high risk of developing HT, they would work on those patients. They would also conduct BMI screening, so they would measure around the waist to determine the BMI level as well. And they would also screen those who have been consuming alcohol and also those who are smoking and also screen those who usually have high sodium intake (PHC KI)***

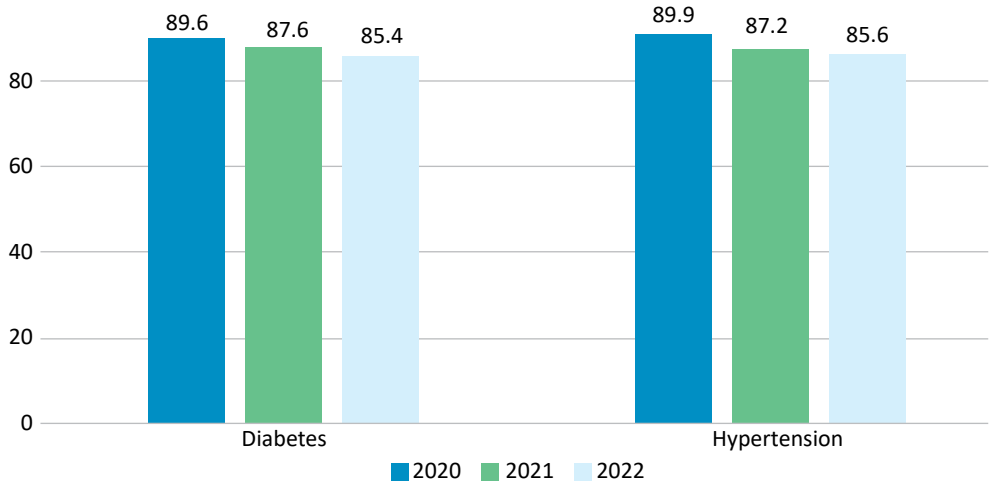
Clinical practice guidelines and protocols exist for annual diabetes screening of persons aged 35 years and above and retinopathy, kidney disease, and foot lesions for those with diagnoses. Screening of hypertension and risk assessment for cardiovascular disease (CVD) is done for all adults visiting hospitals by licensed medical doctors, with treatment and follow-up care in accordance with Thai hypertension guidelines. The diagnosis and treatment initiation for NCDs is solely assigned to a physician in Thailand. A medical officer explained the service delivery model as *"Village Health Volunteers serve as our screeners, and they would do some preliminary interpretation for us, but in the end, it's the clinicians who diagnose and make decisions on patient care."*(PHC KI)

A medical officer pointed out the absence of interventions targeted towards the at risk population in NCD care provision. The current system has laid out a robust path for patients who are diagnosed but little focus given to the population at risk, she added

> ***So just get the screening done, but what happens once they are screened? ... for example, they may have high-risk factors like being a little obese. I mean overweight. So at-risk-people, basically, there's nothing... There are no programs for these people...we ask them to come back next year and get screened again; that has been a big gap for us. So, the program (NCD) is all about screening, but there's nothing we can do with them until we diagnose. Once they're diagnosed, then they get good care. (PHC KI)***

National health security schemes cover the cost of drug therapy and counseling provided at health facilities. The Thai national cervical cancer screening program provides pap smear screening for woman aged 35–60 years and Visual Inspection with Acetic acid (VIA) screening for woman aged 35–45 years. At a recent workshop on PHC, it has been reported that some coverage ground has been lost for both blood glucose and blood pressure screening, which needs to be caught up (see Fig. 12).

Fig. 12. Proportion aged 35 and above screened for Diabetes Mellitus (DM) and Hypertension (HT) in Thailand (2020, 2021, 2022)



Source: Thailand Country Presentation, Workshop for implementing South-East Asia Regional NCD Roadmap, 2022–2030 Dhaka, Bangladesh (June 2023). Used with permission.

Healthy lifestyle counseling

The Thai government is dedicated to encouraging a healthy lifestyle for its citizens. They have launched the National Plan to Promote Physical Activity (2018–2030) and the five-year plan to prevent and control NCDs (2017) to achieve this goal. The Thai Health Promotion Foundation (Thai Health), a government agency established in 2001, supports civil society and promotes physical activity. Additionally, the Department of Public Works and Town and Country Planning strives to create safe and accessible public open spaces to help achieve SDG 11.7. The Bureau of Non-Communicable Diseases and the Office of Healthy Lifestyle Management are responsible for implementing the national strategic plan for preventing and controlling NCDs. The Diet and Physical Activity Clinic established by the department of Health offers physical activity counselling services. Since 2005, Thailand has organised national mass media campaigns to promote physical activity and combat obesity. These campaigns include, "Fatless belly Thais" (2011–2019) targeting the working age population," "Run for new life" (2012–18) and "National step challenge (2020–2021)." BE 2560–2564 Thailand National Sports development plan aimed to increase exercise and sports awareness and participation. Over 1800 running events were organised in 2019 before the pandemic. A medical officer in charge of implementing the NCD control program mentioned a challenge faced by communities in adhering to the guidelines and lifestyle advice prescribed by the program. She said "We have differences, we live in different contexts. Let's say some people are living in poverty; they cannot afford this and that, so they cannot just all of a sudden change their lifestyle." (PHC KI)

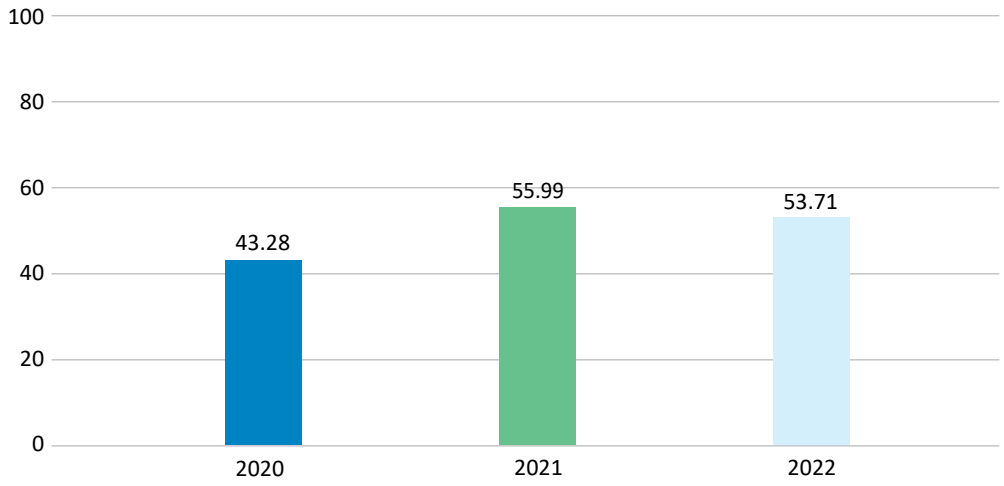
The medical officer suggested that implementors should have a better understanding of the community and the circumstances they live in. Health workers need to act as mentors and empower the community to make behavioral changes for a healthier and localized solution

relevant to the context would be more appropriate than strictly adhering to the implementation of centralized program guidelines.

Access to essential medicines and technology

The Prevention and Control of Non-Communicable Diseases in Thailand: The Case for Investment" report finds that 80% of facilities in Thailand are equipped with essential medicines and technologies to treat NCDs. [65] The report also adds that at least half of the population eligible for drug therapy to attain glycaemic control and prevent CVD and stroke receives it. [65] The report also adds that at least half of the population eligible for drug therapy to attain glycaemic control and prevent CVD and stroke receives it. Recent data on this was presented suggesting that the peak of controlled hypertension was attained in 2021 with a minor decline in the past year (see Fig. 13). Overall, however, over half of those on medication have controlled hypertension, which is an encouraging outcome.

Fig. 13. Proportion of those on medication with controlled hypertension in Thailand



Source: Thailand Country Presentation, Workshop for implementing South-East Asia Regional NCD Roadmap, 2022-2030 Dhaka, Bangladesh (June 2023). Used with permission.

A PHC KI when asked about the availability of essential drugs and diagnostics mentioned that Primary care units in Thailand are equipped with diagnostic kits and basic medicines to manage NCDs, and advanced care is available at provincial hospitals. A provider conveyed that

> ***HT measurement machines and finger pricking supplies are available in every village. So each village would have some 300–400 population we have basic supplies. Some PCUs would have ultrasound machines to conduct preliminary cancer screening for liver cancer... Metformin and medicines like that are available at the PCU. Now the more complicated medication for instance, the one with a higher price range, would be available at the provincial-level hospital. (PHC KI)***

Systems for monitoring

The National Statistical Office conducts regular national household surveys, which are utilised to monitor the impact of health policies on households and estimate capitation fees for the Universal Coverage Scheme (UCS) support. To ensure a robust data capturing mechanism, identity cards, family folders, patient booklets, and referral forms are provided to people; digital health records are available to facilitate communication between healthcare workers and facilities, making it easier to manage patient information**.** To ensure quality and people-centred NCD care, for hypertension care ,the Thai health system has assigned a unique ID to each individual, maintains family health records at health centers, and provides patients with a booklet containing information on diagnosis and treatment. Thailand has a Health Data Centre that records and stores health information using a unique ID number in a standardised format called the "43 folders" system. The MoPH requires healthcare facilities to provide disaggregated and individualised raw data to the provincial level via the same system for easy accessibility and organisation. Key Performance indicators are closely tracked across various levels, from national down to district and individual health facilities.[64] While the data of people who use the public system is available, the data of people using private facilities are not integrated to the government system and this become a challenge especially in Urban areas. A senior MoPH official spoke about this challenge as "We (MoPH) have just the data from the people using government health system. But yeah, in urban areas we have many private hospitals that do not incorporate the data into our system. There's just a big gap"(DOH KI)

Community

Community Participation in the policy process

The NHSO has created various initiatives to encourage participation, including health insurance coordinating centers, patient groups, and community health funds. Civil society groups oversee implementation through the National and Regional Health Security Committees. The impact of these structures and processes remains to be assessed. NCD alliance a global collective that leads civil society movements for NCD, is active in Thailand and works closely with MoPH. A WHO official explained the role of patient associations in the country and how the UHC act ensures that decision-makers hear the community's voices.

> ***In Thailand, the patient with kidney disease, the diabetes patient, they get together and they form an association…they have a strong voice…. there is the decision for the health service under the universal health coverage act to establish committee, Representatives of these organisations and NCD patients are also the member of the committee when making a decision about the service package. (WCO KI)***

The National Health Commission Office (NHCO) coordinates and facilitates National Health Assembly in developing policy proposals for implementation, evaluation, and policy revision. National health assemblies serve as a platform to hear community voice and are organized in the national, provincial, and district levels. The NCD guidelines developed by MoPH has a strong component on patient empowerment, and health workers try to make care more patient-centric by empowering communities a MoPH official mentioned

> ***The guideline for the NCD clinic, one of the items is patient empowerment - to make the mechanism to support the management for patients.. we know that health issues are not just about the health sector. It belongs to the community as well. So we try to encourage people, try to enter a community to work together. (DOH KI)***

WHO guidance and role

WHO policies and action plans are key reference points for policy development around preventing and controlling NCDs in Thailand. WHO provides indicators for monitoring, and as of 2020, Thailand has achieved 12 out of the 19 indicators for monitoring NCD disease progression.[66] WHO also conducts health system reviews to evaluate the NCD program and provide data to support policymaking. [66] WHO also conducts health system reviews to evaluate the NCD program and provide data to support policymaking. Thailand also adopted WHO's Framework Convention on Tobacco Control and has implemented a comprehensive tobacco control policy. WHO policies and action plans are key reference points for policy development around preventing and controlling NCDs in Thailand. Our interaction with key informants from MoPH revealed that technical support offered by WHO was useful in i) developing guidelines for NCD management by adapting the global guidelines ii)developing a monitoring framework for measuring the health outcomes and iii) preparing regulatory frameworks controlling risk factors like tobacco usage and salt intake. An MoPH official added that the regular interactions with WHO officials and the technical documents produced by WHO were a useful resource to better understand the program. "I contacted Dr. (Name masked) but I just talked to her about many, things that we tell each other. I think that was integral in helping the health system in Thailand. Honestly, I learned a lot from the document of the WHO when I became Director of this division" (MoPH KI).

WHO officials in country office spoke about the unique position of WHO Thailand office working in a country with high capacity with the government departments. The major focus areas are i) Interacting with ministry and political leadership to keep the momentum going for NCD control especially with changing governments, ii) facilitate local and global partnerships to support MoPH in improving the efficiency in health planning and iii) support the leadership of Thailand in public health by focusing on highlighting the achievements country have made which is a learning experience for other countries in the region and across the globe. A Country Office participant had this to say:

We (WHO) are trying to look at the strategy in different directions, international cooperation, engaging champions, having our partners at the Ministry of Health, but also now we are trying to link the Bangkok Metropolitan Authority and the Ministry of Public Health together……Its actually one of our (WHO) six Country Cooperation Strategy areas promoting Thailand's leadership in the in public health, regionally and globally. (WCO KI)

Thailand has been a lodestar for the region in terms of primary health care reform and while a 2015 review noted some gaps in urban service delivery and national care cascades, the country has been investing substantially 2017 onwards in reducing NCD burden and consequences, demonstrating early successes in partnering with local government to advance NCD programming. A value based ethos guides service design, buttressed by strong foundations of human resource distribution, clear referral pathways although even with strong population based screening coverage (upwards of 85% even during COVID), relatively low diagnostic rates are an identified challenge. Legislative reform in the form of the Primary Care Act with strong linkages between volunteer and clinical staff has created a strong foundation, with emphasis on a number of elements of counseling, addressal of upstream determinants. Data systems – including the 43 folders system in a model where service provision is mostly in the public sector- capture the actual care cascade in the country – another exemplar for the region – with appreciably high drug and technology access with respect to NCDs. Patient advocacy is high and various institutionalised for a exist for contributions including national health assemblies, but also local outreach mechanisms to help people engage in the health sector, not just for their own health, but in service of their communities as well.

Timor Leste

Governance

Policies and strategy

In 2011, the Ministry of Health introduced the National Health Strategic Plan (2011–2030) focused on strengthening primary health care services in the country. [67] In 2015, the Ministry of Health introduced the National Strategy for Prevention and Control of Noncommunicable Diseases, Injuries, Disabilities and Care of the Elderly, and the NCD National Action Plan (2014–2018). [68] In the same year, the WHO Country Cooperation Strategy (2015–2019) also supported federal actions addressing NCDs through technical assistance. [69] Further, in 2021, United Nations Sustainable Development Cooperation Framework (2021–2025) aim to support primary health care services and the reduction of NCDs. [70] According to a WCO key informant "the National Health Strategic Plan had a major revision in 2021 providing a basic plan for the overarching health sector and within that there is an NCD strategy for 2021–2030".

The National Health Strategic Plan (2011–2030) recognized the need for inter-sectoral collaboration, including involvement of the public and private sectors, such as ministries, public institutions, developmental partners, civil society organizations and the community. The NCD National Action Plan (2014–2018) and the Multisectoral NCD Action Plan (2018–2021) for instituting a multisectoral working group as well. The WHO Country Cooperation Strategy (2015–2019) recognized the need to strengthen partnerships both with the Ministry of Health and other relevant ministries, such as social welfare, education, finance and environment. Finally, the United Nations Sustainable Development Cooperation Framework (2021–2025) acknowledged that PHC strengthening would involve strengthening relationships with multisectoral partners, such as the Ministries of Health, Education and Tourism.

Governance and Resources

The Ministry of Health led both the National Health Strategic Plan (2011–2030), the National Strategy for Prevention and Control of Noncommunicable Diseases, Injuries, Disabilities and Care of the Elderly as well as the NCD National Action Plan (2014–2018), with clearly defined roles for management and responsibilities of various stakeholders within the plans. Although budgets were not specified, the NCD National Action Plan (2014–2018) called for an increased allocation of funds in the government regular budget for health, and specifically for NCD prevention and control through primary health care services. he Multisectoral NCD Action Plan (2018–2021) and United Nations Sustainable Development Cooperation Framework (2021–2025) also advocated for an increased budget for NCD control and prevention. The WHO Country Cooperation Strategy (2015–2019) was led by the WHO Country Office for Timor-Leste, involving partnerships with key stakeholders including the Ministry of Health, and non-health developmental partners. No specific budget for the strategy was outlined, however. A key informant noted that "there has been a funding allocation increase of 50% since the previous strategy plan including external funds with the support of WHO with up to 1/3 of funding coming from external agencies which mostly goes towards operational health care costs such as training."

The National Health Strategic Plan (2011–2030) aimed to ensure cost-effectiveness of the strategy while United Nations Sustainable Development Cooperation Framework (2021–2025) aimed to align the plan with the sustainable development goals.

Service Delivery

NCD management in primary health care

The National Health Strategic Plan (2011–2030) focused on the improvement and further development of primary healthcare services, investment in human capital and healthcare infrastructure and strengthening of health management and administration. The NCD National Action Plan (2014–2018) and the Multisectoral NCD Action Plan (2018–2021) had emphasized a multisectoral response, health promotion and primary prevention, early detection and

management of NCDs, as well as surveillance. The WHO Country Cooperation Strategy (2015–2019) aimed to strengthen health systems capacity to reduce the burden of various communicable and noncommunicable diseases. The United Nations Sustainable Development Cooperation Framework (2021–2025) aimed to implement the PHC Essential Service Package across all levels of the primary health care system. Some key priorities included increasing skills and capacities of the health care workforce, improving health care facilities (e.g., hygiene and basic equipment) and improving quality of care based on best practice.

Screening and Risk-based Management

Under the NCD National Action Plan (2014–2018), health posts would conduct opportunistic screening for selected NCDs, such as hypertension and diabetes. Community health facilities (secondary care) also provided laboratory services and screening for common NCDs. Under the Multisectoral NCD Action Plan (2018–201), community- and family-based health promotion and screening programmes were scaled up, including follow-up and treatment for hypertension, common cancers, and diabetes mellitus. A key informant discussed that "there has been a campaign over the last 1–2 years to reduce cervical cancer rates. Colposcopy centres have been opened with staff being trained to do cancer screening and treatment. In addition, the cervical cancer vaccination will be rolled out which should increase public awareness".

Healthy Lifestyle Counselling

The NCD National Action Plan (2014–2018) and the Multisectoral NCD Action Plan (2018–2021) (4) focused on health promotion on tobacco and alcohol use, healthy eating, physical activity and reduction of household pollution through strategies such as mass media use and legislation.

Access to Essential Medicine and Technology

The National NCD Action Plan (2014–2018) aimed to universalize access to essential drugs and basic technologies, including essential medicines and technologies for NCDs in national essential medicine lists. It also aimed to improve efficiency in procurement, supply management of generic drugs and technologies. Both the WHO Country Cooperation Strategy (2015–2019) and the Multisectoral NCD Action Plan (2018–2021) acknowledged the need importance of access to medicine and technology to strengthen quality of care. The United Nations Sustainable Development Cooperation Framework (2021–2025) aimed to promote greater than 80% of health facilities having a core set of relevant essential medicines available and affordable on a sustainable basis. Specific plans to ensure sustainability of the policies and access to medicines and testing were rarely addressed.

Team-Based Care and Human Resources

Little information was provided on the roles and capacities of specific individuals (e.g., healthcare professionals) involved in the implementation of NCD policies and programmes. In

2020 there were 0.8 physicians per 1,000 population[71], and 1.7 nurses and midwives per 1,000 population. Doctor to population ratios vary broadly dependant on region with ratios of 1:630 in Dili , 1:1239 in Manatuto, and 1:3000 in Ermera in 2014, with similar issues pertaining to nursing ratios.[72] A key informant reflected that in 2014–2018 there was a shortage of health care staff, with predominantly nurses leading NCD care at the community level. The government implemented a human resources strategy that saw medical doctors from Cuba graduating and being hired to work at the primary health care level with the aim of at least one medical doctor in each health post. There were also few specialists available in the country. Intake of doctors trained overseas has led to an increase in specialists now working in Timor Leste. District health officers are responsible for NCD risk factor prevention relating to diet and physical activity.

The PEN program is implemented at the community health centres with one health professional identified to take on the responsibility of NCD health service delivery, often a nurse at the centre. A challenge with this system is when staff move to another program then someone new has to be selected and trained on NCD care.

> ***There is a current program called Timor-Leste Hearts for preventing and managing NCDs that aims to put 50,000 people on standard care for diabetes and hypertension by 2025 with the guidance of WHO. Currently standardisation of operational procedures for healthcare workers to promote team-based care to ensure medicines and equipment are available at all levels of the health care system is in progress. Starting with one municipality as a pilot project, the program will then aim to extend to other municipalities as improvements are seen. (WCO KI)***

It was also noted that "nurses and midwives play a very important role in NCD health delivery as they are trusted by the community and are able to bridge cultural sensitivities and provide cervical and breast cancer screening and treatment. Nurses are also tasked with public awareness and education at the community level" (WCO KI).

Systems for Monitoring

The NCD National Action Plan (2014–2018) aimed to establish a National NCD Monitoring Framework including monitoring indicators and conduct a Nationally representative NCDs Risk Factor Survey to generate baseline data and repeat it every five years. A mid-term and final evaluations were set to be undertaken for the WHO Country Cooperation Strategy (2015–2019). Finally, strategic action areas for Multisectoral NCD Action Plan (2018–2021) include to identify an NCD focal point in the existing Department of Surveillance and train the person in NCD surveillance and conduct the WHO STEPS survey for risk factors. According to a WCO key informant, "2014 a national survey for NCD risk factors was undertaken and published in 2015. Using this data, we review and also do some analysis, we can use to develop strategic plan … secondly. We collect field data to analyse changes in NCD risk factors. "

Timor Leste has a health information system DHIS2, which has been in place for 7–8 years, focused largely on MCH indicators. For NCDs, over the last 2 years a paper-based reporting system has been used up to the national level. There is a lack of resources such as essential equipment and internet to use the electronic platform at the ground level. There has also been an NCD survey being undertaken is being done on tablets and is tracked digitally. Ideally when the patient is identified then information is entered into the health information system on tablets or phones.

Community

Mass Awareness

The NCD National Action Plan (2014–2018) drew on mass media to engage in health promotion activities. The Multisectoral NCD Action Plan (2018–2021) further recognized the need to strengthen the capacity of the health promotion unit within the MoH and of other stakeholders by developing training modules and programmes for them. We leaned from the KI interviews that the Ministry of Health has a health promotion department to produce educational materials on diabetes, hypertension, and cervical cancer and it is disseminated through social media channels, supported at district levels by Health Promotion Bureaux. They work closely with community radio to promote messages and encourage people to get screening or tests done. Print media is not utilised for health promotion or infographics, it is used more for articles detailing Ministry announcements. WHO has been actively working with the Health Promotion Bureau and the media to encourage more discussions on health issues to build more awareness and understanding. Notwithstanding this, it has been challenging to build awareness around screening. The first cervical cancer screening centre only opened in May 2022 and approximately 320 women have been screened. WCO noted that they had begun work in the desired direction, though there was a long way to go, yet.

Provision for access for hard-to-reach population groups

The National Health Strategic Plan (2011–2030) aimed to develop guidelines for mainstreaming gender issues in health sector planning, in line with the National Gender Policy. A core value of the plan also included equity (ensuring equal access to health services for all people with the same health conditions) and building a culturally sensitive health system. The NCD National Action Plan (2018–2018) also emphasized the value of equity by acknowledging that the government needs to ensure equal access to quality care according to needs of individuals with same medical conditions. The United Nations Sustainable Development Cooperation Framework (2021–2025) aimed to improve the quality of primary health care services and health coverage with a particular focus on the needs of the poor, less educated, rural communities, women and children, persons with disabilities, migrant and mobile populations and other marginalized groups, by drawing on best practices.

WHO guidance and tools

Under the WHO Country Cooperation Strategy (2015–2019), the WHO Country Office would provide technical assistance, and the regional office as well as WHO HQ would provide resources to support the country office as required. WHO also provided technical support for the development of the Multisectoral NCD Action Plan (2018–2021). Finally, WHO served as an implementing partner of the United Nations Sustainable Development Cooperation Framework (2021–2025). A WCO key informant further elaborated that "WHO works closely with the Timor Leste Ministry of Health to advise on best practices to strengthen their health system at the country level. At the program level WHO provide technical guidance on policy and guideline development and implementation specifically for NCDs and for capacity building. WHO monitor at the field level and then offer guidance on best practice and for any gaps within their systems. World Health Assembly resolutions are prioritised and adapted by the MOH with the support of WHO."

Various strategic documents have led up to revisions covering NCD services in Timor Leste as part of the 2021 reform packages. Thus much of the reform is forthcoming, with a strong emphasis on PHC and expected partnership with WHO and other UN agencies. An ambitious target of 80% coverage of core essential medicines is set in place and specific targets for NCD service coverage – enhancement and skilling of the human resource workforce is being given priority at present. Data systems require greater digital enhancement and tailoring to be fit for purpose and workable across the particular contexts of the country while health promotion efforts will need also to be ratcheted up. Cervical cancer service delivery is in early stages and will need to receive more emphasis going forward, drawing on regional expertise and good practice.

Research Question 1b: success stories, best practices, and innovations in expanding access to people centred NCD services

While defining a success story and best practice in the time frame under consideration was not possible, we identified from one particular publication on *Shifting Paradigms* NCD service delivery, as well as our primary fieldwork, examples of emerging innovation and promising practices that offer insights on addressing multiple domains of people-centred NCD services at PHC level. Indeed examples may exist in ALL countries to this effect; the following set of descriptions is intended to be illustrative, not comprehensive and points towards the need for a concerted and continuous process of rigorous monitoring, evaluation and documentation of "what works, for whom, under what circumstances" in delivering NCD care across the region.

Bangladesh

Support for refugee NCD health in Cox's Bazaar [49]

The Cox's Bazar refugee camp is home to 884,000 Rohingya people and the area has 175 healthcare facilities operated by government and non-government organisations. These

health facilities serve the Rohingya refugees and the 472,000 Bangladeshi population in the surrounding area. In 2019, a WHO assessment found that only a quarter of healthcare workers in Cox's Bazar received NCD prevention and management training the previous year and the same proportion of facilities even had printed Guidelines for NCD management.

The Directorate General of Health Services in Bangladesh, with the assistance of WHO, created and implemented national protocols for integrated hypertension and diabetes through the primary health centres, later named as Cox Bazar model of Integrative NCD care. The model emphasised training primary health care staff and community health workers to promote health and prevent risk factors for NCDs through screening and surveillance. It also ensured the availability of necessary equipment and supplies for detecting and managing NCDs. The WHO country office supported the development of "Bangladesh PEN", adapted from the WHO Package of Essential Noncommunicable Disease Interventions (WHO PEN); educational material regarding NCD risks and health lifestyle was developed in Bangla and English.

NCD Screening services were introduced for all the Rohingya population aged 40 years and above. The "Bangladesh PEN" training was a collaborative effort between the Directorate General of Health Services, WHO Bangladesh, and BRAC James P Grant School of Public Health. It successfully trained 68 government health staff facilities and 361 community health workers from the Rohingya community. A WCO KI remarked about the role of Rohingya community health workers in the program and strategy adopted to customise the training according to the preferences of a foreign population.

> ***When we started the NCD operations in 2019, we trained all community workers and, uh, to you developed an NCD flip chart, uh, which are in English and Bengali language. We did not go for Burmese because the Rohingya refugees, there is evidence that they don't understand Burmese or they can't read very well... But features are basically pictorial. uh, we put pictures. Let's do so. So the flip charts are with community health workers. They do their door to door visit (WCO KI)***

Additionally, the program provided essential medication and supplies for NCD management to 123 healthcare facilities in Cox's Bazar. The efforts have led to increased utilisation of NCD services among Rohingya refugee population in the area. A WCO KI working in Cox bazar noted that staff retention is a major challenge as this is an emergency response mission trained staff gets transferred or their contract period ends which led to trained human resource shortages affecting the quality of care. The second challenge was data management, as data system is still developed the health staff find it difficult to monitor the progress of the program effectively. Lastly the duration of funding was challenge as unlike immunisation and communicable disease response NCDs require long term management and uninterrupted supply of medicines which becomes difficult as emergency response is largely donor funding which are usually short term.

Bhutan

Bhutan- People-Centered Care with Care and Compassion[49]

Gaps found in treatment, medicine availability and follow up through a 2016 PEN clinical audit led to Bhutan adopting the revised WHO PEN interventions in 2018 using the global HEARTS technical package- service with care and compassion (SCCI). The package consisted of the 7 R: i. robust team building, ii. reach out to home-bound services, iii. refill of medicines, iv. recall and reminders v. responsive referrals, vi. reliable and people centred lab diagnosis, vii. real time monitoring and supportive supervision and 3 C (comprehensive, collaborative and continuum of care). This model has become an integral part of the primary and district health services.

The SCCI mandates that all visitors to healthcare facilities undergo NCD screenings and also has elements such as home care, medication refills, treatment reminders, follow-ups, efficient referrals, and real-time monitoring[12].A WCO KI briefed us about the initiative showing the transformation in people's experiences:

> ***In the past people struggled to get their (NCD medicine) refills. they had to come to the district hospital and if the district hospital didn't have stock for it was a huge inconvenience. With SCCI now they can get the same medicine at the primary health centre because the health assistant at the primary health centre has a good connection with the district hospital and if the district hospital doesn't have the medicine, then the district hospital pharmacist has a good connection with regional hospitals so they proper link developed across. Now we assume that people have more confidence and trust (WCO KI)***

A PHC KI further explained to us about the process of SCCI and the model of NCD care in the country: The NCD screening through health facilities starts at PHC level with a Health Assistant trained in hypertension and diabetes management conducting the initial screening and does the diagnosis, the HA then contacts the medical officer and shares the details though social media apps WhatsApp or Telegram and the treatment is initiated according to the PEN protocol. If the HA feels the need for further assistance does a referral by booking a slot for the patient at the district hospital for conducting the full panel of tests and consulting the medical officer. After test and consultation, the patient is again referred back to the HA through social media application. if there are complicated cases or some cardiovascular diseases or maybe stroke the patient is refeed to regional referral hospital for specialised care. The HAs are trained in PEN protocol and are authorised to prescribe medicines form essential drug list for NCDs. A PHC KI explained " We have an essential medical list, and there are some basic medicines like let's say Losartan, metformin,.. All those medicines are available at primary healthcare centre, so they are allowed to prescribe that".(PHC KI)

A team- based care approach has been the leitmotif of people centred care. Targeted mentoring and supervision of the primary health centres (PHC) are done by district mentoring teams which has been a guiding force in integrating people centred care by focusing on patient outcome measures. While social media apps are used for regular interaction with PHC, six months visits are conducted for supportive supervision through a standard checklist. This has led to an increase in clinical competence at the PHC. Health assistants at the PHC conduct screening, initiate treatment and counsel and educate patients. They have also initiated home visits for homebound patients. Records of coverage and cohort control rates of hypertension, brief interventions and homebound care are compiled on a quarterly/annual basis and sent to the PEN focal person in the district for review. This, in turn, is submitted to the NCD programme division at the Ministry of Health. Based on the report, the NCD division prepares written feedback which is then sent to the PHC. The continuum of care, thus, enables continuous quality improvement in the delivery of NCD services. Furthermore, the model has led to overall satisfaction and improved work environment among district and primary health care providers.

An assessment conducted in 9 districts in May 2023 found screening, IPD, emergency and pharmacy was available in all 18 PHC and lab service in 11 of them. An efficient flow of patients resulted from team- based care which included doctors, nurses, pharmacists and laboratory technicians, receptionists and other staff. Revitalizing the FORM-III reduced out of pocket expenditure and increased patient compliance. It also enabled consistent patient contacts even during the Covid-19 lockdown. Findings pointed to the increased availability of medicines. Essential medicines were available in most of the PHC while drugs for diabetes mellitus was available in all 9 of the district hospitals (see Table 1).

Table 1. Availability of NCD medicines in primary health centre and district hospital

Availability of antihypertensive medicines in PHC (n=18)		Availability of diabetes mellitus medicines in DH (n=9)	
Hydrochlorothiazide	17 (94.4%)	Metformin	9 (100%)
Losartan	17 (94.4%)	Gilipizide	9 (100%)
Nifedpine	15 (83.3%)	Pioglitazone	9 (100%)
Amiodipine (form III)	14 (77.78)	Mixtard insulin	9 (100%)
Atenelol (form III)	11 (61.11%)	Insulin soluble	9 (100%)
Furosemide	15 (83.3%)	Insulin isophane	9 (100%)

Source: Bhutan Country Presentation, Workshop for implementing South-East Asia Regional NCD Roadmap, 2022–2030 Dhaka, Bangladesh (June 2023). Used with permission.

Furthermore, health workers served as the conduit between the patient and the medical doctor resulting in active case referral. There was also an improved referral and care coordination between PHC and district hospital (DH), and between the district hospital and higher referral

centres. 16 of the 18 PHC and 8 of the 9 district hospitals had established a referral system, and phone lines to schedule appointments were available in 50% of the PHC and DH. Health workers further coordinated the sample collection and made laboratory test appointments. Managing blood sample collection where the patient was significantly cut down patient time and reduced overcrowding at the hospital. Finally, real time monitoring and timely coaching helped in care delivery. The major learning to be drawn from the case study is that people-centred care using a team-based approach allows for continuous improvement in quality of care.

India

India Hypertension Control Initiative (IHCI) [49]

The India Hypertension Control Initiative (IHCI) is a multi-partner strategy implemented to strengthen hypertension management and control in public sector health facilities. The project was launched in 2018–19 in 29 districts across five Indian states with five core strategies: standard treatment protocol, reliable supply of free antihypertensive drugs, team-based care, patient-centered care, and an information system to track individual patient treatment and blood pressure control. Clinic-level blood pressure control averaged 43% (range 22–79%) by Jan-March, 2020 out of an initial 570,365 enrolment in 2018–19. Among 721,675 patients registered until March 2020, 38.4% had received drug refills through HWC/SC or home delivery by frontline workers during the lockdown, thus highlighting that a scalable public health hypertension control programme can yield substantial benefits even in challenging times. As a DOH KI indicated "*We picked up important learnings from IHCI. It doesn't exist anymore, but is integrated in the portal. This is how Implementation Research can improve implementation in reality and learnings can be brought into main system. We did that and GOI showed we have improved our portal.*"

Indonesia

Persatuan Diabetes Indonesia (PERSADIA)

Established in 1971, PERSADIA has steadily expanded its reach, gaining numerous members over the years. With a presence spanning various regions of the country, the organization has 33 units, each catering to around 200–300 patients. The members, including doctors and patients, actively participate in talks, seminars, campaigns and conferences aimed at educating patients. They also conduct live sessions on social media to target the younger demographic, recognizing their active presence on social media platforms. Utilizing diverse communication channels, such as WhatsApp, the organization effectively connects with people to spread its message. Periodic meetings facilitate discussions and the dissemination of awareness, while member patients are provided guidance on optimal care-seeking strategies, particularly given the time-consuming nature of public hospital consultations. The patients diagnosed with

diabetes are referred and guided by the doctors to join this organization, highlighting its crucial role in promoting the well-being of individuals living with diabetes. The organization extends its impact beyond awareness campaigns by organizing camps for young individuals and women. Recognizing the pivotal role of empowered women in community guidance, the organization prioritizes educating and empowering women.

The achievements of the organization include instrumental policy reforms during the COVID-19 pandemic, by negotiating with the government allowing patients to receive three months' worth of medicines together, and eliminating the need for monthly hospital visits which was the case previously. Currently, the organization is actively advocating access to glucometers for everyone, through the national insurance system such that patients can monitor their glucose levels individually at their home itself.

The Maldives

Faafu Atoll Demonstration Site (FAD)

The Faafu Atoll Demonstration Site, established in 2022, aims to enhance healthcare delivery across Faafu Atoll, Maldives, by addressing service gaps and revolutionizing care models to ensure patient-centred, innovative, efficient, and effective healthcare provision. This initiative aligns with the commitment of the President and the Ministry of Health, Republic of Maldives, to prioritize PHC delivery in the Maldives, significantly benefit public health and wellbeing.

Under FADS, a holistic approach between clinical and public health units is envisioned within health facilities, aiming to transform them into primary healthcare centres by engaging health workers in community-based activities encompassing sensitization, screening, home visits and school health services.

FADS emphasizes the need for several key service delivery reforms, including policy support for service delivery, the service delivery and care pathway, health information management and telemedicine, essential medicines and equipment availability, functional laboratory facilities, human resource capacity development, standard treatment guidelines, the patient referral pathway, community engagement, and health resilience and preparedness.

Nepal

Integration of NCD services with mental health

A strong causal, yet complex link exists between mental health disorders and non-communicable diseases (NCD). In recent years, there has been an increasing push toward integrating mental health in NCD management through a team-based, people centred care approach. [73]

In Nepal, 71% of the total burden of diseases is contributed by NCD in 2019 which has increased from 66% in 2016. The Mental Health Survey of Nepal (2020) estimated 10% of the

disease burden as being borne by mental health (MH). The primary health care revitalization in Nepal provided an opportunity for integrating mental health in the NCD programme by focusing on people centred care at the province and local level through the use of the mental health gap assessment (mhGAP) guide. The mental health gap operational guide of WHO (2021) has been developed to help non-specialists conduct standardized clinical interviews and examinations, and to deliver interventions. A further objective of the operational guide is to steer the health care provider towards patient-centredness and to protect the rights of the patient. Issues such as patient privacy and the need for confidentiality have been emphasized in the operational guide.

Efforts to integrate mental health and NCD programme management have been a focus of the NORAD-WHO Project in eight districts and the Special Initiative for Mental Health (SIMH) in 14 districts. The projects aim to improve the delivery of essential NCD services through the Nepal Integrated NCD Care Model (NINCM). The NORAD- WHO project has integrated the mental health gap assessment (mhGAP) with the existing initiatives of Package of Essential Noncommunicable (PEN) to develop a comprehensive service delivery including early detection, management, and long-term care. There are efforts, additionally, to integrate skills and competencies of MH and NCD at the preservice level by engaging medical colleges and other universities. Inservice training and education programmes are included and clinical mentoring of nonprofessional primary health care (PHC) workers by psychiatrists have also been initiated. These efforts have led to a well-defined service package with availability of medicines. Ownership by the government has further strengthened NCD and MH service delivery. The success of this programme is evident from the programme management convergence between NCD and mental health within the federal structure of the government as well as the partnership with medical and health institutions for integration of pre-and in-service competencies-based trainings.

Thailand

Healthier cities and social participation in health

Thailand is committed to provide a healthier environment to its growing urban population in line with WHO s vision of healthier cities. The department of public health Thailand recognized the efforts of local self-governments in providing safe and healthy living spaces for citizens and committed to have 1000 cities to achieve healthy city status by 2027[74]. A WCO KI reflected that this initiative has an impact on improving convergence and the community participation and in health.

> ***They have awarded them in terms of like what they have done in terms of climate change, urban health, promoting physical activity.... community initiatives to promote health. In fact, we (WHO) are supporting 7 cities to be accredited as part of the Healthy City Network. (WCO KI)***

A KI involved with planning and delivery of primary care services in areas under Bangkok Metropolitan Authority (BMA) detailed to us about the NCD management activities implemented in Thawi wathana district as part of health charter developed by BMA. Health charter is developed through consultation with community involving multiple partners including BMA, National Health Commission, MoPH, NHSO and district administration. Thawi Watthana district had sixteen communities and health charter was developed in 2023 in four communities through a systematic process, first the primary health centre supported the community in identifying the local health problems though primary and secondary data collection, the identified health problems were compiled and send to District Health Board(DHB) and later to public policy department of district administration for action. The district health charter had a strong NCD component which recommended policy action on four elements i) reducing risk factors like alcohol intake, tobacco consumption, sodium intake, improve physical activity and health healthy eating habits ii) improve NCD service delivery by supplying essential diagnostic kits and setting up tele consultation units, the charter also stated need for developing a data collection system to understand the health of communities iii) focus on improving NCD awareness about among community leaders and members ,develop community based NCD management projects iv) Develop a community NCD charter.

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Annex 3

Document review summary – Uncovering key insights

1. Data and information sources

The evaluation consisted of two parts:

(1) Data Collection and Synthesis

(2) Site Visits and Interviews

This annex is dedicated to presenting the outcomes and findings resulting from the initial phase of the evaluation process, which involves data collection and synthesis. During this phase, a comprehensive approach was taken to gather relevant data from various sources, such as documents, surveys, and records. The insights and findings presented in this annex are the result of a meticulously executed methodology that outlined data sources, collection techniques, analysis methods, and quality assurance procedures, ensuring the reliability and validity of the evaluation's outcomes.

Table 1: Data and information sources

Sl. No		Title	Links
1.	Regional Committee	Regional Committee for South-East Asia	https://www.who.int/southeastasia/about/governance/regional-committee
2.	Global and Regional Action Plan	Global action plan for the prevention and control of NCDs 2013–2020	https://www.who.int/southeastasia/publications-detail/9789241506236
3.		Action plan for the prevention and control of noncommunicable diseases in South-East Asia	https://apps.who.int/iris/handle/10665/333817
4.	Global and Regional NCD evaluation	Evaluation of Implementation of Regional Flagship Areas in the WHO South-East Asia Region	https://www.who.int/docs/default-source/searo/evaluation-reports/evaluation-of-implementation-of-regional-flagship-areas-in-who-sea-region-2014-18.pdf
5.		Mid-point evaluation of the implementation of the WHO global action plan for the prevention and control of noncommunicable diseases 2013–2020 (NCD-GAP)	https://www.who.int/publications/m/item/mid-point-evaluation-of-the-implementation-of-the-who-global-action-plan-for-the-prevention-and-control-of-noncommunicable-diseases-2013-2020-(ncd-gap) https://cdn.who.int/media/docs/default-source/documents/about-us/evaluation/ncd-gap-final-annexes.pdf

Sl. No		Title	Links
6.		WHO package of essential noncommunicable (PEN) disease interventions for primary health care	https://www.who.int/publications/i/item/9789240009226
7.	WHO data sources	The Global Health Observatory	https://www.who.int/data/gho
8.		Global Cancer Observatory. WHO South-East Asia (SEARO) - Global Cancer Observatory	https://gco.iarc.fr/ https://gco.iarc.fr/today/data/factsheets/populations/995-who-south-east-asia-searo-fact-sheets.pdf
9.		Noncommunicable Disease Document Repository	https://extranet.who.int/ncdccs/documents/
10.		Implementation roadmap for accelerating the prevention and control of noncommunicable diseases in South-East Asia	https://www.who.int/southeastasia/activities/south-east-asia-noncommunicable-diseases-acceleration-roadmap
11.		Monitoring progress and the acceleration plan for NCDs, including oral health and integrated eye care, in the South-East Asia Region	https://apps.who.int/iris/handle/10665/363096
12.		Shifting paradigm in frontline NCD services in the South-East Asia Region	https://apps.who.int/iris/bitstream/handle/10665/353968/9789290229292-eng.pdf
13.	WHO data source	Noncommunicable Diseases Data Portal	https://ncdportal.org/
14.		NCD country capacity survey	https://www.who.int/teams/ncds/surveillance/monitoring-capacity/ncdccs
15.		UHC Compendium	https://www.who.int/universal-health-coverage/compendium
16.		NCD global monitoring framework	https://www.who.int/teams/ncds/surveillance/monitoring-capacity/gmf
17.		HEARTS D: diagnosis and management of type 2 diabetes	https://www.who.int/publications/i/item/who-ucn-ncd-20.1
18.		Guideline for the pharmacological treatment of hypertension in adults	https://apps.who.int/iris/bitstream/handle/10665/344424/9789240033986-eng.pdf

Sl. No		Title	Links
19.	WHO data source	STEPwise approach to NCD risk factor surveillance (STEPS)	https://www.who.int/teams/noncommunicable-diseases/surveillance/systems-tools/steps
20.		SEARO NCD dashboard	To be updated
21.		Noncommunicable Diseases Progress Monitor	https://apps.who.int/iris/bitstream/handle/10665/184688/9789241509459_eng.pdf
			https://www.who.int/publications/i/item/9789241513029
			https://www.who.int/publications/i/item/9789240000490
			https://www.who.int/publications/i/item/9789240047761
22.		Continuity and coordination of care- A practice brief to support implementation of the WHO Framework on integrated people-centred health services	https://apps.who.int/iris/handle/10665/274628
23.		Framework on Integrated People-centred Health Services (IPCHS)	https://www.who.int/teams/integrated-health-services/clinical-services-and-systems/service-organizations-and-integration
24.		Strengthening Health Systems Response to address noncommunicable diseases in South-East Asia Region	https://www.who.int/publications/i/item/sea-ncd-95
25.		Colombo Declaration on strengthening health systems to accelerate delivery of NCD services at the primary health care level	https://apps.who.int/iris/handle/10665/250283
26.		Strengthening health systems to accelerate delivery of noncommunicable diseases services at the primary health care level	https://apps.who.int/iris/handle/10665/276542
27.		Integration of NCD care in emergency response and preparedness	https://apps.who.int/iris/handle/10665/272964
28.		Second South-East Asia regional forum to accelerate NCD prevention and control in the context of SDGs	https://apps.who.int/iris/handle/10665/334274

Sl. No		Title	Links
29.	Publications	Patient-centred care requires a patient-oriented workflow model	https://pubmed.ncbi.nlm.nih.gov/23538724/
30.		NCD Countdown 2030: worldwide trends in non-communicable disease mortality and progress towards SDG target 3.4	https://www.thelancet.com/pb-assets/Lancet/hubs/ncd/NCDCountdown2030_Summary_FINAL-1537452913640.PDF
31.		Strengthening health systems and service delivery for NCDs	https://www.routledge.com/Noncommunicable-Diseases-A-Compendium/Banatvala-Bovet/p/book/9781032307923
32.		Better health and wellbeing for a billion more people: integrating non-communicable diseases in primary care	https://www.bmj.com/content/bmj/364/bmj.l327.full.pdf
33.		THE LANCET Regional Health Southeast Asia	https://www.thelancet.com/journals/lansea/issue/vol6nonull/PIIS2772-3682(22)X0007-3#fullCover
34.	Bangladesh	Strategic Plan for Surveillance and Prevention of Noncommunicable diseases in Bangladesh 2011-2015	https://cdn.who.int/media/docs/default-source/searo/bangladesh/pdf-reports/year-2007-2012/strategic-plan-for-surveillance-and-prevention-of-non-communicable-diseases-in-bangladesh-2011-15.pdf?sfvrsn=134a0bf3_2
35.		National Protocol for Management of Diabetes and Hypertension	National protocol Management of Diabetes and Hypertension
36.		National Strategy for Cervical Cancer Prevention and Control	BGD_B5_s21_National Strategy cervical ca prevention and control Bd 2017- 2022.pdf (who.int)
37.		National NCD Targets	https://extranet.who.int/ncdccs/Data/BGD_Bangladesh_NCD_targets.pdf
38.		WHO Bangladesh Country Cooperation Strategy	https://www.who.int/publications/i/item/9789290209478
39.		Multisectoral Action Plan for Prevention and Control of Noncommunicable Diseases	https://www.who.int/docs/default-source/searo/ncd/ban-ncd-action-plan-2018-2025.pdf

Sl. No		Title	Links
40.		Package of essential noncommunicable disease (PEN) interventions in primary health-care settings of Bhutan: a performance assessment study	https://apps.who.int/iris/handle/10665/329737
41.	Bhutan	Bhutan Cancer Control Strategy	Bhutan Cancer Control Strategy.indd (who.int)
42.		Guideline for Screening of Gastric Cancer, Cervical Cancer & Breast Cancer	BTN_D1aic_s21_Guideline for screening Gastric cancer, cervical cancer and Breast cancer 2020 (1).pdf (who.int)
43.		National NCD Targets	https://www.who.int/docs/default-source/searo/ncd-surveillance/pages-from-bhu-ncd-action-plan-2015-2020-me.pdf
44.		United Nations Development Assistance Framework Bhutan One Programme	https://www.unfpa.org/undaf-bhutan-2014-2018
45.	Bhutan	WHO country cooperation strategy: towards transition	https://iris.who.int/handle/10665/339044?&locale-attribute=de
46.		Multi-sectoral Action Plan for the Prevention and Control of Non-communicable Diseases	https://extranet.who.int/nutrition/gina/en/node/36191
47.		Evolving a people-centred approach to noncommunicable disease (NCD) services in Bhutan	https://www.who.int/southeastasia/news/feature-stories/detail/Evolving-a-people-centred-approach-to-noncommunicable-disease-NCD-services-in-Bhutan
48.		UN Strategic Framework (UNSF)	https://dprkorea.un.org/en/10156-un-strategic-framework-2017-2021
49.	DPR Korea	WHO country cooperation strategy Democratic People's Republic of Korea	https://apps.who.int/iris/handle/10665/250298
50.		National Strategic Plan for the Prevention and Control of Noncommunicable Diseases	https://cdn.who.int/media/docs/default-source/searo/ncd/dprk-ncd-action-plan-2014-2020.pdf

Sl. No		Title	Links
51.	India	Indian Hypertension Control Initiative (IHCI)	https://www.ihci.in/
52.		National Noncommunicable Disease Monitoring Survey (NNMS)	https://www.ncdirindia.org/nnms/
53.		National NCD Targets	https://extranet.who.int/ncdccs/Data/IND_India_NCD_targets.pdf
54.		United Nation Development Action Framework	https://planipolis.iiep.unesco.org/sites/default/files/ressources/india_undaf_0.pdf
55.		The WHO India Country Cooperation Strategy 2019–2023: A Time of Transition	https://www.who.int/india/country-cooperation-strategy-2019-2023
56.		National Multisectoral Action Plan for Prevention and Control of Common Noncommunicable Diseases	NMAP Display 25 March 2019 REV.cdr (mohfw.gov.in)
57.		National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke	https://dghs.gov.in/content/1363_3_NationalProgrammePreventionControl.aspx https://main.mohfw.gov.in/Major-Programmes/non-communicable-diseases-injury-trauma/Non-Communicable-Disease-II/National-Programme-for-Prevention-and-Control-of-Cancer-Diabetes-Cardiovascular-diseases-and-Stroke-NPCDCS
58.		Report of National Cancer Registry Programme	https://ncdirindia.org/All_Reports/Report_2020/default.aspx
59.		Roadmap to scale up hypertension and diabetes in primary health care	https://cdn.who.int/media/docs/default-source/searo/ncd/75-million-people-with-hypertension-or-diabetes-on-standard-care-by-2025.pdf?sfvrsn=2fb8123d_1
60.		CPHC NCD solution- NCD application ANM user manual	https://main.mohfw.gov.in/sites/default/files/CPHC%20NCD%20Solution%20-%20NCD%20Application%20ANM%20User%20Manual_0.pdf
61.	Indonesia	National NCD Targets	https://extranet.who.int/ncdccs/Data/IDN_Indonesia_NCD_targets.pdf
62.		WHO Country Cooperation Strategy	https://www.who.int/publications/i/item/9789290225027
63.		NCD Prevention and Control in Indonesia	NCD_Prevention_and_Control_in_Indonesia.pdf (kemkes.go.id)

Sl. No		Title	Links
64.	Maldives	National NCD Targets	https://extranet.who.int/ncdccs/Data/MDV_Maldives_NCD_targets.pdf
65.		Final Evaluation Report of the UN Development Assistance Framework (UNDAF)	https://maldives.un.org/en/98000-final-evaluation-report-un-development-assistance-framework-undaf-2016-2020
66.		Maldives-WHO: country cooperation strategy	https://www.who.int/publications/i/item/3670902292978
67.		Multi-sectoral Action Plan for The Prevention and Control of Noncommunicable Diseases	https://cdn.who.int/media/docs/default-source/searo/ncd/mav-ncd-action-plan-2016-2020.pdf
68.	Myanmar	Integrated Management of Diabetes & Hypertension	Integrated management of Hypertension and Diabetes
69.		Myanmar National Comprehensive Cancer Control Plan	MMR_B5_NCCP_15_Jul_2016 total-2 MK_full.pdf (who.int)
70.		National NCD Targets	https://extranet.who.int/ncdccs/Data/MMR_Myanmar_NCD_targets.pdf
71.		Draft Myanmar-United Nations Development Assistance Framework	https://themimu.info/sites/themimu.info/files/social-protection-public/FOURTH_DRAFT_UNDAF_30_July_2019_Clean_1.pdf
72.		WHO Country Cooperation Strategy	https://apps.who.int/iris/bitstream/handle/10665/136779/ccs_mmr_2014-18_9789290224495.pdf
73.		National Strategic Plan for Prevention and Control of NCDs	MMR_B3_NSP PDF.pdf (iccp-portal.org)
74.	Nepal	National NCD Targets	https://extranet.who.int/ncdccs/Data/NPL_Nepal_NCD_targets.pdf
75.		United Nations Development Assistance Framework	https://nepal.un.org/en/91050-undaf-nepal-2018-2022
76.		Nepal – WHO country cooperation strategy	https://apps.who.int/iris/handle/10665/272476
77.		Multisectoral Action Plan for the Prevention and Control of Non-Communicable Diseases	https://www.who.int/docs/default-source/nepal-documents/multisectoral-action-plan-for-prevention-and-control-of-ncds-(2014-2020).pdf

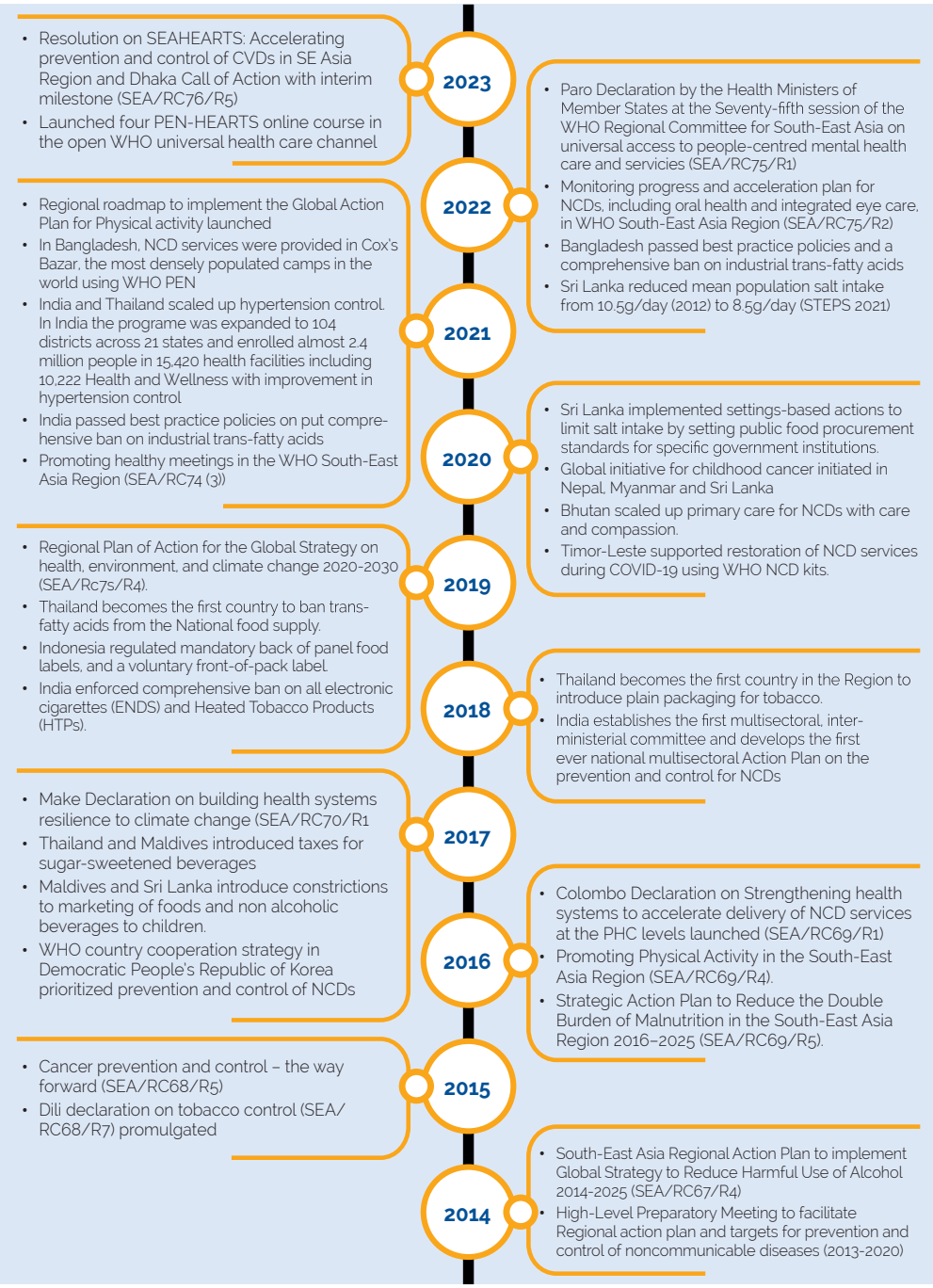
Sl. No		Title	Links
78.		Cardiovascular Risk Management (Total Cardiovascular Risk Assessment Approach) Guidelines for Primary Health Care providers	LKA_D1aia_CVD guidelines.pdf (who.int)
79.		Management of Diabetes Mellitus Guideline for Primary Health Care Providers	Management of Diabetes Mellitus Guideline for Primary Health Care Providers
80.		National Policy & Strategic Framework on Cancer Prevention & Control	https://extranet.who.int/ncdccs/Data/LKA_B5_NCCPSL_POLICY.pdf
81.	Sri Lanka	National Strategic Plan on Prevention and Control of Cancer in Sri Lanka	LKA_B5_s21_National Strategic Plan NCCP 2020-2024.pdf (who.int)
82.		National NCD Targets	Sri Lanka_NCD_targets.pdf (who.int)
83.		United Nations Development Assistance Framework	https://www.unfpa.org/undaf-sri-lanka-2013-2017
84.		WHO country cooperation strategy	https://apps.who.int/iris/handle/10665/272611
85.		National Multisectoral Action Plan for the Prevention and Control of Noncommunicable Diseases	https://www.who.int/docs/default-source/searo/ncd-surveillance/pages-from-srl-ncd-action-plan-2016-2020-me.pdf
86.		Hypertension care in Thailand: best practices and challenges	https://apps.who.int/iris/handle/10665/330488
87.		Clinical Practice Guideline for Diabetes	THA_D1aib_25610702_guideline-diabetes-care-2017.pdf (who.int)
88.	Thailand	National NCD Targets	https://extranet.who.int/ncdccs/Data/THA_Thailand_NCD_targets.pdf
89.		United Nations Partnership Framework Thailand	https://thailand.un.org/en/50604-united-nations-partnership-framework-thailand-2017-2021
90.		WHO country cooperation strategy	https://apps.who.int/iris/handle/10665/255510

Sl. No		Title	Links
91.	Timor-Leste	National NCD Targets	https://extranet.who.int/ncdccs/Data/TLS_Timor-Leste_NCD_targets.pdf
92.		Package of Essential Noncommunicable Diseases Interventions in Timor-Leste	https://extranet.who.int/ncdccs/Data/TLS_D1_Timor-Leste%20PEN%20%20revised%2021%20April%20 2017.pdf
93.		United Nations Sustainable Development Cooperation Framework	UNSDCF Timor-Leste 2021-25 Final_0.pdf
94.		WHO Country Cooperation Strategy	https://apps.who.int/iris/handle/10665/246258
95.		Multisectoral action plan for the prevention and control of noncommunicable diseases	https://www.who.int/docs/default-source/searo/ncd/tls-ncd-action-plan-2018-2021.pdf

2. Findings for South-East Asia Region

The Regional Office has prioritized knowledge generation and evidence- sharing since 2014, evident in the release of over 415 documents encompassing advocacy, guidance, meeting reports, situational analysis, evaluation studies, research papers, strategies and awareness materials. Around 23% of these publications have focused on NCDs.[1]

Fig. 1. WHO support for NCD milestones in the South-East Asia Region (2014–2022)



The South-East Asia Region became the first to endorse an Implementation Roadmap for accelerating the prevention and control of NCDs 2022–2030, which comprises an innovative impact simulation tool.

For the first time, six million people with hypertension with standard care were monitored and their control rates reported.

For the first time, the Region achieved the fastest decline in tobacco use prevalence among people aged 15 years and above, and is now on track to achieve the WHO NCD Global Action Plan target of a 30% relative reduction in the prevalence of tobacco use by 2030.

In 2021, the first WHO South-East Asia Regional Strategy for primary health care 2022–2030 was launched, and in 2022, the Region became the first WHO Region to establish a regional PHC Forum of Member countries.[1]

The SEARO NCD dashboard[2] analysis is an assessment of the Noncommunicable Disease (NCD) dashboard provided by the South-East Asia Regional Office (SEARO) of the World Health Organization (WHO). This dashboard is a tool used to monitor and analyze data related to NCDs in the South-East Asia Region.

The WHO SEARO NCD dashboard offers a dynamic, interactive and responsive tool where the users are able to access information on different aspects of NCDs for the Region as well as for the 11 Member States using data are from published sources. The information is presented in these five main categories

(1) Probability of premature mortality due to NCDs

(2) Risk factors for NCDs

(3) NCDs (diseases and conditions)

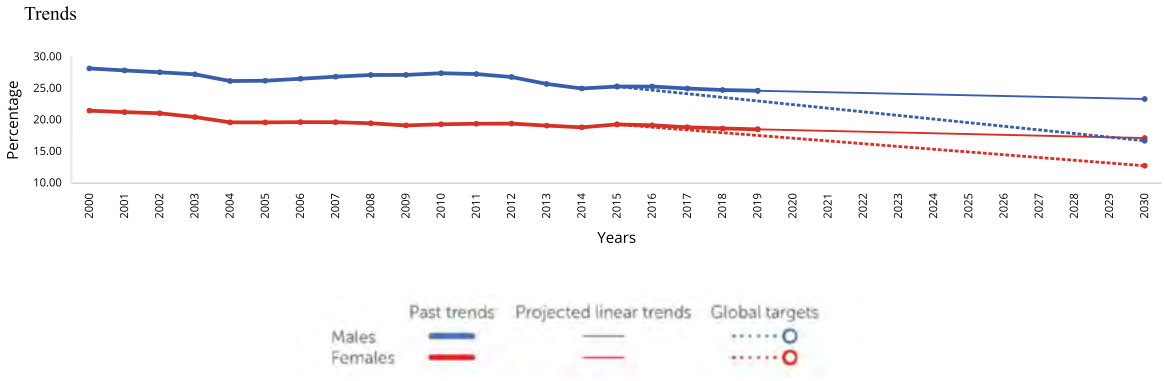
(4) NCD progress monitor

(5) Country Data Portals for NCDs

Source of data for the first three categories of the Global Health Observatory (GHO) of the WHO NCDs (who.int). Many of these datasets in GHO represent the best estimates of WHO using methodologies for specific indicators that aim for comparability across countries and time. They are updated as more recent data become available, or when there are changes to the methodology. The dashboard is based on the estimates published as of December 2022.

In the South-East Asia Region, the probability of dying from cardiovascular diseases (CVDs), cancers, diabetes and chronic respiratory diseases between the ages of 30 and 70 years declined from 23.4% in 2010 to 21.6% in 2019 (Fig. 2).[2]

Fig. 2. Probability of premature NCD mortality: South-East Asia Region



Prevalence of hypertension and diabetes show rising trends in the Region (Fig. 3 and 4).

Fig. 3. Prevalence of hypertension among adults 30–70 years in South East Asia Region, 1990–2020

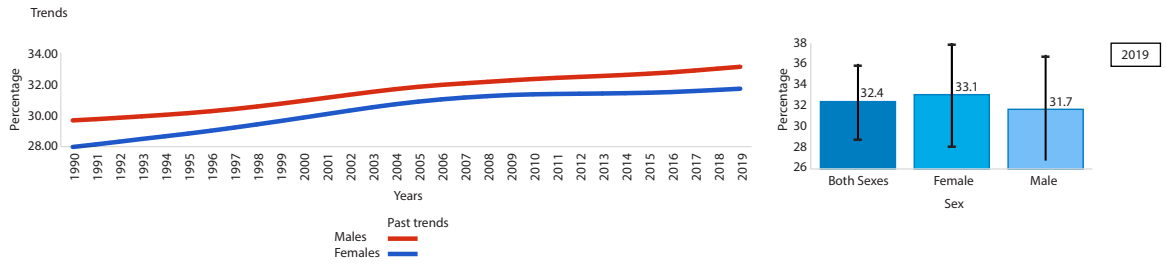
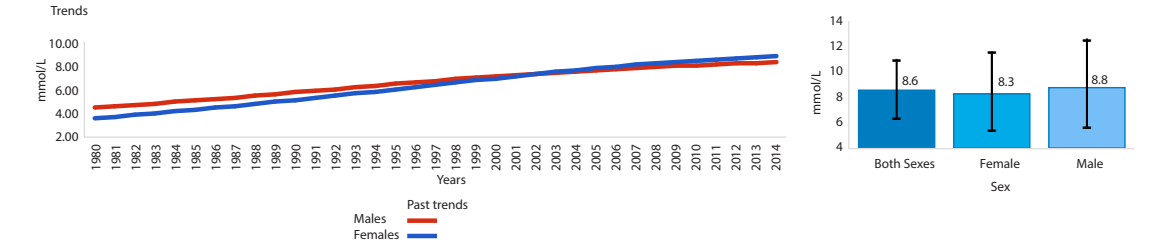


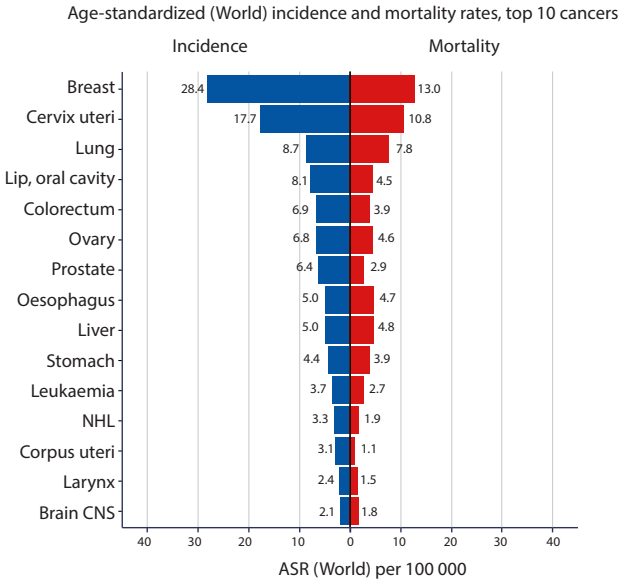
Fig. 4. Prevalence of diabetes among adults 30–70 years in South East Asia Region 1990–2020



Cancer burden is high with the number of new cases at 1,100,037 and the number of deaths being 689,093 in 2020. Breast and cervical cancers show the highest age standardized incidence and mortality. (Fig. 5)[3]

SEARO NCD dashboard analysis involves a comprehensive examination of the data, metrics, trends, and usability of the NCD dashboard provided by the South-East Asia Regional Office. It serves as a valuable tool for assessing the NCD landscape in the region and informing public health policies and interventions.`

Fig. 5. WHO SEARO Age-standardized (World) incidence and mortality rates



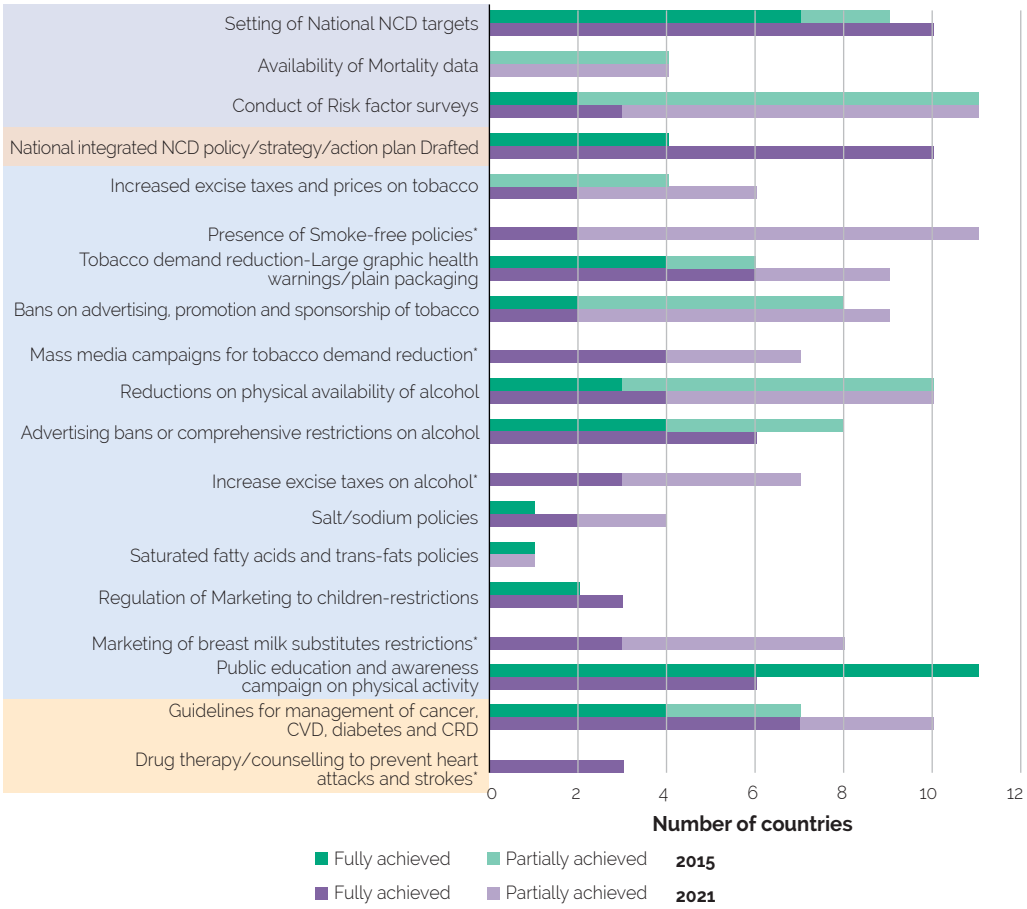
Source: Globocan, 2020

NCD Progress Monitor

The NCD Progress Monitor is a significant initiative by the World Health Organization (WHO) that was established to track and assess the progress made by Member States in the prevention and control of Non-Communicable Diseases (NCDs). The WHO developed a set of 10 progress indicators, first presented at the United Nations Sustainable Development Summit in 2015, and later at the third UN High-Level Meeting in 2018. These indicators are periodically evaluated and published every two years, beginning in 2015.[4]

These progress indicators are instrumental in assessing the effectiveness of global and national efforts to combat NCDs. They provide a framework for Member States to measure and report on their achievements in addressing the NCD burden. The periodic evaluation and publication of data allow for the tracking of trends and the identification of areas where more action and investment are needed.

Fig. 6. NCD progress monitor SE Asia Region status in 2015 and 2021



Ten countries (Bangladesh, Bhutan, DPR Korea, India, Maldives, Myanmar, Nepal, Sri Lanka, Thailand, and Timor-Leste) successfully attained their national NCD target setting and drafted integrated NCD policy/strategy plans. Additionally, seven countries (Bhutan, India, Indonesia, Myanmar, Sri Lanka, Thailand, and Timor-Leste) made significant progress in establishing guidelines for managing cancer, cardiovascular diseases (CVD), diabetes, and Chronic Renal Disease (CRD).

The role and contributions of the World Health Organization (WHO) in addressing noncommunicable diseases (NCDs), particularly in the SE Asia Region.

The 2013 NCD Global Action Plan (GAP)[5] outlines a comprehensive approach to tackling NCDs, covering both prevention and control. It emphasizes a multi-sectoral and integrated response involving various stakeholders, including governments, civil society, healthcare providers, and international organizations. The GAP sets out a series of global targets to be achieved by 2025. These targets include reducing premature mortality from NCDs, increasing the availability of essential medicines and technologies for NCDs, and reducing risk factors like tobacco use and unhealthy diets. The plan identifies a set of priority areas for action. These include reducing tobacco use, promoting healthy diets and physical activity, strengthening health systems for NCD prevention and control, and improving the availability and affordability

of essential NCD medicines and technologies. A key component of the plan is the strengthening of health systems to better manage and control NCDs. This involves building healthcare capacity, ensuring access to essential NCD medicines and technologies, and integrating NCD services into primary healthcare. It emphasizes the importance of monitoring and evaluating progress in NCD prevention and control.

Fig. 7. Status of the individual countries and these Asia Region from noncommunicable diseases progress monitor 2022

No	Indicators		BAN	BHU	DPR Korea	IND	INO	MAL	MMR	NEP	SRL	THA	TLS	SEAR status: Fully achieved	Partially achieved	Not achieved
1	National NCD targets		●	●	●	●	○	●	●	●	●	●	●	10	0	1
2	Mortality data		○	○	○	◐	○	◐	○	○	◐	◐	○	0	4	7
3	Risk factor surveys		◐	●	●	◐	◐	◐	◐	●	◐	◐	◐	3	8	0
4	National integrated NCD policy/strategy/action plan		●	●	●	●	○	●	●	●	●	●	●	10	0	1
5	Tobacco demand reduction measures															
	5.a	increased excise taxes and prices	◐	○	○	◐	◐	◐	○	○	●	●	○	2	4	5
	5.b	smoke-free policies	◐	◐	◐	◐	◐	◐	◐	●	◐	●	◐	2	9	0
	5.c	large graphic health warnings/plain packaging	●	○	○	●	◐	◐	◐	●	●	●	●	6	3	2
	5.d	bans on advertising, promotion and sponsorship	◐	◐	○	◐	○	●	◐	●	◐	◐	◐	2	7	2
	5.e	mass media campaigns	◐	○	◐	◐	●	○	●	○	○	●	●	4	3	4
6	Harmful use of alcohol reduction measures															
	6.a	restrictions on physical availability	◐	●	NR	◐	◐	●	◐	◐	●	●	◐	4	6	0
	6.b	advertising bans or comprehensive restrictions	●	●	NR	NR	●	●	NR	○	●	●	○	6	0	2
	6.c	increased excise taxes	◐	○	NR	NR	●	●	NR	●	◐	◐	◐	3	4	1
7	Unhealthy diet reduction measures															
	7.a	salt/sodium policies	○	○	○	◐	◐	○	○	○	●	●	○	2	2	7
	7.b	saturated fatty acids and trans-fats policies	○	○	○	○	○	○	○	○	○	◐	○	0	1	10
	7.c	marketing to children –restrictions	○	○	○	●	○	●	○	○	○	●	○	3	0	8
	7.d	marketing of breast milk substitutes restrictions	●	○	○	●	◐	●	◐	◐	◐	◐	○	3	5	3
8	Public education and awareness campaign on physical activity		○	○	●	●	○	●	○	●	●	●	○	6	0	5
9	Guidelines for management of cancer, CVD, diabetes and CRD		◐	●	◐	●	●	○	●	◐	●	●	●	7	3	1
10	Drug therapy/counselling to prevent heart attacks and strokes		○	○	●	DK	○	●	○	○	○	●	○	3	0	7

Source: Noncommunicable diseases progress monitor 2022.

● -Fully achieved ◐–partially achieved ○ -not achieved **NR**- No response; **DK** -Don't know

The Colombo Declaration is a significant regional declaration aimed at addressing noncommunicable diseases (NCDs) and strengthening health systems in the SE Asia Region.[6] It was issued following a regional consultation held in Colombo, Sri Lanka, in 2016. The declaration provides recommendations to member states on how to achieve the agreed-upon targets. These recommendations include: Integrating NCD services with primary healthcare, strengthening policies related to health system building blocks to address NCDs effectively, and monitoring and evaluating NCD service delivery to ensure accountability.

The South-East Asia (SEA) Action Plan[7] and Implementation Roadmap are strategic documents developed by the World Health Organization (WHO) for the SE Asia Region to guide efforts to address noncommunicable diseases (NCDs) and strengthen health systems. The health promotion and risk reduction area of the SEA Action Plan focuses on strategies to promote health and reduce risk factors for NCDs. It includes initiatives to raise awareness, encourage healthy lifestyles, and reduce behaviours that contribute to NCDs, such as tobacco use and unhealthy diets. It underscores the need to strengthen health systems to effectively detect, manage, and control NCDs. It involves improving healthcare capacity, ensuring access to essential NCD medicines and technologies, and integrating NCD services into primary

healthcare. The SEA Implementation Roadmap[8] provides three critical strategic directions: "(1) Sustain the progress made in the national response to NCD; (2) Prioritize and accelerate the implementation of the most impactful and feasible interventions in the national context, including through digital health and other innovations; and (3) Promote accountability through timely, reliable and sustained national data on NCD risk factors, diseases, and mortality".

Fig. 8. Achievements in expanding WHO PEN

Bangladesh	WHO PEN-HEARTS have been scaled up to 66 subdistricts and interventions are being scaled up to 34 of 492 subdistricts in 2022. WHO PEN has also been rolled out in Cox's Bazar.
Bhutan	The updated version of WHO PEN was scaled up in 2021 under the new brand of Service with Care and Compassion Initiative (SCCI). Officials from nine of 20 districts have been trained on the SCCI. People-centred NCD services in a primary health care (PHC) setting in Bhutan were rolled out in 2019 and continue to be scaled up.
India	Population-based screening has been expanded to more than 700 districts covering more than 163 300 health and wellness centres. More than 221 million individuals have been screened for hypertension and diabetes as of October 2022.
Indonesia	Developed the PANDU PTM guideline, a tool to assess the risk of having a heart attack and stroke that was developed by WHO. A total of 250 cities/districts are targeted for implementation.
Myanmar	The PEN programme was expanded from 20 townships in 2017 to 177 in 2018 and 232 townships in 2019. This translates into 5058 health facilities in 2018 and 9518 health facilities in 2019. A total of 429 400 and 205 945 patients were diagnosed with hypertension and diabetes, respectively.
Nepal	Since the pilot implementation of WHO PEN in two districts in 2017, the programme has been scaled up to 51 districts. The Ministry of Health plans to cover all 77 districts by 2022. Eight districts were identified in 2021 to implement a comprehensive chronic care model.
Sri Lanka	One district in Sri Lanka implemented a shared care cluster demonstration model to strengthen primary care services for NCDs in 2021.
Thailand	In 2019, Thailand launched hypertension guidelines alongside a social media public awareness campaign to create public awareness about blood pressure monitoring and treatment.
Timor-Leste	WHO PEN services have been expanded to 37 community health centres (CHCs) in six municipalities since the programme was first launched in six CHCs in Dili Municipality in 2017. NCD services are also being delivered to the community through domiciliary visits, mobile clinics, and the School Health Service.

Fig. 9: WHO supported progress in the South-East Asia Region to strengthen PHC/UHC

- **Bangladesh** developed its essential service package in 2016 and is operationalizing it through a strengthened community and primary health care (PHC) system.
- **Bhutan** initiated its Service with Care and Compassion initiative in 2018, integrating NCD services into its established PHC system.
- **DPR Korea** expanded telemedicine, strengthened its household doctor system, and further integrated its traditional medicine system into PHC.
- **India** launched its national initiative for Free Essential Drugs and Essential Diagnostics in 2014 to provide essential medicines and essential diagnostics free of cost in public health facilities. It launched the Ayushman Bharat scheme in 2018, providing health coverage to 500 million poor and disadvantaged, while also establishing over 150 000 health and wellness centres (HWCs) for the provision of comprehensive primary care close to communities free of cost. The pathbreaking National Medical Commission Act, 2019 and the National Commission for Allied and Healthcare Professions Act, 2021 were enacted by the Parliament to address the challenge of HRH.
- **Indonesia** enacted a significant health financing reform in 2014 through its National Health Insurance Scheme ("JKN"), with 83% of its population covered as of 2019; moved towards a holistic organization of primary health through its 2018 Health Lifestyle Communities Movement; implemented substantial reforms in the Ministry of Health in 2022 to strengthen PHC and enactment of the Health Omnibus Law in 2023.
- **Maldives,** in 2014, introduced "Husnuvaa Aasandha", a universal health scheme to provide affordable and accessible health care for all Maldivians, by removing previous limitations.
- **Myanmar** introduced National Health Plan 2017, with focus on advancing UHC
- **Nepal,** in 2018, provided constitutional guarantee to basic health services and emergency health services for all systems; developed an associated basic health services package; and is operationalizing it in a decentralized health context.
- **Sri Lanka's** Cabinet, in 2018, approved the policy on health-care delivery for UHC and is currently operationalizing a shared cluster approach to reorganize service delivery to improve efficiency and integrate NCD care into primary care.
- **Thailand,** in 2019, enacted the Primary Health System Act as a means to strengthen the efficiency, equity and quality of PHC, and is in the process of extending its strong UHC system in the urban context and to a wider population, including migrants.
- **Timor Leste,** in 2015, launched the "Programa Nacional Saud ana Familia" to bring comprehensive package of essential services to the household level

Fig. 10: Salient declarations, resolutions and initiatives on UHC

2023	2023: Delhi Declaration on Strengthening primary health care as a key element towards achieving universal health coverage (SEA/RC76/R3) UNGA Political declaration of the high-level meeting on Universal Health Coverage
2022	Regional PHC Strategy adopted at the Seventy-fifth session of the Regional Committee Resolution on Enhancing social participation in support of Primary Health Care and Universal Health Coverage adopted by the Regional Committee. SE Asia Regional PHC Forum launched by Member States, development, knowledge and implementation partners, as well as civil society, for knowledge management and greater synergy to address key PHC-related bottlenecks in the Region 4th progress report on the Decade of HRH Strengthening identified a 30% increase in the availability of doctors, nurses and midwives in the Region
2021	Ministerial Declaration on COVID-19 and measures to "build back better" essential health services to achieve UHC and the health-related SDGs launched at the Regional Committee Regional Strategy for Primary Health Care: 2022–2030 launched
2020	Mid-term Review of the Decade for Health Workforce Strengthening; for the first time the SE Asia Region quantified the PHC workforce, including the critical role of health workers
2019	Ten Member States from the SE Asia Region produced at least one health expenditure study and all transitioned to the new global standard accounting framework of the System of Health Accounts 2011
2018	Delhi Declaration on 'Improving access to essential medical products in the SE Asia Region and beyond' adopted Initiative for Coordinated Antidotes Procurement in the SE Asia Region (iCAPS) announced
2017	The Regional Committee adopted a resolution to include a report on the annual progress on UHC and the health-related SDGs as a substantive agenda item for the Regional Committee Sessions till 2030.
2016	All 11 Member States have launched the South-East Asia Regulatory Network (SEARN) for enhanced collaboration among regulators across the Region to ensure access to high-quality medical products
2015	Regional Health Information Platform established SE Asia Region Decade for Health Workforce Strengthening (2015–2024) launched with a focus on transformative education and rural retention Regional Strategy for strengthening the role of the health sector for improving civil registration and vital statistics (CRVS) (2015–2024) released

Source: The Platinum Decade: Accelerating health for billions. WHO South-East Asia Region 2013-2023

3. Country specific information

3.1 Bangladesh

3.1.a. Policies and programmes for noncommunicable diseases

In 2007, the Strategic Plan for Surveillance and Prevention of NCDs was launched. Building on this, the Strategic Plan for Surveillance and Prevention of Non-Communicable Diseases 2011-2015 (SPSPNCD 2011)[9] emerged with a clear objective: reducing NCD-related deaths by 2% annually. The Health, Population, and Nutrition Sector Development Program (HPNSDP)[10] for 2011-2016 recognized the significance of socioeconomic conditions in NCD control and introduced program integration as a strategy. The 4th Health, Nutrition, and Population Strategic Investment Plan (HNPSIP)[11] for 2016-2021 made NCD control a top priority.

The 7th Five-Year Plan of Bangladesh incorporated HNPSIP's strategies and emphasized health promotion for NCD control. In 2017, the National Strategy for Prevention and Control of Cervical Cancer[12] introduced a pivotal HPV vaccination program for adolescent girls. It also implemented population-based cervical cancer screening and treatment via the public delivery system. The year 2018 witnessed the Multisectoral Action Plan for Prevention and Control of Noncommunicable Diseases (MSAPNCD).[13] This plan was divided into two stages: The first stage (July 2018 to June 2021) and the second stage (July 2021 to June 2025).It defined four crucial action areas: Advocacy, leadership, and partnerships; Health promotion and risk reduction; Health systems strengthening for early detection and management of NCDs and their risk factors; and Surveillance, monitoring, evaluation, and research.

Bangladesh's NCD policies were developed in line with the Global Action Plan for the prevention and control of NCDs (2013-2020)[14] and UN Sustainable Development Goal (SDG), as well as other global initiatives in NCD control. In 2022, the Dhaka Declaration endorsed 32 action areas to tackle existing challenges and gaps, further invigorating progress toward NCD control, management, and prevention.

The UzHC was the main facility to implement NCDC OP and the NCD corner was designated to provide hypertension and diabetic care following the national protocol. The protocol was developed contextualizing the World Health Organization's package of essential noncommunicable (WHO PEN) disease interventions for primary health care in low-resource settings.[15]

3.1.b. Governance and resources

In Bangladesh, healthcare services are provided by both the government and private organizations. The Ministry of Health and Family Welfare (MoHFW) is the main government agency responsible for organizing and overseeing services related to non-communicable diseases (NCDs). Within the MoHFW, the NCD Line Directorate, which is part of the Directorate General of Health Services (DGHS), plays a crucial role in coordinating NCD services. Various directorates under the MoHFW handle the day-to-day operations and management of health services.

The Directorate General of Family Planning (DGFP) not only provides reproductive health and family planning services but also educates people on healthy lifestyles. They offer these services at different healthcare centres, including maternal and child health centres, union health and family welfare centres, and community clinics. Healthcare services, including NCD care in rural areas, are primarily provided through public facilities such as district hospitals, Upazila health complexes (UZHC), union subcentres, and community clinics. In cities, local government institutions like city corporations and municipalities offer primary healthcare services.

Non-governmental organizations (NGOs) also play a role in providing NCD services. They work in partnership with the government to address healthcare needs. Preventing and controlling NCDs is a significant policy focus in Bangladesh. The implementation of the Multisectoral Action Plan for Prevention and Control of Noncommunicable Diseases (MSAPNCD) 2018 is overseen by the National Multisectoral NCD Coordination Committee (NMNCC). This committee, led by the Minister of Health and Family Welfare, is appointed by the Prime Minister. The NCD control unit within the DGHS acts as the support team for the NMNCC, helping to organize regular committee meetings.

Additionally, coordination efforts involve mechanisms for collaboration between different sectors to ensure a comprehensive approach to NCD prevention and control.

3.1.c. Service delivery

NCD management in primary health care

Bangladesh provides healthcare services through a mix of public and private systems, with the Ministry of Health and Family Welfare (MoHFW) serving as the primary government agency for coordinating and regulating non-communicable disease (NCD) services. In response to the first national NCD survey, the Directorate General of Health Services (DGHS) established NCD "corners" in selected Upazila Health Complexes, focusing on cardiovascular diseases, diabetes, chronic respiratory diseases, and cancer screening. These corners aim to enhance NCD care. Primary health care plays a crucial role, with interventions focused on hypertension and diabetes management. Screening and early detection are conducted through the primary healthcare system, and the balanced approach encompasses prevention, lifestyle modification,

screening, clinical interventions, and comprehensive care, facilitated by primary care teams and tailored services. Additionally, Bangladesh has been expanding cervical cancer screening, using Visual Inspection of the Cervix with Acetic Acid (VIA) to reach women aged 30 and above, with a goal of achieving 40% coverage in the target population. All screen-positive cases receive counselling and necessary treatment.

Primary care in Bangladesh encompasses a wide range of health services for people of all ages and backgrounds, addressing physical, mental, and social health issues, including chronic diseases. Continuity of care is a key feature, as patients prefer seeing the same healthcare provider for regular check-ups, preventive care, and when addressing new health concerns. Common chronic conditions managed in primary care include hypertension and diabetes.

Bangladesh has been following a sector-wide approach in the health sector since 1998, with the Ministry of Health and Family Welfare (MOHFW) implementing programs like the Health, Population, and Nutrition Sector Development Program (HPNSDP) to improve access and utilization of healthcare. Specific healthcare standards for non-communicable disease services are not explicitly mentioned.

Since 2012, Bangladesh has been implementing a significant initiative to bring non-communicable disease (NCD) services to the community level by establishing NCD corners within Upazila Health Complexes (UHCs). These NCD corners are designed to work alongside existing services and offer dedicated NCD care. However, they currently face challenges such as shortages of trained healthcare providers, essential supplies, equipment, and medication, as well as issues with recording and reporting NCD services. Additionally, Bangladesh has set up over 13,000 community clinics (CCs) to provide primary healthcare to local populations, each covering approximately 6,000 people. These CCs are staffed by community healthcare providers, including CHCPs, health assistants (HAs), and family welfare assistants (FWAs), who provide services such as screening for common NCDs like diabetes and hypertension. Although basic medication for these conditions is available at the community clinic level, the diagnosis and management of other NCDs, like COPD and cancer, require referrals to higher-level health facilities with specialized services.

Risk based management

The SPSPNCD 2011 advocated equipping UZHC with NCD screening tools and training the health staff to conduct population-level screening of NCD risk factors. It also recommends establishing a "Well Women Clinic" program in the model Upazilla, which would offer screening services for hypertension, diabetes, breast cancer, and cervical cancer to adult women.

Bangladesh has been gradually developing cervical cancer screening facilities since 2005 and has expanded the program to Upazila since 2012. The program uses Visual Inspection of the Cervix with Acetic Acid (VIA) for women 30 years and above at around 400 centers. The strategy aims to achieve 40% coverage of the target population by offering screening to all married women between 30-60 years old every five years.[14] The VIA-based screening

will continue, and all screen-positive cases will be counselled, evaluated by colposcopy/mini-colposcopy, and treated as needed.

The MSAPNCD 2018 proposed restructuring primary healthcare facilities to provide essential screening and establishing a referral system to a higher-level health facility. The policy recommended integrating NCD services with other healthcare services like maternal and child health, disability prevention, and care for chronic diseases such as TB and HIV, which would require providing health workers with proper training and orientation on delivering essential NCD services

Healthy lifestyle counselling

Health education and counselling are provided at health facilities by trained professionals such as health workers, midwives, nurses, and doctors. The target audience is reached in waiting areas, outpatient clinics, and community outreach. The MSAPNCD 2018 suggested creating a group of trained health counsellors employed in health facilities to provide lifestyle education counselling related to tobacco cessation and optimum intake of salt, sugar, fruits and vegetables as part of the daily diet.

Protocols and guidelines

Clinical guidelines are developed for managing hypertension, diabetes, heart disease, stroke, and cancer, emphasising pharmacological and non-pharmacological treatments. Operational manuals are designed to train primary care physicians in government and private medical practitioners in medicine, diagnosis, and prevention. The guidelines complied with the policies and regulatory frameworks related to NCDs, including the WHO Framework Convention on Tobacco Control and the Global Strategy on Diet, Physical Activity and Health. In 2018 the MSAPNCD proposed to adapt WHO PEN disease interventions and create guidelines, protocols, and tools that will aid in implementing the essential health services package in primary healthcare facilities.

The PEN protocol is followed by all the implementors including a modified version by development partners in NCD corners.

Access to essential medicines and technology

Local pharmaceutical industries provide 98% of essential drugs in Bangladesh, but limited regulatory capacity makes it hard to provide quality medical products at affordable prices, especially for vulnerable groups. The NCD policies have reiterated ensuring uninterrupted essential NCD medicines and basic diagnostic facilities at all levels of care, starting from primary care centres. By 2025, one of the goals for addressing non-communicable diseases is to ensure that 80% of health facilities (both public and private) are equipped with essential medicines, including generics, necessary for treating significant NCDs.[16]

Team-based care and human resources

HPNSDP 2011 recommended revitalising community health clinics by posting community health care providers (CHCP) and the health assistant and family welfare assistant to strengthen grassroots-level delivery of primary care services. SPSPNCD2011 recommended creating a primary care team by reorienting the existing staff structure.

Systems for monitoring

The WHO STEPS approach was adapted for NCD risk factor surveillance in Bangladesh, with surveys conducted in 2010 and 2018.[17] The Bangladesh Network for NCDs Surveillance and Prevention (BanNet)[18] was established to enhance NCD surveillance, data analysis, and knowledge dissemination. BanNet's key goals include optimizing data collection, aiding policy development, implementing multisectoral interventions, and empowering individuals. It utilizes community and hospital-based surveillance to collect NCD data and shares information through websites and newsletters for public access.

Quality assurance

To maintain high standards of care in service delivery, MOHFW has established national committees on Quality, namely the National Steering Committee (NSC), the National Technical Committee (NTC), and the Quality Assurance Task Group (QATG) under the Directorate General of Health Services (DGHS). In 2011 HPNSPD suggested implementing Total Quality Management for hospital services. Accreditation would depend on accessibility, adequate logistics, the information provided to clients, the technical competence of providers, interpersonal relations, responsiveness, continuity of services, and appropriate service options.

3.1.d. Community participation

Addressing inequalities/Leaving no one behind

In 2011, the HPNSDP identified several hard-to-reach populations and those facing vulnerabilities. Special populations, such as ethnic minorities, tribal communities, people living with disabilities, those involved in specific professions like cleaning and sex work, the elderly, and those living in poor geographic areas, were identified. Interventions were planned with the support of NGOs and other departments to target these populations and provide necessary assistance. In 2016, HNPSIP highlighted the unequal access to healthcare for vulnerable people in the country and considered ensuring the availability of services as a critical strategy of the sector development plan. Using disaggregated data to monitor progress and ensure regular improvement was also suggested. MSAPNCD 2018 proposed a targeted intervention by tertiary health facilities to provide health services to hard-to-reach populations like urban slums and other marginalized communities with the support of MoHFW.

Community participation in policy

The Strategic Plan for Surveillance and Prevention of Non-Communicable Diseases in 2011-2015 was developed based on the guiding principles of people-centeredness, cultural relevance, focus on reducing inequity, ensuring care continuum and involvement of the whole of the community, which reflect the thrust and importance on the people centeredness given by the policy.

3.1.e. Good practices

Bangladesh initiates trainings on Package of Essential Noncommunicable Disease Interventions

Bangladesh, in collaboration with WHO and JICA, conducted team-based training on the Bangladesh Package of Essential Noncommunicable Disease Interventions (PEN) for Primary Health Care. Participants included health officers, medical officers, nurses, and community medical officers from Narsingdi and Cox's Bazar districts. The training focused on preventing and managing noncommunicable diseases, emphasizing modifiable risk factors like tobacco use, high salt intake, high blood pressure, and high blood sugar. The training package was adapted from WHO's regional modules and includes sessions on Bangladesh's National protocol for integrated management of hypertension and diabetes in primary health care. The PEN approach incorporates team-based care for patient-centered continuous care.[19]

Three million with hypertension and diabetes placed on protocol-based care by 2025

Bangladesh has taken efforts to strengthen NCD management in primary health care and are planning to accelerate the coverage of hypertension and diabetes management. All levels of primary health care including community clinics, union level facilities and sub-district hospitals are being involved in a phased manner through capacity building, essential drugs and diagnostics, supportive supervision and digital monitoring.[20]

Origins of integrated noncommunicable disease care model in Cox's Bazar

In Cox's Bazar, the densely populated Rohingya refugee camp faced a growing threat from noncommunicable diseases (NCDs). In 2019, WHO assessed 90 health facilities in the camp, revealing that most health workers lacked NCD training, and only 36% of primary health-care facilities had NCD management guidelines.

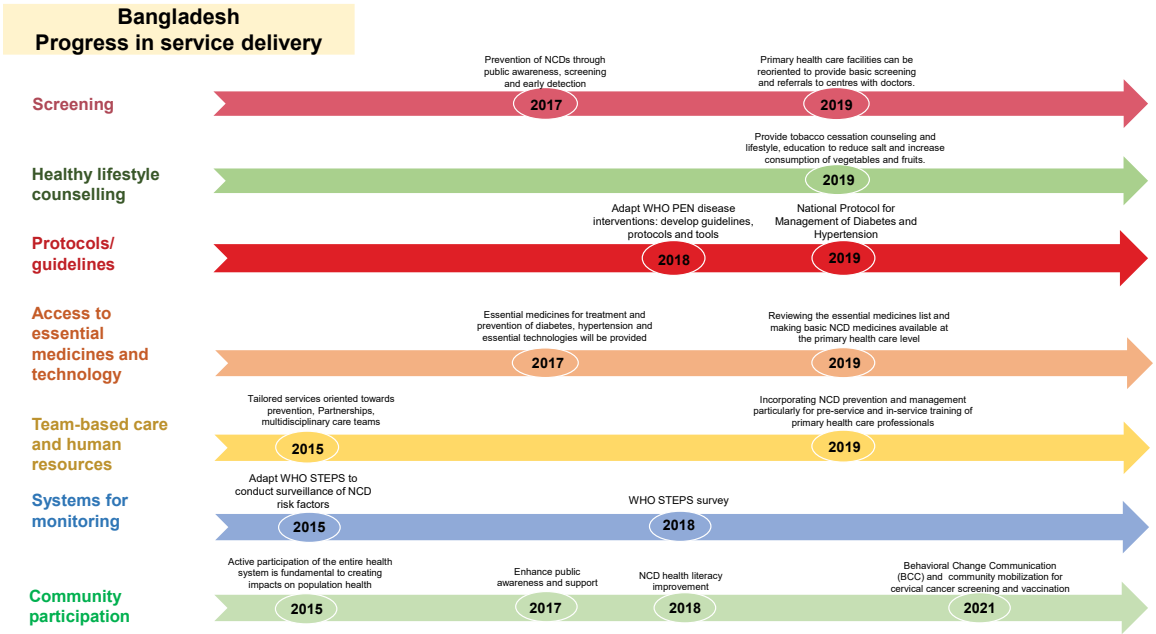
In response, the Directorate General of Health Services, with WHO's support, developed national protocols for integrated hypertension and diabetes management, emphasizing primary health-care worker and community outreach worker capacity building, health promotion, and NCD risk factor awareness. This model ensures essential supplies, screening for NCDs for those aged 40 and above, improved management, and enhanced surveillance in the refugee camp.[21]

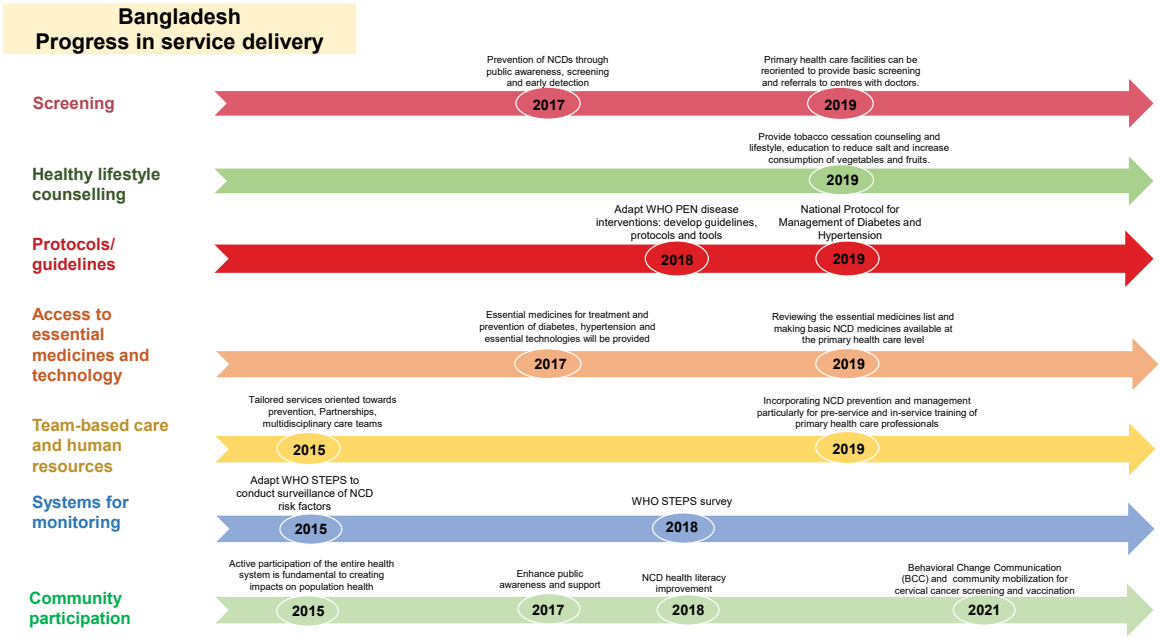
3.1.f. WHO guidance and role

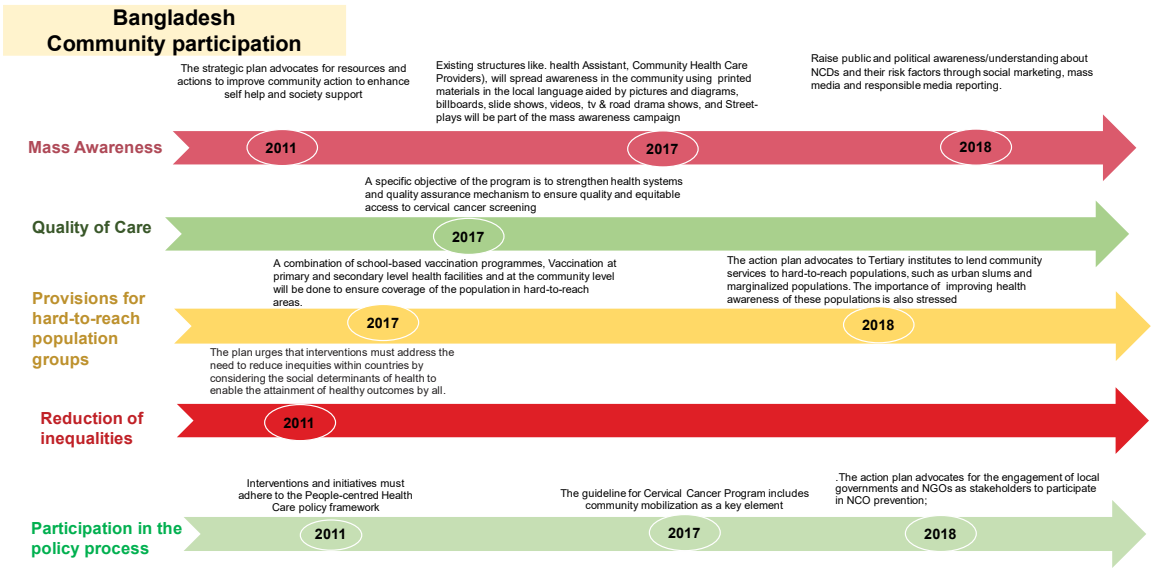
The development of the NCD policies in Bangladesh is supported by technical assistance from the WHO country office in Bangladesh. The policies are developed in compliance with the Global Action Plan and Regional NCD Action Plans of the WHO. A 2010 survey in 23 low and middle-income countries reporting to WHO indicated that Bangladesh is among the 17 countries that have implemented and are effectively executing an integrated policy, strategy, or action plan for NCDs; as a development partner, WHO provides strategic and technical support, creating tools and evidence-based guidelines, as well as operating manuals to develop the capacity of human resources for health and help BanNet in collaborating with other national and regional networks.

The WHO PEN protocol was accepted and introduced by the government in NCD prevention, control and management. The WHO Bangladesh is currently working with the DGHS to set up the M&E system. WHO provides PEN training of trainers (ToT) and supports in direct implementation in Cox's Bazaar among the Rohingya refugees. WHO also work with the Directorate General of Drug Administration which is a regulatory body for quality control of pharmaceuticals. HPV vaccination strategy another area guided and supported by WHO.

Noncommunicable Diseases (NCDs) in Primary Health Care- Bangladesh







3.2 Bhutan

3.2.a. Policies and programmes for noncommunicable diseases

The Multisectoral National Action Plan for the Control of Non-Communicable Diseases (2015-2020) drew on multi sectoral collaboration at the national, regional and community levels.[22] Breast cancer, oral cancer, and gestational diabetes screening protocols and programs were introduced.[23] The Service with Compassion and Care Initiative launched in 2018 put people

centeredness in the heart of service delivery with clearly defined roles of healthcare workers.[22] It also aimed to address a wide range of NCDs. The Bhutan Cancer Control Strategy (2019-2025) called for the review of national medicines list as well as expanding health promotion to include sexual and reproductive factors associated with cancer.[24] The Guidelines for Cervical Cancer Program in Bhutan (2019-2023), Guidelines for Screening of Gastric Cancer, Cervical Cancer and Breast Cancer (2020-2023)[25] expanded the role of health workers. All policy documents outlined measurable indicators to track progress. Plans for periodic audits of progress and data collection were also often outlined.

3.2.b. Governance and resources

Effective governance structures have been a common thread in the policies and programs addressing non-communicable diseases (NCDs). Multistakeholder collaboration is a key feature, emphasizing collective efforts in tackling NCDs. For instance, the Multisectoral National Action Plan for the Control of Non-Communicable Diseases (2015-2020) in one country outlined specific roles for various entities, including the National Steering Committee on NCDs, the Ministry of Health, the Lifestyle Related Disease Program (LRDP), local and district governments, healthcare organizations, and a range of multisectoral departments and agencies like the Ministry of Education.

Similarly, the Bhutan Cancer Control Strategy (2019-2025) is guided by a National Technical Advisory Body (TAB) that advises the National Cancer Control Program (NCCP). This dedicated program within the Ministry of Health employs full-time staff to ensure effective implementation.

Moreover, policies like the Guidelines for Screening of Gastric Cancer, Cervical Cancer, and Breast Cancer (2020-2023) and the Health Flagship Blueprint (2020-2023) are led by Project Management Units within the Ministry of Health. These initiatives benefit from support provided by Project Steering Committees and Technical Working Groups consisting of medical experts. These governance structures are pivotal in driving coordinated and comprehensive efforts to combat NCDs and improve public health.

3.2.c. Service delivery

Evidence based protocols

Under the Multisectoral National Action Plan for the Control of Non-Communicable Diseases (2015-2020), key strategic priorities included NCD awareness, early detection, and management of NCDs and their risk factors, as well as strengthening of surveillance and monitoring systems. The Bhutan Cancer Control Strategy (2019-2025) prioritized developing a national technical guideline for cancer screening, healthy lifestyle promotion, implementing screening programs, enhancing the monitoring and supervision of existing screening programs, and providing people-centred cancer treatment at national and regional hospitals. Later initiatives through

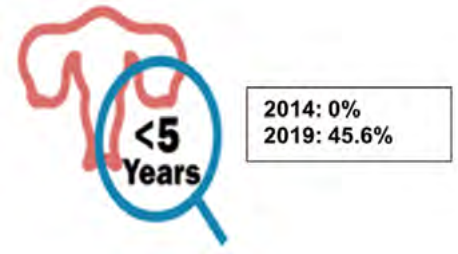
the WHO Country Cooperation Strategy (2020-2024) focused on expanding PEN-HEARTS initiatives to all districts, expanding NCD health services available at regional referral hospitals, and improving the availability of diagnostic services and human resources at Basic Health Units (primary care facilities). The Guidelines for Cervical Cancer Program in Bhutan (2019-2023) began to set out roles and responsibilities for cancer detection and treatment at the national, regional and district hospital level, as well as at the level of satellite clinics and community organizations, with a major focus on HPV vaccination for prevention services. The Health Flagship Blueprint (2020-2023) further built on cancer prevention and detection by laying out clear screening guidelines for adults.

Screening and risk based management

Based on STEPS 2019 data,[26] blood pressure screening rates were 83.3% among individuals aged 15-69, and a quarter of those with elevated levels had ever used medication. Cost wasn't a significant barrier to medication, but overall awareness was low, especially among men. A substantial lack of awareness existed among individuals with high blood pressure, with 65.1% being unaware of their condition, and merely 5.7% were aware and receiving treatment with control. Blood glucose screening rates were low, with men often missing out. Sex and education-related inequalities were common in medication prescription and access. Mass awareness, especially among men, was inadequate, with more than half of those with high blood sugar unaware of their diagnosis, and two out of five individuals no longer on medication deemed it unnecessary. Compared to blood pressure, only about a fourth of individuals had controlled blood glucose, particularly among women and in rural areas.

Great strides have been made in increasing access to screening. According to STEPS data, from 0% in 2014, 45.6% of women aged 15-69 had been tested for cancer in the previous five years (Fig. 11). Screening coverage was greater in rural areas as compared to urban areas, however.

Fig. 11. Proportion of women aged 15–69 tested for cervical cancer in the previous five years in Bhutan (2014, 2019)



Source: Regional NCD Dashboard (STEPS, 2014, 2019)

Healthy lifestyle counselling

A range of policies and programmes focused on promotion of health through behavioural modifications. The United Nations Development Assistance Framework Bhutan One Program (2014-2018) had a particular emphasis on educating women, youth, and at-risk populations on practices for improved nutrition and well-being. The Multisectoral National Action Plan for the Control of Non-Communicable Diseases (2015-2020), Service with Care and Compassion

Initiative, Bhutan Cancer Control Strategy (2019-2025) prioritized education on nutrition, physical activity and avoidance of unhealthy substances such as tobacco and alcohol. Notably, the Service with Care and Compassion Initiative aimed to support physical activity through the introduction of open-air gym facilities across the country.

Access to essential medicine and technology

A small number of programmes and policies explicitly address the challenges regarding access to medicines and health technology across the country. The Service with Care and Compassion Initiative aimed to ensure ease of access to medication at the community level, while the Bhutan Cancer Control Strategy (2019-2025) called for a review of the national medicines list to ensure alignment with WHO EMLc (Essential Medicines List for Children) 2019 and clarifying medicines registered and procured based on treatment capacity. One study reported that 3.3 million females received HPV vaccination between 2015 and 2020 as compared with 1.4 million between 2006 and 2014, a marked increase.[27]

Team-based care and human resources

The Service with Care and Compassion Initiative clearly defined roles of healthcare workers involved in community based primary health care practice and NCD screening services. The Guidelines for Screening of Gastric Cancer, Cervical Cancer and Breast Cancer further laid out the healthcare workers needed for prevention, detection and treatment services of cancer across the national, regional, district, and community levels.

Systems for monitoring

All policy documents outlined measurable indicators relating to health outcomes and service use to track progress. Plans for periodic audits of progress and data collection were also often outlined. For instance, under the Multisectoral National Action Plan for the Control of Non-Communicable Diseases (2015-2020), a Brief External Review conducted by a third-party consultant were sought to be conducted at the end of 2016, 2017 and 2019 with a more thorough mid-term and whole-plan review in 2018 and 2020. Some programs, such as the Guidelines for Cervical Cancer Program (2019-2025) called for strengthening of monitoring and evaluation efforts by improving a newly established national cancer registry.

3.2.d. Community participation

Mass awareness

Several policies, such as United Nations Development Assistance Framework Bhutan One Programme (2014-2018), Multisectoral NCD Action Plan (2015), Guideline for Cervical Cancer Program in Bhutan (2019-2023), Guideline for Screening of Gastric Cancer, Cervical Cancer and

Breast Cancer, and Health Flagship Blueprint (2020-2023) aimed to run education campaigns in collaboration with media to enhance information access about healthy lifestyle behaviours, health services, and promote community participation in NCD programs.

Community participation in policymaking

Furthermore, policies made provisions to include civil society organizations and community members in the policy development and/or implementation process. The Bhutan Cancer Control Strategy (2019-2025) implemented a National Technical Advisory Body, partly comprised of civil society organizations to guide the program. The United Nations Development Assistance Framework Bhutan One Programme (2012) was developed using consultative processes with equity-deserving groups and civil society organizations. Furthermore, the Guidelines for the Cervical Cancer Program (2019-2023) included community participation as a guiding principle. In particular, promoted community mobilization and community involvement in knowledge dissemination efforts.

3.2.e. Good practices

Results of WHO PEN Performance Studies

As early as 2014, a three-month PEN performance assessment study indicated decreasing cardiovascular disease risk, as well as improvement in blood pressure and diabetes control among over 39000 participants from PEN pilot districts. Among those who participated in three follow-up visits, CVD risk declined from 13% to 7.3%. Use of medication increased for hypertension and diabetes, resulting in a decrease in the prevalence of high blood pressure from 42.3% to 21.5%. As early as 2014, a three-month PEN performance assessment study indicated decreasing cardiovascular disease risk, as well as improvement in blood pressure and diabetes control among over 39000 participants from PEN pilot districts. Among those who participated in three follow-up visits, CVD risk declined from 13% to 7.3%. Use of medication increased for hypertension and diabetes, resulting in a decrease in the prevalence of high blood pressure from 42.3% to 21.5%. Furthermore, a more recent PEN HEARTS assessment demonstrated decreasing treatment gaps and higher retention of patients in care.[28]

Bhutan- People-Centered Care with Care and Compassion29

Gaps found in treatment, medicine availability and follow up through a 2016 PEN clinical audit led to Bhutan adopting the revised WHO PEN interventions in 2018 using the global HEARTS technical package- service with care and compassion (SCCI). The package consisted of the 7 R: (i) robust team building, (ii) reach out to home-bound services, (iii) refill of medicines, (iv) recall and reminders (v) responsive referrals, (vi) reliable and people centred lab diagnosis, vii. real time monitoring and supportive supervision and 3C (comprehensive, collaborative and continuum of care). This model has become an integral part of the primary and district health services.

A team-based care approach has been the leitmotif of people centred care. Targeted mentoring and supervision of the primary health centres (PHC) are done by district mentoring teams which has been a guiding force in integrating people centred care by focusing on patient outcome measures. While social media apps are used for regular interaction with PHC, six months visits are conducted for supportive supervision through a standard checklist. This has led to an increase in clinical competence at the PHC. Health assistants at the PHC conduct screening, initiate treatment and counsel and educate patients. They have also initiated home visits for homebound patients. Records of coverage and cohort control rates of hypertension, brief interventions and homebound care are compiled on a quarterly/annual basis and sent to the PEN focal person in the district for review. This, in turn, is submitted to the NCD programme division at the Ministry of Health. Based on the report, the NCD division prepares written feedback which is then sent to the PHC. The continuum of care, thus, enables continuous quality improvement in the delivery of NCD services. Furthermore, the model has led to overall satisfaction and improved work environment among district and primary health care providers.

An assessment conducted in 9 districts in May 2023 found screening, IPD, emergency and pharmacy was available in all 18 PHC and lab service in 11 of them. An efficient flow of patients resulted from team-based care which included doctors, nurses, pharmacists and laboratory technicians, receptionists and other staff. Revitalizing the FORM-III reduced out of pocket expenditure and increased patient compliance. It also enabled consistent patient contacts even during the Covid-19 lockdown. Findings pointed to the increased availability of medicines.

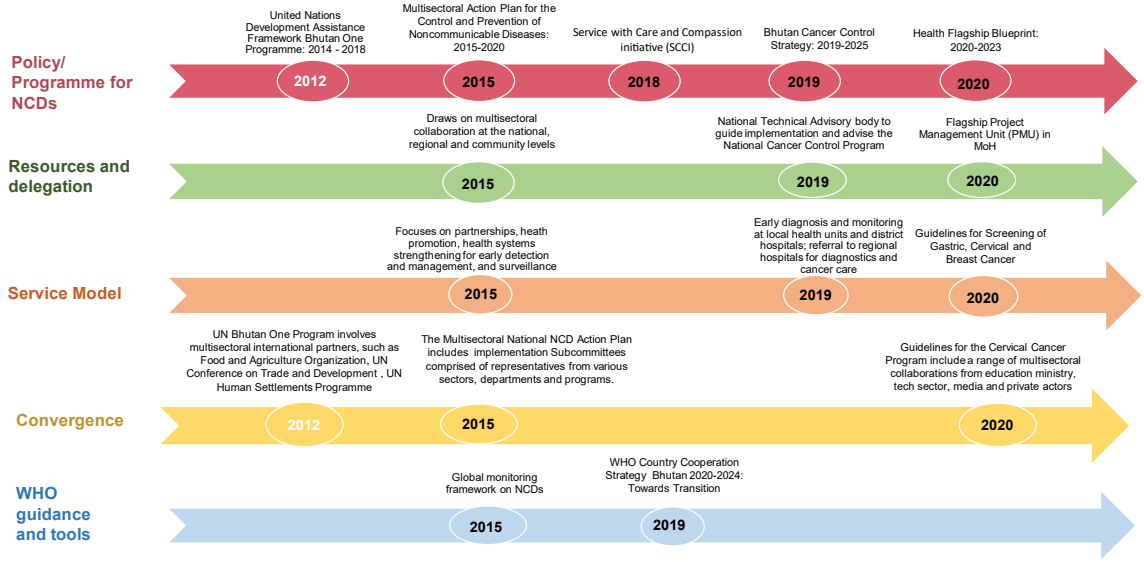
Furthermore, health workers served as the conduit between the patient and the medical doctor resulting in active case referral. There was also an improved referral and care coordination between PHC and district hospital (DH), and between the district hospital and higher referral centres. 16 of the 18 PHC and 8 of the 9 district hospitals had established a referral system, and phone lines to schedule appointments were available in 50% of the PHC and DH. Health workers further coordinated the sample collection and made laboratory test appointments. Managing blood sample collection where the patient was significantly cut down patient time and reduced overcrowding at the hospital. Finally, real time monitoring and timely coaching helped in care delivery. The major learning to be drawn from the case study is that people-centred care using a team-based approach allows for continuous improvement in quality of care.

3.2.f. WHO guidance and role

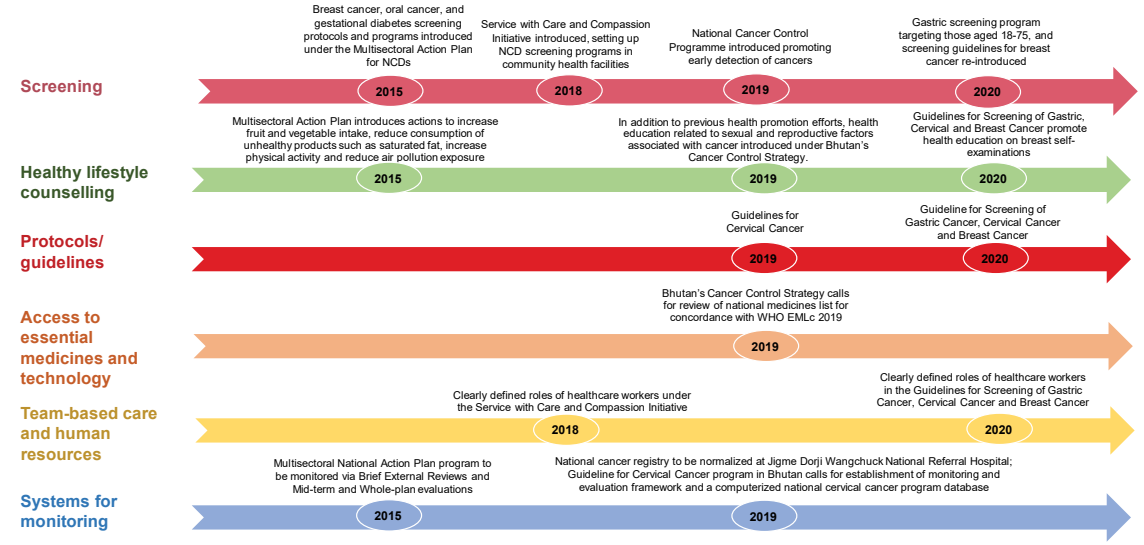
Key WHO guidance informing programs and policies within the country included the package of essential noncommunicable (PEN) disease interventions and Global Monitoring Framework on NCDs (2015). The WHO also provided support for implementing NCD-focused programs and initiatives through the WHO Country Cooperation Strategy (2020-2024), as well as input and support in the development of initiatives such as the Bhutan Cancer Control Strategy (2019-2025).

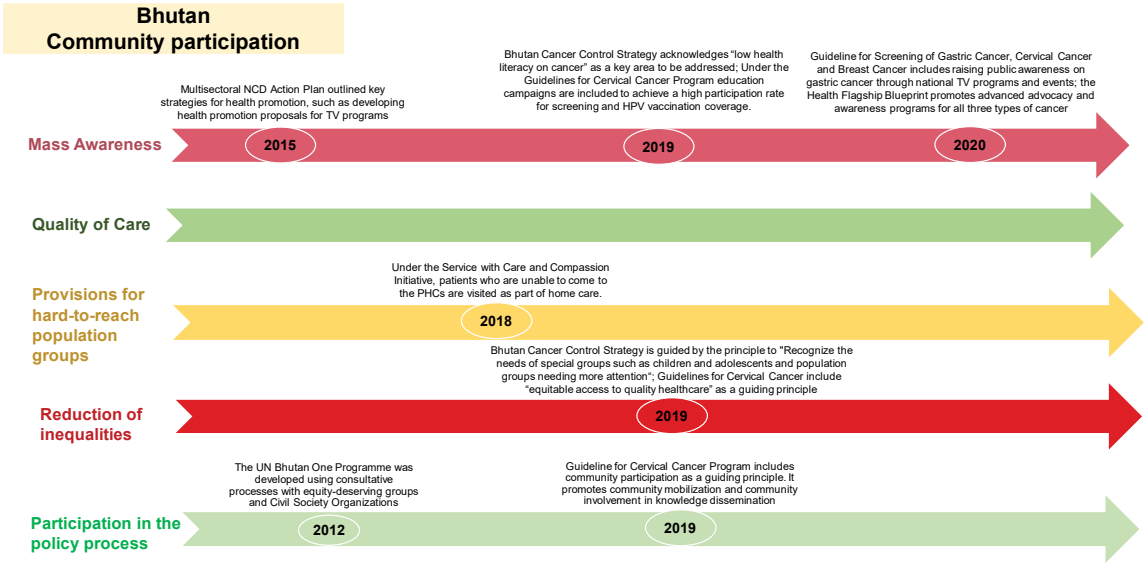
Noncommunicable Diseases (NCDs) in Primary Health Care- Bhutan

Bhutan
Governance and guidance



Bhutan
Progress in service delivery





3.3 Democratic People Republic of Korea (DPRK)

3.3.a. Policies and programmes for noncommunicable diseases

In 2014, the Democratic People's Republic of Korea (DPRK) introduced the National Strategic Plan for the Prevention and Control of Non-Communicable Diseases (2014-2020).[30] In the same year, the WHO Country Strategic Plan (2014-2019) aimed to build capacity for the implementation of the National Strategic Plan and other multisectoral NCD policies and programmes.[31] Further, in 2017 the UN Strategic Framework for Cooperation between the United Nations and the Democratic People's Republic of Korea (2017-2021) aimed to address NCDs particularly cardiovascular diseases, hypertension, and cancer through improved social determinants of health, such as food security.[32]

Convergence

Under the WHO Country Strategic Plan (2014-2019), cooperation with the Ministry of Public Health aimed to build capacity for the implementation of the National Strategic Plan (2014-2020) and other multisectoral NCD policies and programmes. The National Strategic Plan (2014-2020) also focused on initiating a multisectoral response, including organizations such as the Ministry of Finance and Ministry of Trade to address relevant social determinants of health. The UN Strategic Framework for Cooperation (2017-2021) aimed to involve a variety of domestic and international implementation partners, such as UNICEF and FAO.[32]

Sustainability

The UN Strategic Framework for Cooperation (2017-2021) committed to pursuing both environmental sustainability as well as institutional sustainability in the implementation of the plan.

3.3.b. Governance and resources

Under the WHO Country Strategic Plan (2014-2019), the Ministry of Health (MoH) was assigned to lead action on strategic objectives with support from WHO Country Office and international organizations including GAVI, UNICEF, and FAO. The Strategic Plan aimed to support governments in identifying the financial resources needed to implement NCD policies and programs, such as the National Strategic Plan for the Prevention and Control of Non-Communicable Diseases (2014-2020). The Ministry of Health also led the implementation of the National Strategic Plan for NCDs along with partner ministries, drawing on financial resources from the state budget, donations of institutes, enterprises and social organizations, and the support of international organizations and donors. The UN Strategic Framework for Cooperation aimed to further NCD efforts through collaboration with the national government, as well as UN and international partner agencies, such as UNICEF, FAO, and WHO. Regarding financing, the Framework acknowledged the relative uncertainty regarding the financial resources available to the UN in DPRK.

3.3.c. Service delivery

The WHO Country Strategic Plan (2014-2019) focused on building capacity for the National Strategic Plan for NCDs (2014-2020), as well as other NCD policies and programs through active technical assistance to the Ministry of Health. It aimed to strengthen partnerships with both government and external partners inside and outside of the health sector. The National Strategic Plan for NCDs (2014-2020) focused on intersectoral response, prevention, treatment, and management of NCDs, with an emphasis on expanded screening services as well as health promotion and education. The UN Strategic Framework for Cooperation (2017-2021) aimed to focus specifically on cardiovascular diseases, hypertension, and cancer, through four strategic priorities: food and nutrition security, social services development, resilience and sustainability, and data management.

Screening

Under the National Strategic Plan for NCDs (2014-2020), the government aimed to strengthen and improve preventive health care, to carry out actively periodical screening and registration of and medical service delivery for patients with chronic diseases including cardiovascular diseases, cancer and diabetes. Under this plan, the DPRK aimed to reach 90% coverage in cancer screening for adults above 40 years by 2025.

Healthy lifestyle counselling

Under the National Strategic Plan for NCDs (2014-2020) health promotion for the prevention and control of noncommunicable diseases was prioritized through health education programming.

Protocols/Guidelines

No information on protocols and guidelines supporting the NCD policies and programmes was provided.

Access to essential medicine and technology

The National Strategic Plan for NCDs (2014-2020) aimed to improve the supply of and access to the essential drugs and equipment needed to diagnose, treat, and manage main noncommunicable diseases.

Team-based care and human resources

Little information was provided on the roles and capacities of specific individuals (e.g., healthcare professionals) involved in the implementation of NCD policies and programmes.

Systems for monitoring

For the WHO Country Cooperation Strategy (2014-2019), the WHO will monitor programme implementation via mid-term and final evaluations. The National Plan for NCDs (2014-2019) aimed to strengthen research and evaluation on NCDs and the Ministry of Public Health was assigned to report to the Ministry of Health on data collected. Relevant indicators to track progress were clearly outlined for both the WHO Country Cooperation Strategy (2014-2019) and the National Plan for NCDs (2014-2019). Under the UN Strategic Framework for Cooperation (2017-2021), the government agreed to provide timely access to relevant and accurate NCD data. Data was planned to be disaggregated by sex and age, and any other variable necessary to identify the most vulnerable groups.

3.3.d. Community participation

Mass awareness

The National Strategic Plan for NCDs (2014-2020) focused on enhancing the prevention and control of noncommunicable diseases and risk factors through mass media and public health reference books.

Provision for access for hard-to-reach population groups

The UN Strategic Framework for Cooperation (2017-2021) aimed to apply a human-rights, people-centred approach, as well as support gender equality. Despite this, specific steps to achieve this were not outlined. However, the framework did take steps toward identifying the groups most vulnerable to NCDs by entering into an agreement with the government, which would provide NCD data disaggregated by sex, gender, and other relevant variables.

Community participation in policy process: No information was provided about community participation in the policy process.

3.3.e. WHO guidance and role

The WHO Country Office for DPRK supported NCD policy and program implementation under the 2014-2019 WHO Country Strategic Plan. Additionally, the WHO's contributions, including developing tobacco control conventions and introducing Package of Essential NCD interventions, influenced the National Strategic Plan for NCDs from 2014-2020.

3.4 India

3.4.a. Policies and programmes for noncommunicable diseases

India's Policies and Programmes on Non-Communicable Diseases (NCDs) have evolved over the years to address the prevention and control of major NCDs such as cancer, diabetes, cardiovascular diseases, stroke, and more. The National Programme for the Prevention and Control of NCDs (NPCDCS),[33] launched in 2010, laid the groundwork for NCD policies in India. In 2013, the operational guidelines decentralized NCD activities and expanded screening and early detection efforts. A task force on Comprehensive Primary Health Care (CPHC)[34] in 2014 paved the way for further decentralization which was the catalyst for population- based screening and Ayushman Bharat Health and Wellness Centres (AB- HWC). The 2017-2022 National Multisectoral Action Plan for Prevention and Control of Noncommunicable Diseases[35] introduced population-based screening for adults above 30 years with an emphasis on early detection and appropriate referral. From an outreach and camp- based approach, screening was now taken to the population level. The policy landscape expanded further to engage various stakeholders, including separate ministries of the Union government, state/union territory bodies, civil society, and international partners. Additionally, the National Monitoring Framework laid down a process of accountability through collecting and storing data on 10 targets and 21 indicators on mortality, risk factors, and health systems response to NCD. In 2017, the National Health Policy emphasized people-centred care and introduced the concept of "Health and Wellness Centres" (HWCs) at the primary healthcare level.[36] It was around this time that primary health care strengthening was concretized with decentralization being the pivot of

NCD programming. Screening for oral, breast, cervical cancer, chronic obstructive pulmonary disease (COPD), hypertension, and diabetes was expanded under this policy. The latest policy, the National Programme for Prevention and Control of Non-Communicable Diseases in 2023, identified additional priority NCD conditions such as chronic obstructive pulmonary disease and asthma, chronic kidney disease, and non-alcoholic fatty liver disease.

3.4.b. Governance and resources

Though health is a state subject, the Department of Health & Family Welfare, Government of India provides technical and financial support to the States/UTs under the NPCDCS. The NPCDCS gives financial support under NHM for awareness generation (IEC) activities for NCDs to be undertaken by the States/UTs as per their Programme Implementation Plans (PIPs). The State NCD Cell is responsible for overall planning, implementation, monitoring and evaluation of the different activities while the district NCD cell is responsible for implementation at the district level. A shift began to appear around 2017 with the push for a more comprehensive and quality primary health care package. Beginning in 2017, HWC were developed at selected sub centers and PHC that became the hub of delivery of a comprehensive package of NCD services. Given the enhanced roles of staff at the primary care health and the paucity of human resources, the HRH nodal and mission director has been given the responsibility for HRH recruitment and management. Dedicated budget is earmarked for drugs and supplies, lab equipment, IEC, infrastructure, referral transport, diagnostics, training and compensation for ASHA. The 2023 guidelines see the integration of the fifteenth finance commission support for diagnostic infrastructure in rural and urban areas based on the mandate to achieve universal health coverage. It also emphasizes the role of Pradhan Mantri- Ayushman Bharat Health Infrastructure Mission (PM-ABHIM)[37] to develop the capacities of institutions including critical care blocks and integrated public health laboratories) across the continuum of care at all levels of the health system.

3.4.c. Service delivery

NCD management in primary health care

India has implemented a population-based initiative, part of NHM and Comprehensive Primary Health Care, to prevent, control, and screen for common NCDs like diabetes, hypertension, and cancers. This initiative targets individuals above 30 years, with a specific focus on breast and cervical cancer screening for women. Screening is integral to Ayushman Bharat – Health and Wellness Centres. Additionally, Comprehensive Primary Health Care under Ayushman Bharat promotes wellness activities and community-level communication for NCD prevention. Integration with "Affordable Medicines and Reliable Implants for Treatment (AMRIT)" provides affordable medicines for cancer, cardiovascular disease, and other NCD treatments.[38]

In 2017, the National Program for the Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases, and Stroke (NPCDCS) launched a Population-Based Screening (PBS) initiative covering diabetes, hypertension, oral cancer, breast cancer, and cervical cancer for individuals aged ≥30.[39] As of 2020, PBS has been implemented in 219 out of 742 districts in India[40], with over 80% of healthcare personnel in Haryana trained for PBS implementation.[39]

The Indian Public Health Standards (IPHS) for Primary Health Centres (PHCs), published in 2007 and revised in 2012, are a set of uniform standards envisaged to deliver quality services to citizens with dignity and respect and is a reference point for public health care facility planning and up-gradation. Concomitant to the many new initiatives and programmes, the revised 2022 IPHS[41] focus on service delivery at every level which will further strengthen components viz. infrastructure, human resources, drugs, diagnostics/equipment, quality improvement, monitoring/supervision, governance, and leadership. Presently, even a well-functioning primary health centre provides services that are limited to reproductive, sexual and child health along with some of the National Disease Control Programmes. Ayushman Bharat with its two inter-related components of Health and Wellness Centres (HWCs) and the Pradhan Mantri Jan Arogya Yojana (PM-JAY)[42] represents a paradigm shift towards India's path to Universal Health Coverage (UHC). HWC have been introduced to play an important role in prevention of communicable as well as non- communicable diseases. The guidelines classify rural and urban HWC into HWC-PHC and urban HWC-PHC. Under this classification, all PHC conducting deliveries are envisaged to be converted to HWC offering, besides the routine services, also preventive and promotive health interventions and functions.

To provide Comprehensive Primary Health Care (CPHC), existing Sub Health Centres will become Health and Wellness Centres (HWC) with a 30-minute "time to care" principle. Primary Health Centres (PHCs) linked to clusters of HWCs serve as the first referral point and are strengthened to offer expanded primary care.

One of the twelve CPHC packages covers NCD screening, prevention, control, and management, including hypertension, diabetes, and cancer (oral, breast, cervical). Multipurpose workers require additional skills for NCD screening, referral, and follow-up. Medical Officers, Staff Nurses, Lab Technicians, Pharmacists, and Lady Health Visitors undergo training in NCD screening and management.

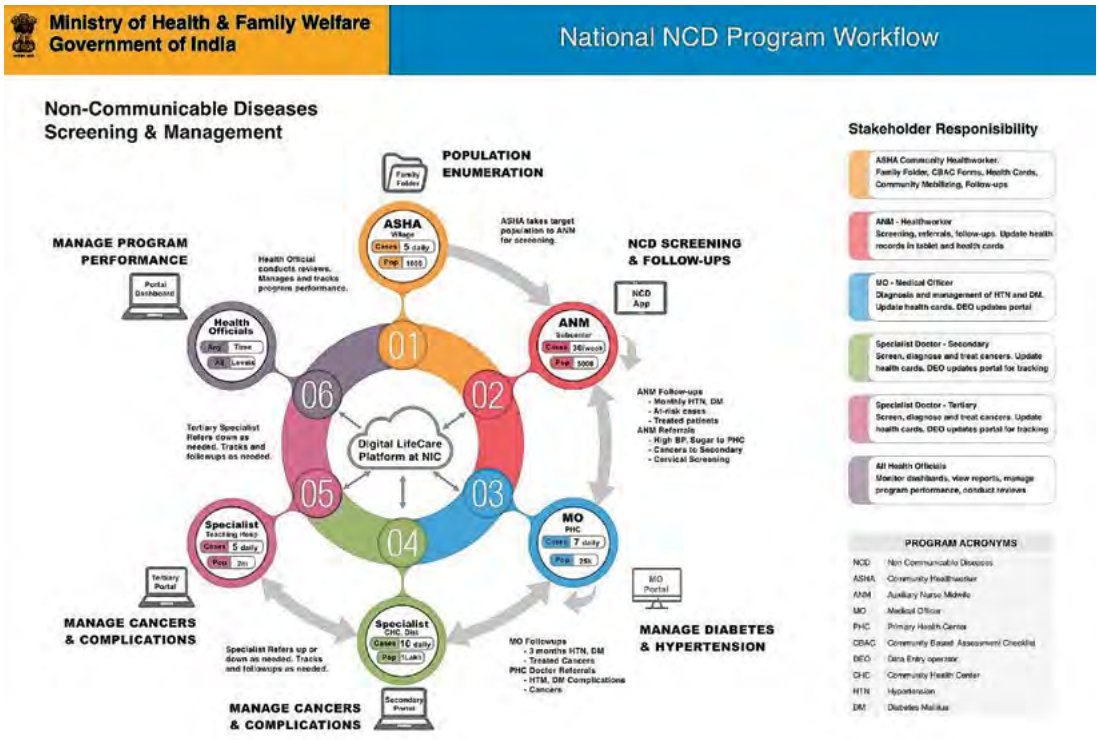
Leveraging existing health systems, HWCs overlap with districts for Universal NCD Screening. Intersectoral collaboration is essential for promoting healthy NCD-related behaviours. HWC-PHC serves as a platform for teleconsultation and expanded diagnostic services using a hub-and-spoke model.

Standard treatment workflows

With the vision to make Universal Health Coverage a reality in the country, the Government of India has started many initiatives, development of Standard Treatment Workflows is a catalytic step in this direction (Fig. 12).[43] The Indian Council of Medical Research has made available its

Standard Treatment Workflows (STWs) in three volumes which contain 11 specialities with 52 diseases. The Indian Council of Medical Research has made available its Standard Treatment Workflows (STWs) in three volumes which contain 11 specialities with 52 diseases. A continuum of care has been established through referral linkages. A Primary Health Centre (PHC) that is linked to a cluster of HWCs serves as the first point of referral for many disease conditions for the HWCs in its jurisdiction. The patients referred from the sub-center/HWC to the PHC are to have confirmatory tests prescribed by the medical officer who is supported by the staff nurse and lab technician. Health education and monitoring of records is also done at the PHC. In case of cancerous lesions, the CHC is to offer cryotherapy and for complicated cases, management is to be done at the district hospital.

Fig. 12. National NCD programme workflow



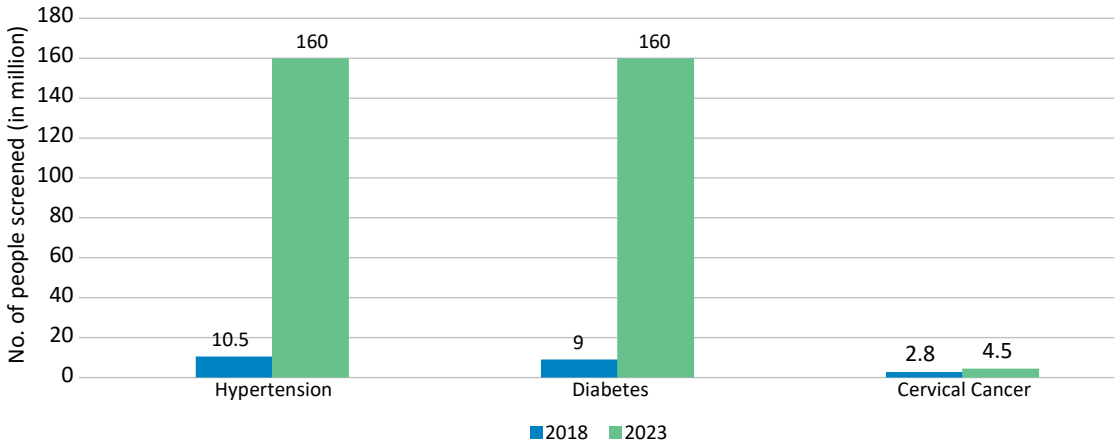
Source: Ministry of Health and Family Welfare, Government of India

Screening

Population based screening starts with population enumeration through individual health cards identified by Aadhar or the National Population Register (NPR), or the Socio-Economic Caste Census (SECC). This is done by ASHA through a community-based assessment checklist (CBAC) that scored an individual's risks for NCD. Screening for cancers is planned for once in five years, and once in a year for hypertension and diabetes for all adults 30 years and above**.** While hypertension, diabetes, oral and breast cancer screening is ensured at the subcentre

and outreach level, cervical cancer screening is done at the HWC/CHC/DH where speculum examinations and visualization with acetic acid can be done, including facilities for sterilization of equipment. Some encouraging increases in coverage have been seen (Fig. 13) over the past half decade.

Fig. 13. Screening Coverage for Hypertension, Diabetes Mellitus and Cervical Cancer in India (2018, 2023)



Source: India Country Presentation. Workshop for implementing South-East Asia Regional NCD Roadmap, 2022-2030, Dhaka, Bangladesh. Used with permission.

Healthy lifestyle counselling

At every level of the primary health care system, lifestyle counselling has been incorporated in service provision. Counselling to help modify behavioural risk factors is done by ASHA and ANM at the community level, and by doctors, nurses, counsellors and community health officers at the PHC and CHC level.

Protocol and guidelines

Training modules for medical doctors (2017), staff nurses, ASHA, multi-purpose workers and the NCD application user module for ANM have been developed Additionally, as the primary service provider for NCD solutions in comprehensive primary health care, a PHC Medical Officer User Manual was developed while the Handbook for Counsellors- reducing risk factors for non-communicable disease was introduced in 2017.[44] Guidelines on prevention of stroke was launched in 2019 which reiterated the role of HWC in service delivery of NCD.[45]

Access to essential medicines and technology

With the launch of universal screening and comprehensive primary health care, long term dispensing (one to three months) of drugs for the management of chronic illnesses such as

diabetes and hypertension has been initiated. The 2023 guidelines ensure regular updating of drug inventory along with buffer stocks. Provision for glucometers, glucostrips and lancets is also ensured for screening at all levels of health facility while laboratory investigations and diagnostics such as common blood examinations, spirometry, X- Ray, ECG, USG is recommended to be provided at CHC. Under the Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP)[46], stores are set up to provide generic medicines including insulin at affordable prices. Further, integration with the "Affordable Medicines and Reliable Implants for Treatment (AMRIT)" offers affordable medicines for treatment of cancer, cardiovascular disease and other NCD.

eSanjeevani offers teleconsultation services at the primary health care level with specialists.[47] The cloud-based eSanjeevani platform is implemented in two modes:

(1) eSanjeevani AB-HWC (a provider-to-provider telemedicine platform): this variant provides assisted teleconsultations for patients who walk into HWCs, community health officers in Health & Wellness Centres facilitate the teleconsultation for the patient who are connected to the doctors and specialists in hubs established in secondary/tertiary level health facilities or medical colleges. This variant is based on a Hub-and-Spoke model.

(2) eSanjeevani OPD (a patient to provider telemedicine platform): it empowers citizens to access health services in the confines of their homes through smartphones and laptops.

The Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (PM-JAY)[48] aims to undertake path breaking interventions to holistically address prevention, promotion and ambulatory care at the primary, secondary and tertiary level. PM-JAY is the largest health assurance scheme in the world which aims at providing a health cover of Rs. 5 lakhs per family per year for secondary and tertiary care hospitalization to over 12 crores poor and vulnerable families (approximately 55 crore beneficiaries) that form the bottom 40% of the Indian population. The benefits of INR 5,00,000 are on a family floater basis which means that it can be used by one or all members of the family.

Team-based care and human resources

At the HWC level, a team of ASHAs, ANMs, and Community Health Officer (CHO) are seen to be the main "team" handling NCD primary and secondary prevention and management. At PHCs, this team is to be supported by additional staff, namely, lab technician and pharmacist, and, at the sub-center, the ANM is to be supported by multi-purpose worker wherever possible. Additional skill requirements for Multipurpose worker (Female/Male) include screening for common NCDs-Hypertension, Diabetes, three common cancer-Cervix, Breast and Oral Cancer and timely referral and provision of follow up care, enabling periodic monitoring of BP, Blood sugar for patients on treatment. Medical Officer, Staff Nurses, Lab technician, Pharmacist, Lady Health Visitors to undergo 5 days training in Population-based screening, prevention, and

management of NCDs. ASHA's focus of work now encompasses wider range of services and includes screening and management of common NCDs.

Systems for monitoring

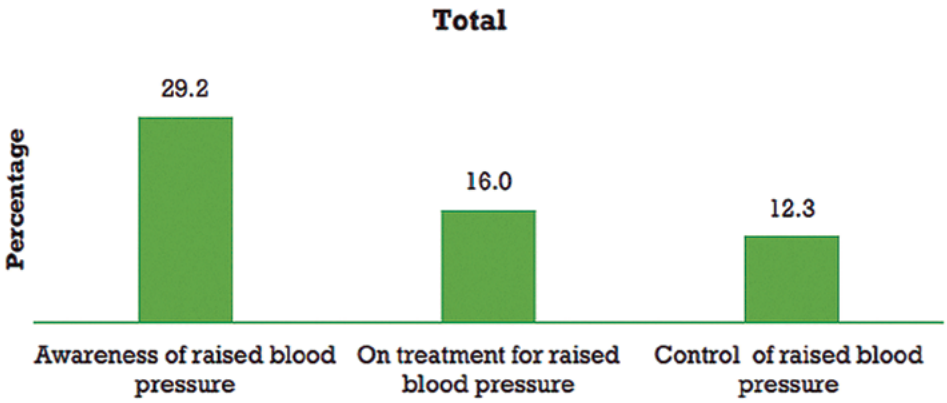
The national NCD portal is used by CHO/ANM/MPW at health and wellness centres to generate Ayushman Bharat-Health Account (ABHA) IDs for population based statistics.[49] ABHA helps to digitize health records and eliminate the hassle of carrying physical copies to doctor visits. The ABHA number is used for identifying and authenticating persons and linking their health records across multiple systems. Digitalization of the data from physical registers is done at the PHC-HWC/UPHC/HWC level through entry of data on screening and management of NCD by CHO/ANM on the NCD portal. Moreover, Ayushman Bharat Digital Mission (ABDM) is also providing other facilities through ABHA such as hospital discovery, faster appointment booking, and so on.[49]

The Ayushman Bharat Comprehensive Primary Healthcare (CPHC) NCD solution[50] and dashboard is an application developed for the MoHFW, GoI by Dell in consultation with MoHFW (NCD, NHM, EGov and DGHS) and other technical experts of reputed GoI partner institutions such as the NHSRC, ICMR, AIIMS, WHO, NICPR, CHI, Tata Trusts and India Stack. It aims to screen all persons over 30 years for hypertension, diabetes, oral, cervical and breast cancer at HWC with referrals to secondary and tertiary level Government hospitals for diagnosis, treatment, and management. By using the application every individual's electronic health record will be created, similar to a paper file/ record. Every time the patient/individual visits the facility for screening or treatment the relevant data is entered and new information is added. This information can be viewed by the health officials for measuring the disease burden, update in program planning and evaluate the performance of health workers. The individual's health information collected is highly confidential and the department aims at maintaining them securely and use it only for treatment and nothing else.

India is committed to the sustainable development goal of reducing premature death from NCD by one-third by 2030 (SDG 3.4). Digitalization of records has been gradually integrated into the monitoring system since the 2013-2020 guidelines. India is also committed to the Global monitoring framework of which it was the first country to sign and adopt and the national NCD monitoring framework of 10 targets and 21 indicators on mortality, risk factors, and health systems response to NCD. The national monitoring framework was instrumental in shaping accountability to NCD goals for the first time. However, gaps in the data on these indicators became evident, and therefore, the National Noncommunicable Disease Monitoring Survey (NNMS) was conducted in 2018-19 to measure and arrive at national estimates for the identified indicators for prioritization of actions (Fig. 14).[51] It is the first comprehensive fully digitalized national level survey that provides key estimates on NCD risk factors according to the National NCD framework and action plan of India.

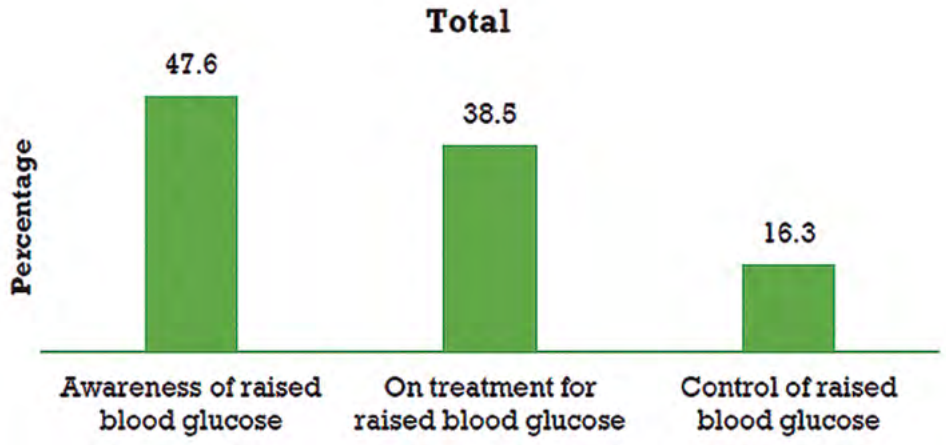
Fig. 11. Treatment Cascades as per National Noncommunicable Disease Monitoring Survey

Hypertension Treatment Cascade, India (2018)



Source: NNMS, 2018

Diabetes Treatment Cascade, India (2018)



Source: NNMS, 2018

The NNMS has revealed that of those with raised blood pressure under a third were aware of their status, 16% were on treatment and only 12% had controlled blood pressure. The overall pattern was similar for diabetes although awareness, treatment and effective coverage for raised blood sugar was higher. One difference in the pattern was that blood pressure coverage was greater among women and blood glucose coverage was greater among men. There was a rural coverage gap in both cascades.

Cancer registries

The National Cancer Registry Programme (NCRP), initiated by the ICMR in December 1981, collects data on cancer and supports the National Cancer Control Program (NCCP). It began with population-based cancer registries (PBCRs) and hospital-based cancer registries (HBCRs) in select cities.[52]

Recognizing its success, the NCRP expanded its scope to include other NCDs like cardiovascular diseases, diabetes, and stroke under the National Centre for Disease Informatics and Research (NCDIR) in March 2011. NCDIR aims to develop a national research database and conduct studies in these areas. Currently, there are 36 PBCRs and 236 HBCRs registered under NCRP.[53]

Fig. 15. Network of 36 Population-based cancer registries in India

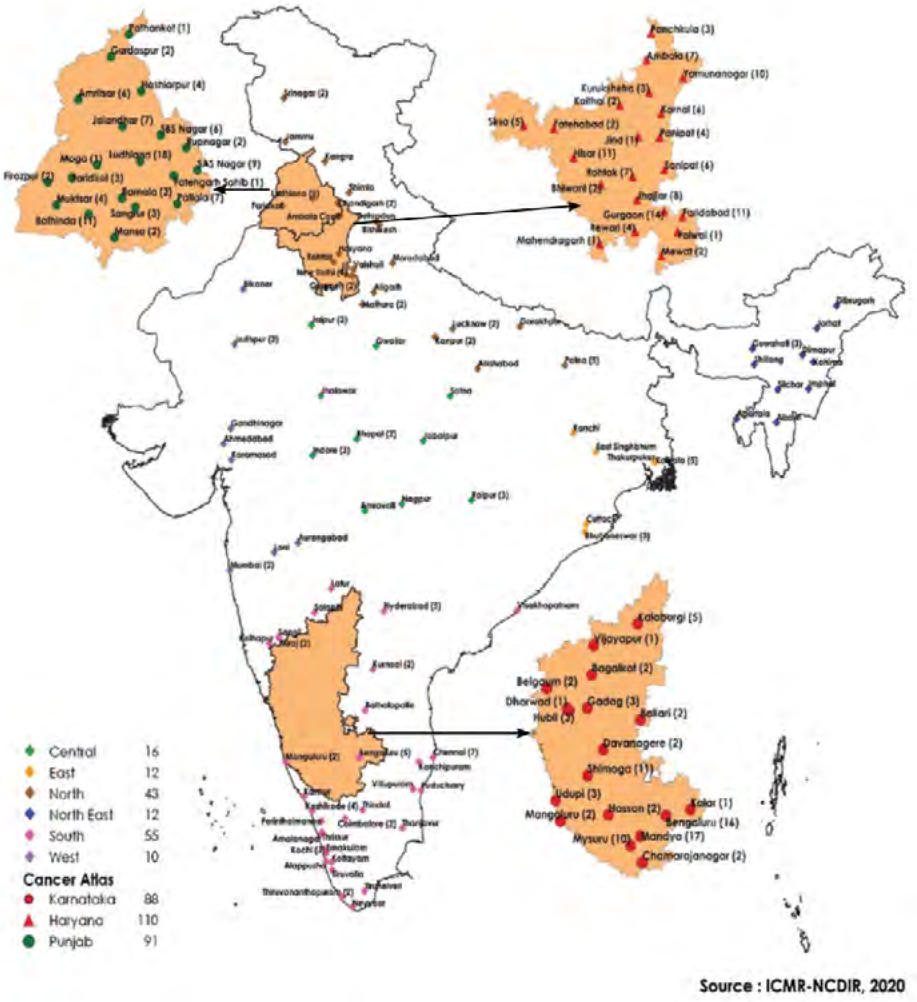
PBCR data included in the report	
North	2
East	1
West	6
South	5
Central	3
North East	11

▲ PBCR data not included in the report (8)

Registries	Year of Inception
Ahmedabad rural	2004
Malabar	2013
Karimganj	2016
Allahabad	2017
Gautam Budh Nagar	2017
Aligarh	2018
Patna	2018
Srinagar	2018

Source : ICMR-NCDIR, 2020

Fig. 16. Network of Hospital-based cancer registries in India



Quality assurance

With the launch of the National Quality Assurance Programme (NQAP), National Quality Assurance Standards (NQUAS) have been developed keeping in mind the specific requirements for public health facilities as well global best practices. NQAS are currently available for District Hospitals, CHCs, PHCs and Urban PHCs. Standards are primarily meant for providers to assess their own quality for improvement through pre-defined standards and to bring up their facilities for certification.[54]

To ensure provision of quality care at the primary level, standards of care for HWC have been framed. For a facility to apply for the state and national certification it is mandatory to apply for at least 7 packages of the Comprehensive Primary Health Care Packages, one being, screening, prevention, control, and management of non-communicable diseases.[55]

3.4.d. Community participation

Addressing inequalities/Leaving no one behind

India's NCD policy has seen a progressive aspiration of inclusivity and reduction in inequality. The National Health Policy of 2017 prioritizes healthcare among urban, tribal, and vulnerable populations by allotting higher cost inclusion in these areas to address NCD. The 2023 operational guideline builds on this to make access to quality healthcare for NCD equitable among urban poor populations. Provision of affordable medicines and treatment is sought to be made widely available through health assistance via AMRIT and PM-JAY under universal health coverage. India's NCD policy has seen a progressive aspiration of inclusivity and reduction in inequality.

3.4.e. Good practices

India Hypertension Control Initiative (IHCI)

The India Hypertension Control Initiative (IHCI)[56] is a multi-partner strategy implemented to strengthen hypertension management and control in public sector health facilities. The project was launched in 2018-19 in 29 districts across five Indian states with five core strategies: standard treatment protocol, reliable supply of free antihypertensive drugs, team-based care, patient-centered care, and an information system to track individual patient treatment and blood pressure control. Clinic-level blood pressure control averaged 43% (range 22–79%) by Jan-March, 2020 out of an initial 570,365 enrolment in 2018-19. Among 721,675 patients registered until March 2020, 38.4% had received drug refills through HWC/SC or home delivery by frontline workers during the lockdown, thus highlighting that a scalable public health hypertension control programme can yield substantial benefits even in challenging times.

Evolution of the national NCD programme

India is undergoing a significant health transition, with Non-Communicable Diseases (NCDs) now outweighing Communicable diseases. NCDs, including cardiovascular diseases, cancer, chronic respiratory diseases, and diabetes, contribute to approximately 60% of all deaths and result in a loss of productive years of life. Heart disease, stroke, and diabetes-related premature deaths are projected to rise.

To address major NCDs, the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases, and Stroke (NPCDCS) was launched in 2010. It focuses on strengthening infrastructure, human resources, health promotion, early diagnosis, management, and referral.[57] The program establishes NCD Cells at national, state, and district levels for management and NCD Clinics at district and CHC levels for early diagnosis, treatment, and follow-up of common NCDs.

75 by 25 initiative

The Union Health Ministry introduced the "75/25" initiative, aiming to provide standard care to 75 million people with hypertension and diabetes by 2025 through Primary Health Centers (PHCs). This is the largest expansion of NCD care under primary health care globally.

The plan involves training 40,000 Primary Health Care Medical Officers on Standard Treatment Workflow for NCDs via the Shashakt Portal.[58] Health and Wellness Centers (HWC) play a vital role in achieving the 75 by 25 target, with nearly 90% of diagnosed hypertension and diabetes patients managed at HWC PHC/UPHC.

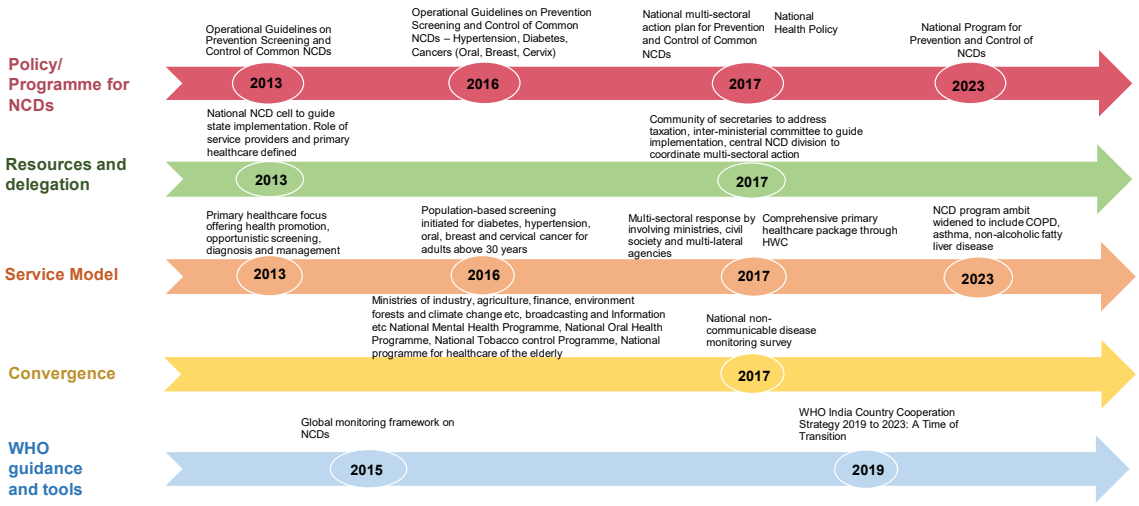
HWC PHC/UPHC activities include opportunistic screening, team-based care, timely diagnosis, protocol-based management, ensuring drug and diagnostic availability, decentralized care, prompt incentive disbursement, supportive supervision, and utilizing CPHC NCD data for monthly review meetings and patient tracking.[59]

3.4.f. WHO guidance and role

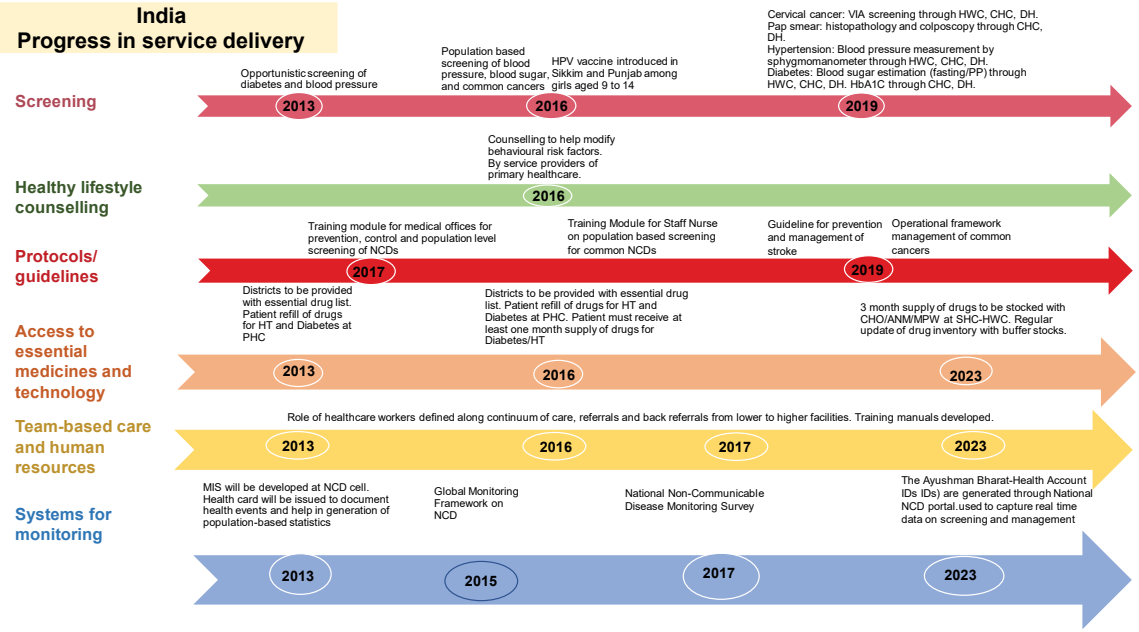
India was the first country to adopt the national action plan with 10 targets and 21 indicators following the launch of the WHO Global Action Plan for the Prevention and Control of noncommunicable diseases 2013-2020. Corresponding to the Colombo Declaration of Strengthening Health Systems to accelerate NCD services at the Primary Health Care level, the revised operational guidelines expanded screening services to the community level and strengthened the role of primary health care providers through trainings and delegation of responsibilities. To drive the implementation of the WHO Framework Convention on Tobacco Control (FCTC) by different sectors, high level coordination committees were established at national, state and district levels. The WHO India Country Cooperation Strategy of 2019-2023 builds on the National Health Policy of 2017 and initiatives like the Ayushman Bharat and the promotion of digital health amongst others, with a special focus on the prevention of NCD.

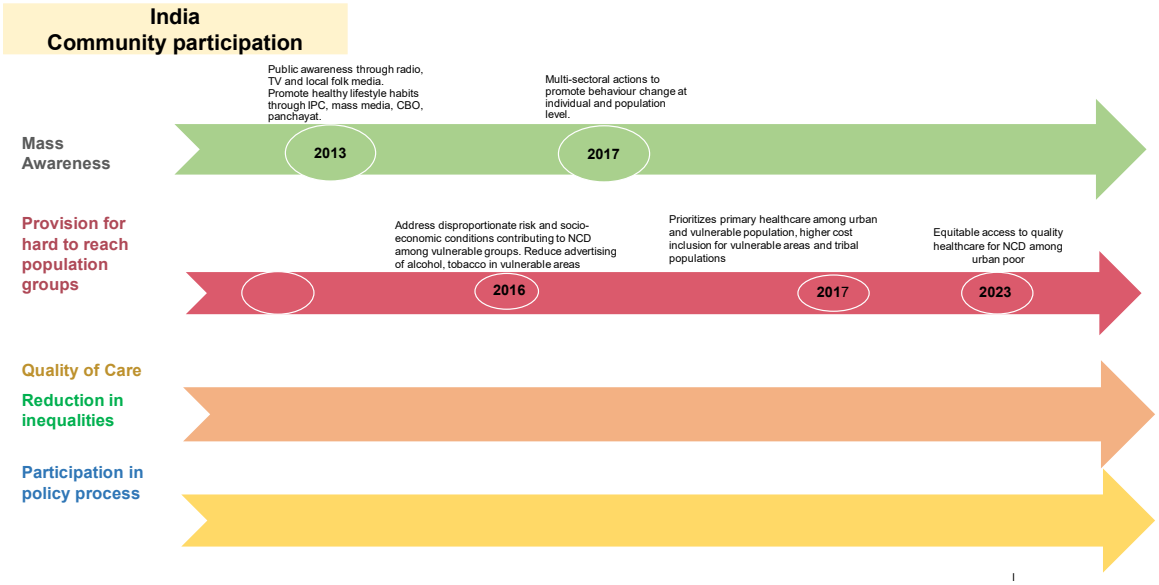
Noncommunicable Diseases (NCDs) in Primary Health Care- India

India
Governance and guidance



India
Progress in service delivery





3.5 Indonesia

3.5.a. Policies and programmes for noncommunicable diseases

Indonesia's National Action Plan on Prevention and Control of NCDs (2015-2019) had the precedent of existing reforms in primary care service delivery – such as Posbindu and village level Posyandu integrated health posts created as early as 2011, and linkages to the community health centre model of Puskesmas introduced in the 1960s.[60] The Multisectoral Action Plan on Prevention and Control of NCDs was also being operationalised at this time, with express linkages to the Ministry of Human Rights. This tracked with the 2014-released WHO Country Cooperation Strategy which had an emphasis on health systems, uptake of the PEN model and linkages to UHC.[61] In 2018 Cervical Cancer management guidelines followed.[62]

3.5.b. Governance and resources

The year 2015 was a watershed for NCD service integration with the Posbindu reform legally introduced, alongside a 200% increase in budgetary allocation for NCD programming. Posbindu PTM was created specifically for NCD monitoring and counselling in communities; they target people aged 15 and up, whereas Posyandu Lansia is concerned with the health of the older people (65 years and older).

3.5.c. Service delivery

NCD management in primary health care

On the service delivery side, NCD packages began to be introduced into the Permenkes health insurance scheme as early as 2014 with guidelines and training of trainer modules following

by 2016. Healthy lifestyle counselling was introduced in 2016 under Presidential instruction. The main activities in the Posbindu PTM and Posbindu Lansia include: (1) screening for NCDs, mainly hypertension and diabetes; (2) assessing risk factors, i.e., smoking behaviour, diet, and physical activities; (3) health education; and (4) facilitates referral to primary health care.[63]

Systems for monitoring

Indonesia used to have separate STEPS surveys which were then integrated with ongoing surveys such as Riskesdas 2018 with NCD risk factor data and Sirkenas 2016 which has data on cervical cancer screening. Monitoring of global NCD indicators is underway through the Puskesmas and Posbindu systems as well.

3.5.d. Community participation

Addressing inequalities/Leaving no one behind

The government's Nusantara Sehat plan, introduced in 2014 to specifically target remote and border islands, places special emphasis on equity.[64] The government's Nusantara Sehat plan, introduced in 2014 to specifically target remote and border islands, places special emphasis on equity. In addition the Healthy Indonesia Program (2015-2019) builds on the puskesmas network and seeks to foreground preventive and promotive care, optimize referral and ensure community empowerment; NCD indicators monitored include hypertension therapy, mental illness monitoring and smoking cessation, However, further details on operational linkages between these schemes and programs and NCD related services as well as the coverage of these programs warrant further exploration.

Community involvement in policymaking

Efforts to engage civil society have been underway in 2016 and include major players like LKNU, PKK, YPU and women's organisations. The nature of engagement is however unclear. Efforts in 2017 were revitalised to implement Law 23/2014 calling for local government steer or defined services at the community level.

3.5.e. Good practices

Screening and Early Detection of NCDs in Indonesia and Best Practice in Nusa Tenggara Barat (NTB)[65]

In 2020, only 2.8% of the 200 million people of Indonesia were screened for NCD (diabetes, hypertension and obesity). The only exception is Nusa Tenggara Barat (NTB) which is one of the 34 provinces to achieve 51.6% NCD screening coverage. NTB targeted the most obvious

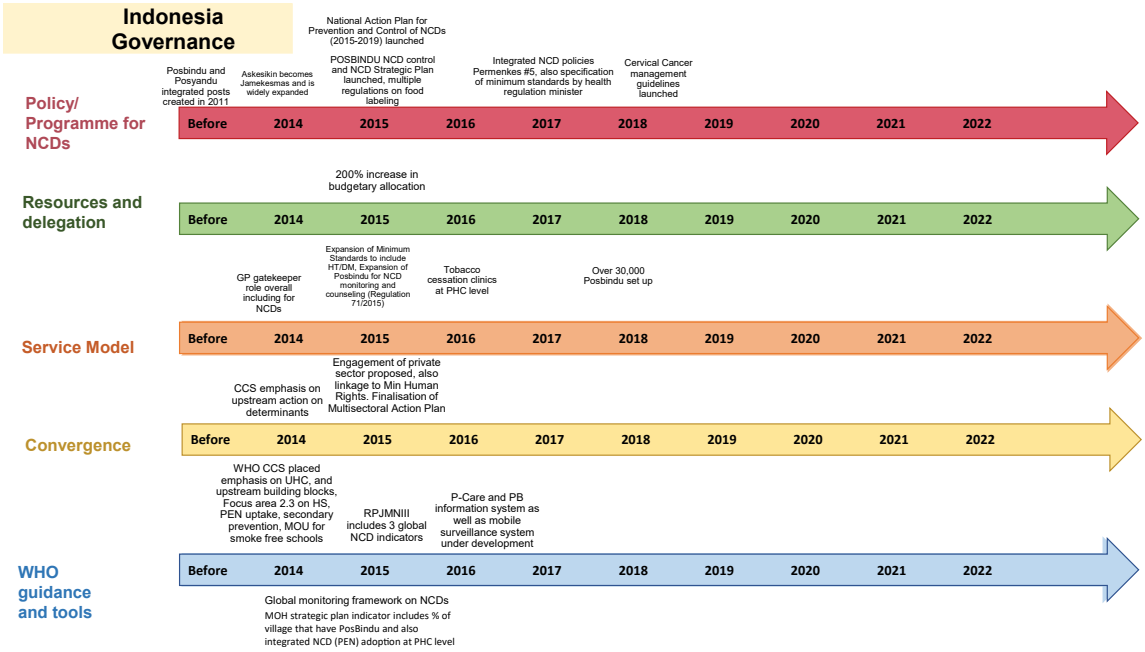
gap in coverage which was to integrate NCD screening with maternal and child health and communicable disease programme screening using a life course approach. All these programmes were running separately with poor resource allocation. It was, further, seen that an opportunity to screen children during stunting outreach was missed and NTB filled this gap. The other challenges of coverage were lack of awareness about screening and early detection and inadequate cross-sectoral collaboration, both of which NTB set forth to address. The Governor Regulation was established by the NTB regional government to consolidate multiple programs and enhance cross sectoral collaboration on NCD screening and early diagnosis. The Posyandu (community-based intervention) function was revitalized with the integration of other health programmes to include NCD screening from early childhood to adulthood. Consequently, from absent coverage in 2021, screening coverage of diabetes reached 25.5%, that of hypertension reached 12.6% and cervical cancer coverage was 9.3% in 2022. Through the primary health facility in the subregion (Puskesmas), in the village (Posyandu Prima) as well as through the community-based intervention (Posyandu), the integrated programme targeted pregnancy through to postpartum care, and covered entire population groups- babies and preschool, school age children and adolescents, productive age and the elderly. The success of the primary health care programme translated into a nationwide scale up of screening and early detection by adopting the model.

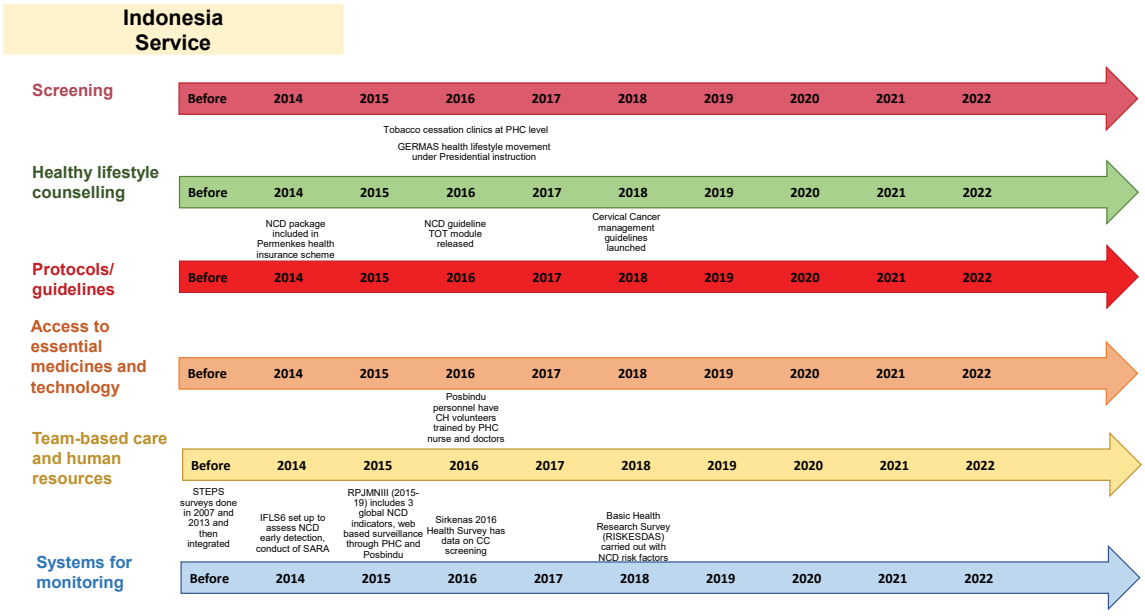
TeleDoVIA: An Innovation to Tackle Cervical Cancer Screening in Indonesia[66]

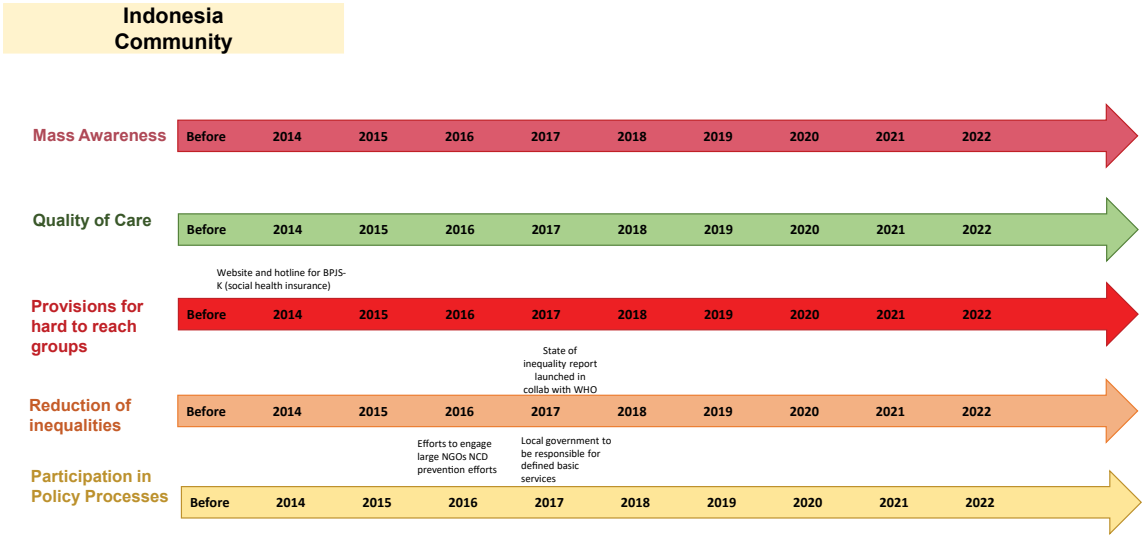
The majority of cervical cancer cases, the most common cancer among women in Indonesia, are diagnosed at advanced stages, leading to high mortality rates. In April 2015, the National Movement for Prevention and Early Detection of Cancer in Women was launched to promote early detection and treatment. The main strategy for early detection involves visual inspection with acetic acid (VIA) or pap smear, with pre-cancerous lesions treated using cryotherapy. While the screening program was initiated in 1999, coverage remained low. Furthermore, while VIA was a useful screening technique, it did not produce enough information to present to medical practitioners. TeleDoVIA, a photography-based consultation model that uses WhatsApp Messenger, was developed to address this. Healthcare providers use a smartphone camera to capture pictures of the cervix, which are then sent to the TeleDoVIA portal. Experts, including gynecologic oncologists and gynecologists with VIA expertise, review the pictures and provide consultation within 24 hours.

Training more healthcare providers on VIA, DoVIA, and TeleDoVIA is crucial for expanding screening services. As well, the expansion of the platform depends on ownership by the central government in addition to local governments. Additionally, developing an effective communication network and relevant policies is essential to improving cervical cancer prevention and treatment.

Noncommunicable Diseases (NCDs) in Primary Health Care- Indonesia







3.6 Maldives

3.6.a. Policies and programmes for noncommunicable diseases

The National Health Master Plan (HMP) (2006-2015) prioritised the prevention of non-communicable diseases (NCDs) as a significant policy objective. It recommended integrating health promotion and preventive health services across all levels of care and establishing primary health facilities equipped with trained staff and equipment to provide comprehensive primary healthcare.[67] The national strategic plan for NCDs (2008-2010) made progress in NCD prevention and control by implementing STEPS surveys, strengthening tobacco laws, piloting PEN interventions, and raising awareness among political bodies.[68] The Health Master Plan HMP (2016-2025) included interventions focused on preventing and controlling NCDs through health promotion, early detection, and management using standard treatment guidelines.[69] The HMP 2016 plan also called for delivering primary care through the public sector in all islands. The Multisectoral Action Plan (MSAP) for Prevention and Control of Non-Communicable Diseases (2016-2020) identified four strategic action areas for NCD control. These areas include building partnerships across sectors, improving advocacy for NCD prevention, strengthening legislative measures for risk factor reduction, scaling up PEN interventions, and continuing ongoing STEPS surveillance. The plan also suggests conducting a "walkability survey" and establishing a cancer registry in Male.[70]

Convergence

The MSAP 2016 for NCD control at the national level has created a thorough strategy to establish partnerships and convergence among various ministries and departments. This involves creating specialised subcommittees that can guide the high-level NCD task force. For example, the Ministry of Education must form the School Health Promotion Board to implement

NCD-related health programs in schools. Similarly, the Workplace Health Promotion Board and the Urban Planning Board will integrate MSAP guidelines into workplace health programs and urban planning. The Enforcement Board, led by the police department, will coordinate efforts related to tobacco control, food labelling, and other related matters.

3.6.b. Governance and resources

In the Maldives, the healthcare delivery system operates on a tiered structure. Primary health centres are on all the islands, while atoll-level health facilities offer specialised care. Urban areas have tertiary care facilities. The regional or atoll hospital provides primary and curative care for 5 000 to 15 000 people in each atoll. Primary care services, including medicines, are provided free of cost to Maldivian citizens.

The MSAP 2016 was proposed to be implemented in two stages and an elaborate governance structure is designed to implement the program. The plan's first phase from 2014-2016 involved piloting interventions, launching a national campaign, training health human resources, and improving supply chains. A mid-term evaluation was planned in 2017, and the focus would shift to scaling up successful interventions and enhancing service delivery in the second phase from 2018 to 2020. To oversee the plan implementation under the directive of the president a high-level NCD task force was proposed. The duties of the task force were to guide stakeholders, inform the government on policy and legal issues, and explore ways to allocate more resources for NCD response. The Ministry of Health (MOH) oversee the efforts to address Non-Communicable Diseases (NCDs), with the NCD Unit as the main coordination point for the MSAP 2016. The plan proposed supporting the unit with additional resources to support its duties. Several subcommittees were set up to advise and support the task force.

3.6.c. Service delivery

A 2017 report by the Ministry of Health mentions that the country has implemented the WHO Package of Essential Non-communicable (PEN) Disease Interventions for primary healthcare in two regions with plans in the country with expansion plans.[71] Curative services for chronic diseases and cancer are available in all major hospitals in the country, and the treatment, including medicines, is covered under "Aasandha", the national health insurance scheme.[72] The MSAP for NCDs 2016 proposed establishing NCD clinics offering diabetes care and built a referral network connecting health facilities within and outside the country.

Screening

The MSAP 2016 for NCDs suggests strengthening the primary care system as a crucial strategic action area. This includes enhancing the capacity of healthcare workers to address NCDs and promoting self-care awareness among communities. Scaling up the WHO Package of Essential NCD interventions is a significant element of this action area.

Healthy lifestyle counselling

The National Policy on Physical Activity for Healthier Living 2022 highlights the government's dedication to enhancing physical activity and fostering positive health within communities. The policy aims to achieve a 10% decrease in the prevalence of insufficient physical activity by 2030, through a societal shift in attitude towards physical activity, political commitment, health system responses, and partnership building.[73]

Protocols/Guidelines

The HMP 2016 recommends using standard treatment guidelines healthcare providers were trained to detect and manage NCDs and those with comorbidities. The 2016 MSAP for NCD control recommends capturing data of patients with non-communicable diseases (NCD) treated and counselled according to NCD protocol, using clinical audit reports occurring every three years.

Access to essential medicines and technology

The HMP 2006 proposed setting up pharmacies on every inhabited island with private and community partnerships to provide affordable essential medicines. The policy also suggested introducing legislation to ensure the accessibility of essential medicines under TRIPS agreements. HMP 2016 proposed creating a centralised supply chain of essential medicines and supplies as well as maintenance of medical equipment. The policy recommended improving the quality control mechanism of drugs and control of essential medicine costs by including generic medicines in public drug supply and covering the cost through social health insurance. The MSAP for NCD Prevention and Control 2016 have included the availability of essential medicines and basic technologies to treat NCDs in 80% of public and private health facilities as a country goal to achieve by 2025. The MSAP further stresses streamlining the central procurement of medicine and equipment as a priority area to be implemented in the plan's first phase by 2017.

Team-based care and human resources

According to HMP 2016, the Maldives currently has 23 doctors and 66 nurses per 10,000 population. To improve the human resource for the health situation, the policy outlines detailed strategies such as increasing incentives, creating a safe working environment, providing appropriate training, and establishing additional medical education facilities for local communities.

Quality of care

In 2016, the HMP emphasized the importance of prioritizing the quality of healthcare services in the Maldives. To ensure this, legislation has been put in place regarding the licensing of healthcare institutions and the professional registration of healthcare workers. The Ministry

of Health has also developed quality standards for institutions and protocols for clinical care delivery.

3.6.d. Community participation

Provision for hard-to-reach population groups/ Reduction in inequalities

In 2006, the HMP recommended a health insurance scheme to provide social security for the poor, particularly those in need. The HMP 2016 emphasised the importance of addressing the health concerns of vulnerable groups, such as pregnant women, children, migrant workers, adolescents, and people with disabilities. The policy also stressed the need to ensure preventive and curative services for at-risk groups, such as drug users, while tackling the associated stigma and legal issues. The policy noted that welfare schemes, allowances, subsidies, and old-age pensions were in place, supported by the government, but could add to the country's fiscal deficit. The MSAP for NCD Prevention and control 2016 has equity as a guiding principle and proposes different approaches that would reduce inequalities in the burden of non-communicable diseases caused by socioeconomic determinants, such as gender and economic status. It also recommends ensuring universal access to essential health services, including diagnostics and medicines, for all people in the country, especially vulnerable groups, without causing financial hardship.

Mass awareness

According to HMP 2016, primary care centres should connect with every family in their respective island or neighbourhood to improve public health awareness and increase service coverage. The policy also aims to empower communities to demand quality assurance measures for drinking water and food products. Creating opportunities to educate and empower families about healthy practices is crucial. Modern Information Communication Technologies (ICT) can also help bring about behavioural change in these communities. Lastly, the policy emphasizes the importance of developing joint programs with schools and higher education institutions to promote health among young people.

Community participation in the policy process

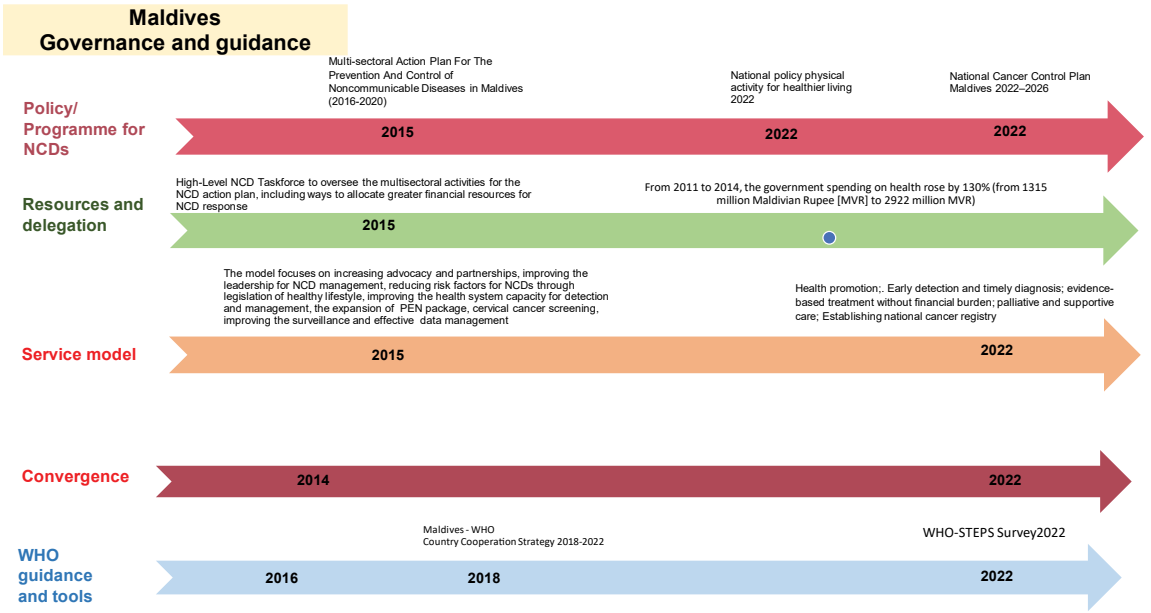
The MSAP 2016 identifies community-based organisations as a stakeholder in preventing non-communicable diseases. They are tasked with promoting NCD services and providing health education.

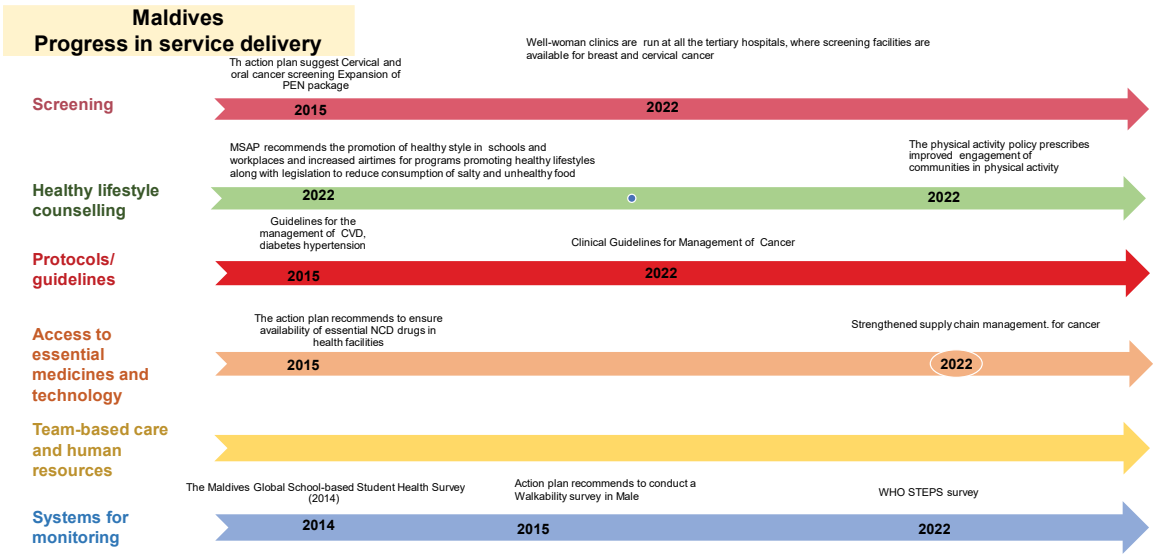
3.6.e. WHO guidance and role

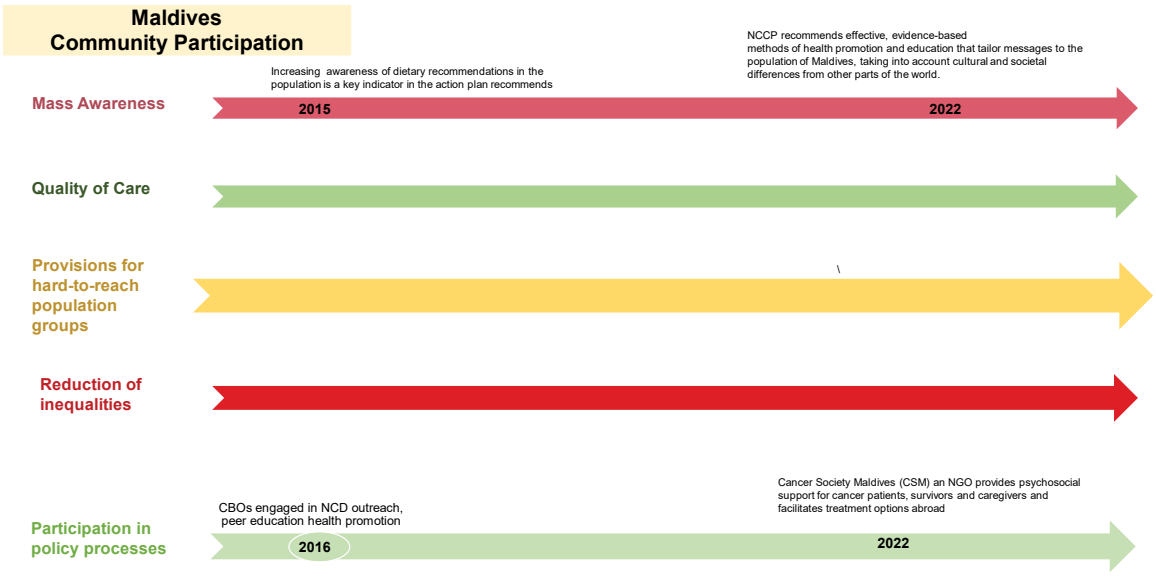
The Maldives' WHO country office has offered technical assistance to the government in creating the HMP 2016 and MSAP to prevent and control NCD 2016. The WHO PEN disease

interventions are currently piloted, and the country plans to expand them to the whole region. WHO also supports the conduct of STEP surveillance surveys for assessing NCD risk factors.

Noncommunicable Diseases (NCDs) in Primary Health Care- Maldives







3.7 Myanmar

3.7.a. Policies and programmes for noncommunicable diseases

The government of Myanmar has consistently focused on addressing non-communicable diseases (NCDs) since the early 2000s, as the burden of these diseases began to increase in the country. The Myanmar Tobacco Free Initiative was launched in 2000. Myanmar become a party to WHO Framework Convention on Tobacco Control (FCTC) in 2005 and signed the protocol to eliminate illicit trade in Tobacco products in January 2010.[74] Since then, Myanmar implemented several tobacco control policies and programs, including the Tobacco Control Law in 2006. The formulation of the National Health Plan 2011-2016 was an important step towards improving the health of the people of Myanmar and it set the stage for subsequent health plans and policies in the country after decades of isolation. In May 2013, the WHO developed the Global Action Plan for the Prevention and Control of NCDs, and Myanmar endorsed the Global Action Plan in 2013.[75] WHO CCS for Myanmar (2014-2018)[76] targets NCDs as one of the strategy priories aiming to strengthen the health system, Multisectoral support to expand national efforts for preventing and enhancing the achievement of NCDs targets and calls for cancer registry to be established. In early 2015, A dedicated NCD Unit was established under the Department of Public Health. Myanmar National Health Plan (2017-2021) recognizes NCDs as a major public health challenge in Myanmar and actions requires of a multi-sectoral approach with strategies to strengthen primary health care, promote healthy lifestyles, improve access to essential medicines, and strengthen health Information systems and partnerships.[77] To address this challenge, the government developed the Myanmar National Comprehensive Cancer Control Plan (2017-2021)[78] and Myanmar National Strategy Plan for Prevention and Control of NCDs (2017-2021) through a consultative process involving various stakeholders

including government agencies, civil society organizations and international partners.[79] It provides a framework for coordinated action across sectors and stakeholders to address the NCD burden in Myanmar. Furthermore, the government of Myanmar developed its first National Salt Reduction Strategy in 2018, with technical support from the WHO.[80] United Nations Development Assistance Framework (UNDAF) for Myanmar 2018-2022 further emphasize the importance of addressing NCDs as a key priority area for sustainable development in the country and outlines the comprehensive approach for UN agencies to support Myanmar in addressing this challenge.[81]

Convergence

The convergence for NCDs involves the coordination and integration of efforts across the health sector, as well as other sectors such as education, agriculture, finance, and urban planning, among others. The National Strategy Plan for Prevention and Control of NCDs (2017-2021) in Myanmar emphasizes the importance of a multi-sectoral approach to address the NCD burden in the country and drew on intersectoral collaboration to implement NCD prevention, detection, and treatment initiatives. A new economic policy was launched in 2016 to support a people-centred approach.

Sustainability

National Health Plan (2017-2021), National Strategic Plan for Prevention and Control of NCDs (2017-2021), Myanmar National Comprehensive Cancer Control Plan (2017-2021) emphasize their concern to ensure the long-term sustainability of NCD initiatives.

3.7.b. Governance and resources

WHO CCS for Myanmar (2014-2018) calls for strengthening the capacity of the health workforce to address NCDs, including training health providers in diagnosis and management. National Health Committee formed in 1989 and recognized in April 2011 takes the leadership role and gives guidance in implementing the health programs systematically and coordinates intersectoral collaboration as well as regional and local NCD coordinating committees. Overall, the prevention and control of NCDs in Myanmar require a multi-sectoral and coordinated approach, with the allocation of resources and delegation of responsibilities across various levels of the health system and other sectors. Myanmar National Strategy Plan for NCDs 2017-2021 calls for increased allocation of human and financial resources with the estimated budget for the implementation, the potential budget source from the World Bank, MoHS and WHO. Myanmar National Comprehensive Cancer Control Plan 2017-2021 cost in detail by year with allocations across primary prevention, detection, diagnosis and treatment, documentation, surveillance and radiation safety to the potential donors, MOHS, WHO and International Atomic Energy Agency (IAEA). Furthermore, UNDAF identifies a general budget for health-related priorities, including addressing NCDs in Myanmar. However, no specific dedicated budget for NCDs is mentioned.

3.7.c. Service delivery

The WHO CCS for Myanmar (2014-2018) aimed to improve the prevention and control of NCDs in the country through a comprehensive approach that involved strengthening the health system's capacity to provide essential NCDs services, promoting healthy lifestyles and behaviour and improving policy development and advocacy for the prevention and control of NCDs. Integrated guideline for the management of hypertension and diabetes with specific medicines indicated (2014) was launched. Also, National Strategy Plan for NCDs (2017-2021) is based on a compressive and multi-sectorial approach. Prioritizing the strengthening of the capacity of primary health care providers to deliver essential NCD services including screening, diagnosis, treatment, and follow-up care. It also called for the integration of NCDs services into routine primary health care with a focus on providing patient-centred and community-based care.

Screening

National Cancer Control Programme includes the goal to increase the percentage of women aged 30-49 years who had ever had a screening test for cervical cancer. National Strategy Plan for Prevention and Control of NCDs (2017-2021) also proposed to draft national guidelines of screening for selected NCDs and conditions. However, opportunistic screening is an effective approach for identifying individuals with hypertension because it leverages existing healthcare services and does not require significant additional resources or infrastructure where access to health care services is limited and where there is a shortage of healthcare providers.

Protocols and guidelines

Integrated guidelines for the management of hypertension and diabetes 2014 indicated the process of selection criteria with specific medicines. National Strategy Plan for Prevention and Control of NCDs (2017-2021) provides a framework for the prevention and control of NCDs in Myanmar. It outlines key priority areas for action, including the strengthening of primary health care services, the promotion of healthy lifestyles, the integration of NCD services into other health programs, and the coordination of multi-sectoral efforts.

Access to essential medicines and technologies

National Strategy Plan for Prevention and Control of NCDs (2017-2021) called for the need to advocate and establish a technical working group for NCDs. Myanmar National Comprehensive Cancer Control Plan (2017-2021) aimed to ensure the availability of the required essential drugs (e.g., Oral Morphine, Codeine, Tramadol, Fentanyl Patch) to improve the quality of life of cancer patients. However, there are no specific policies or procedures to address access to essential medicines and technologies related to NCDs.

Team-based care and human resources

WHO CCS for Myanmar 2014-2018 calls for strengthening the capacity of the health workforce to address NCDs, including training health providers in diagnosis and management. National Strategy Plan for Prevention and Control of NCDs (2017-2021) further highlight the importance to strengthen the capacity and workforce to deliver NCD services. It also called to revise the competencies for all levels of the health workforce based on their roles and responsibilities. Myanmar National Comprehensive Cancer Control Plan (2017-2021) mentioned the required human resource for the establishment of Palliative care clinics in tertiary hospitals to improve the quality of life for cancer patients. However, there is no clear justification for the roles and responsibilities specific to NCDs.

Systems for monitoring

National Strategic Plan for Prevention and Control of NCDs (2017-2021) aimed to incorporate the data needs of NCD programs into existing health management information system and develop a web-based system for reporting and compiling all facilities and called for strengthening of monitoring and evaluation efforts by improving a newly established national cancer registry.

3.7.d. Community participation

Reduction of inequalities

Myanmar's National Health Plan (2017-2021) includes strategies to reduce health inequalities, including those related to NCDs. The plan prioritizes improving health services in rural and remote areas, strengthening primary healthcare systems, and increasing access to essential medicines. Further, UNDAF for Myanmar acknowledges the need to expand coverage of health services, including for NCDs, to the most disadvantaged populations.

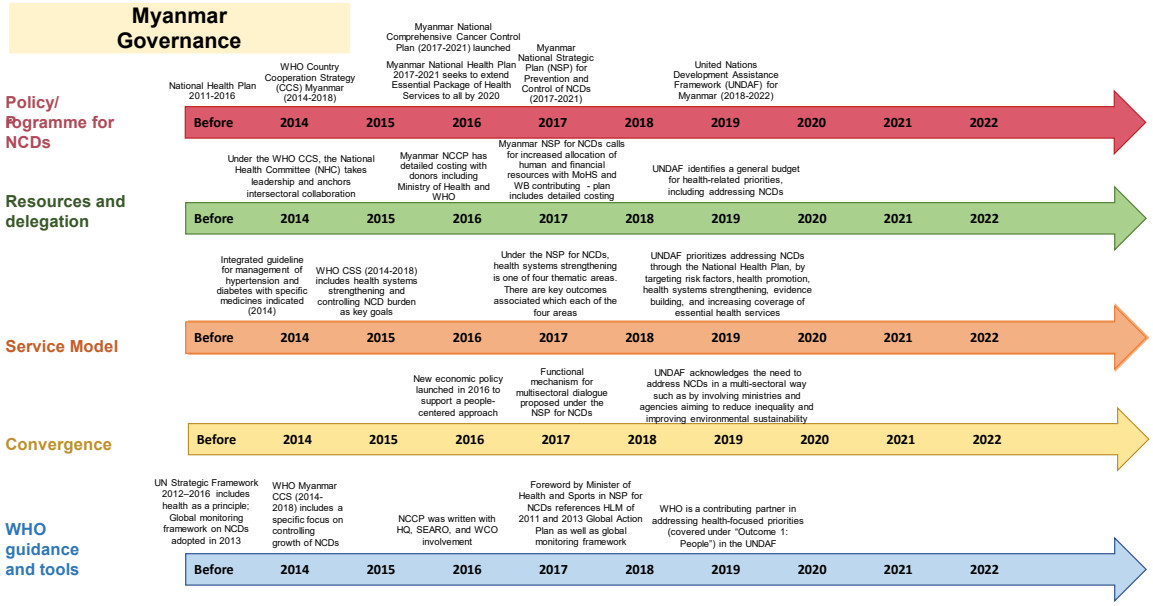
Mass awareness

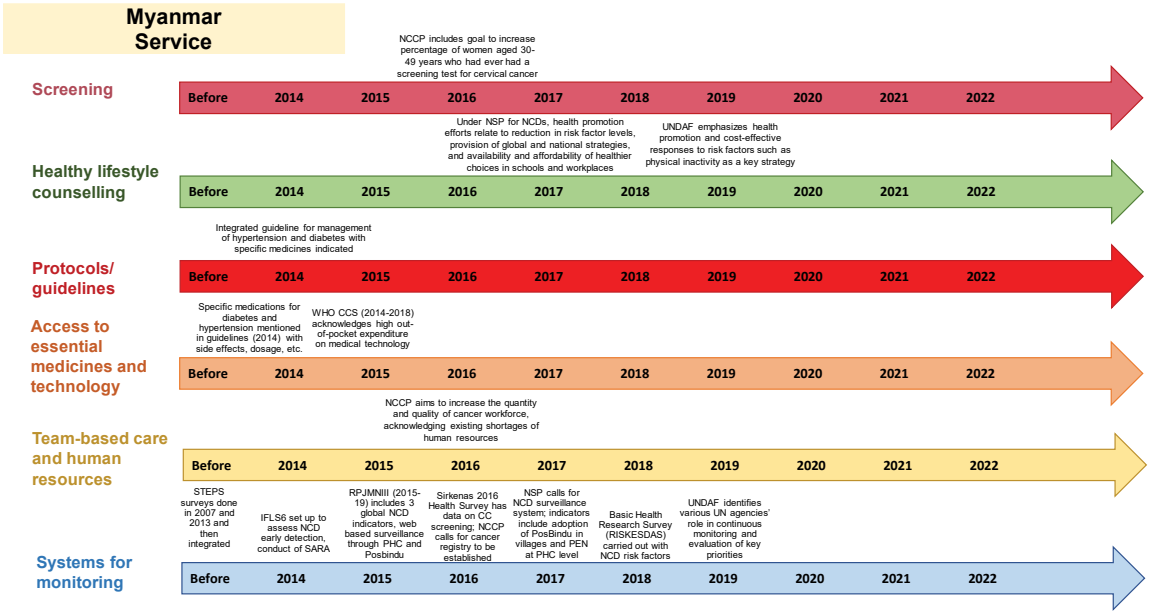
Although WHO Country Cooperation for Myanmar (2014-2018), United Nations Development Assistance Framework Myanmar (2014-2018) and National Health Plan (2017-2021) calls for the need to run education campaigns, only National Strategic Plan for Prevention and Control of NCDs (2017-2021), Myanmar National Comprehensive Cancer Control Plan (2017-2021) provide their aims and plan to run education campaigns in collaboration with media to enhance information access about healthy lifestyle behaviours, health services, and promote

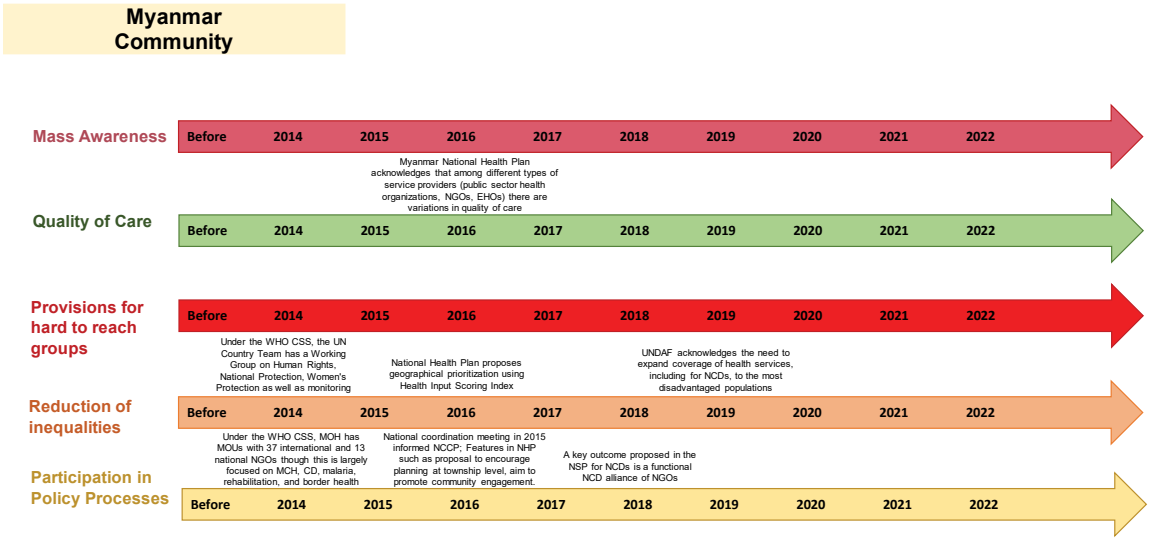
3.7.e. WHO guidance and role

The WHO provides support for implementing NCD-focused programs and initiatives through the WHO Country Cooperation Strategy (2014-2018), as well as input and support in the development of initiatives such as the Myanmar National Comprehensive Cancer Control Plan 2017-2021 and Myanmar National Strategy Plan for Prevention and Control of NCDs (2017-2021). WHO Myanmar CCS (2014-2018) includes a specific focus on controlling the growth of NCDs and outlines a set of priority interventions and strategies that can be adapted to the local context in Myanmar. WHO Package of Essential Noncommunicable Disease (PEN) Interventions for Primary Health Care in Low-Resource Settings provides a comprehensive set of evidence-based interventions for the prevention and management of NCDs at the primary health care level, including screening, diagnosis, treatment, and follow-up care for hypertension, diabetes, and other NCDs. Global Monitoring Framework on NCDs (2015) is also another important key guideline for Myanmar. WHO's Stepwise approach provides a standardized method for collecting and analysing data on the major risk factors for NCDs, such as tobacco use, unhealthy diets, physical inactivity, and hypertension.

Noncommunicable Diseases (NCDs) in Primary Health Care- Myanmar







3.8 Nepal

3.8.a. Policies and programmes for noncommunicable diseases

The policy framework for addressing non-communicable diseases (NCDs) at the primary care level was established before 2014, emphasizing the integration of the WHO PEN package in Village Development Committees (VDCs) and Primary Health Centres (PHCs) in line with the SE Asia Region Action Plan (2014-2020).[82]

Reviewing and expanding the role of community health volunteers (CHV) to NCD education is another strategy outlined in the 2014 action plan. Furthermore, the plan lays down creating health counselor positions and counselling units in the middle tier health care level, while at the primary care level, it outlines the development of incentive level and pay package based on the qualification and specialty for PHC workers.

In 2016, the Ministry of Health launched the WHO PEN program in two districts. Efforts were made to enhance the program's effectiveness by training national trainers in 2016 and early 2017, with the support of the Ministry of Health and Population and WHO.

The 2017 Nepal Health Sector Strategy Plan expanded the role of primary healthcare in NCD prevention and control, introducing referral protocols between primary, secondary, and tertiary care. The PEN program was extended to 51 districts by 2021, with the goal of covering all 77 districts by 2022.[83] Additionally, gestational diabetes screening and cervical cancer screening and treatment were integrated into the program.

While community health volunteers initially played a significant role in health promotion as per the 2014 national action plan, the 2017 strategic plan shifted its focus towards capacity building and empowering doctors in primary health centres. Recently, the Multisectoral Action Plan for NCD prevention and control (2021-2025) has been launched.[84]

Regarding cervical cancer, although there is no national program, in 2010, the Ministry of Health and Population issued guidelines for Cervical Cancer Screening and Prevention (CCSP) with the aim of screening at least 70% of women aged 30-60 years by 2017.[85]

3.8.b. Governance and resources

The action plan laid down a governance structure by ensuring that a National Steering Committee provide planning and monitoring, while Regional and District NCD Prevention and Control Committees coordinated the implementation. Increased funding for NCDs was supported through tax funds from tobacco and alcohol.

3.8.c. Service delivery

NCD Management in primary health care

Primary healthcare system was prioritized for NCDs in Nepal, with a pilot implementation of the WHO PEN package in select areas and with the goal to scale it up to cover all VDCs and PHCs in all the districts. A three-tier referral system was established for NCD management, and the strategy aimed to expand coverage to 77 districts over five years. Capacity building at the central and provincial levels has resulted in a trained workforce in the primary health centres and health posts capable of providing promotive, preventive and curative services for NCD. In 2015, the federal structure propounded in the new Constitution of Nepal further revitalized the

primary health care which was reiterated in the Nepal Health Sector Strategy Implementation Plan of 2017. The plan expanded the coverage of unreached urban populations and increased the NCD service package. It extended screening camps in hard to reach areas and strengthened the development and implementation of referral guides for primary, middle and tertiary levels.

People centred care

In 2021, the Ministry of Health and Population adopted the Nepal Integrated NCD Care (NINCM) Project to improve people centred NCD services in eight districts in seven provinces.[86] The project covers a total 1.7 million population and builds on the current PEN and mental health interventions to focus on strengthening a continuum of care at the primary care level with linkages to higher facilities or hospitals. Keeping the patient at the centre of a comprehensive care service delivery system that includes early detection and management, and long-term care for common NCDs is the focus of the project. The priorities at the primary health care will include hypertension, diabetes, chronic respiratory diseases, basic palliative care and stroke referral and care pathway. Early diagnosis and referral pathways for cervical cancer, oral cancer, and breast cancer is sought to be improved.

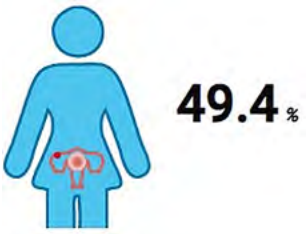
Screening

The action plan specifies the expansion of screening program for cervical cancer, breast cancer, and oral cancer. It also aims to integrate and expand screening program for gestational diabetes fasting and post prandial blood sugar at 24 weeks and 28 weeks of pregnancy in the reproductive health care service standards. At the population level, STEPS data indicate that 55.9% respondents aged 15-69 reported having their blood pressure measured by a medical provider at some point of time among all respondents in 2019, which has slightly reduced from 57.3% in 2013.[87]

Protocols and guidelines

Development of screening protocols for breast cancer, development of oral cancer screening programmes in the community, and integration of mental health and NCD screening in the infectious disease screening programme for Nepali migrants are other key milestones laid down in the action plan. These interventions are much needed as in 2019, STEPS data suggest that only 5.4% of women aged 15-69 had ever been tested for cervical cancer (about a fifth of whom said this was part of routine examination, while another 49% said they experienced symptoms) (Fig. 17).

Fig. 17. Proportion of those screened for cervical cancer who got tested after experiencing symptoms, Nepal (2019)



Source: Regional NCD Dashboard (STEPS 2019)

The introduction of protocols and tools for the management of NCD has standardized the treatment for hypertension and diabetes at the primary health care level.

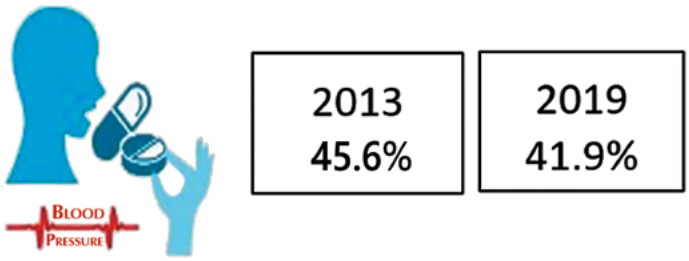
Healthy lifestyle counselling

At present, health counselling is not offered at the primary care level; lifestyle health counselors and counseling units are slated for district hospitals, regional and zonal hospitals. The Health Sector Strategy of 2017 also prioritizes the development of lifestyle counselling curriculum.[88]

Access to essential medicines and technology

The implementation of the PEN package has led to the improvement of the availability of essential medicines and basic diagnostics in primary health facilities. Provision of essential drugs for CVD, COPD, diabetes, and cancer is ensured free of cost at all levels of health care and procurement of supplies for urine testing for glucose and glucometer for testing blood sugar is ensured at all health posts. This is starkly manifested in STEPS data rounds which suggest that from 0% in 2013, 41.9% of those with raised blood pressure had taken medication (Fig. 18). The case of those taking medication to control blood glucose similarly rose from 0% in 2013 to 70% of those with raised blood glucose in 2019.[87]

Fig. 18. Proportion of those with Raised Blood Pressure taking Medication, Nepal (2013, 2019)



Source: Regional NCD Dashboard (STEPS 2013,2019)

The price of essential drugs is proposed to be regulated through pricing regulatory mechanism.

Systems for monitoring

A results-based action framework forms the core of NCD operationalization in Nepal, and hence certain steps have been taken toward this. The five yearly STEPS survey is aimed at assessing the progress of the NCD action plan. Data and information on NCD are proposed to be integrated in the HMIS. The 2015 strategy highlights the development of reporting tools for NCD and incorporating urban health reporting format to HMIS. It also lays down the critical role of data management training to all healthcare staff.

3.8.d. Community participation

Mass awareness

The 2014 action plan outlines the structured media campaign strategy based on dose, medium, and timing of NCD messages. The plan aims to mobilize women's groups, female community health volunteers (FCHV), celebrities and community people for awareness campaigns. Additionally, the plan envisages creation of health information and education campaigns among consumer forums, ward citizens forums, patient groups, schools, and the creation of citizen awareness centers.

Community participation in policymaking

Community participation is envisioned through mobilizing women's groups, consumer forums, ward citizen forums and citizen awareness centres for awareness campaigns, however, it is unclear how this is going to be achieved.

3.8.e. Good practice

One good practice is the integration of mental health services with non-communicable disease (NCD) management, recognizing the strong and complex link between the two. The Mental Health Survey of Nepal (2020) estimated that 10% of the disease burden is due to mental health issues. Nepal's primary healthcare revitalization program created an opportunity to integrate mental health into NCD management by adopting a people-centered approach at the provincial and local levels, utilizing the mental health gap assessment (mhGAP) guide. The WHO's mental health gap operational guide (2021) was developed to enable non-specialists to conduct standardized clinical interviews, examinations, and interventions, with a focus on patient-centered care and patient rights, including privacy and confidentiality.

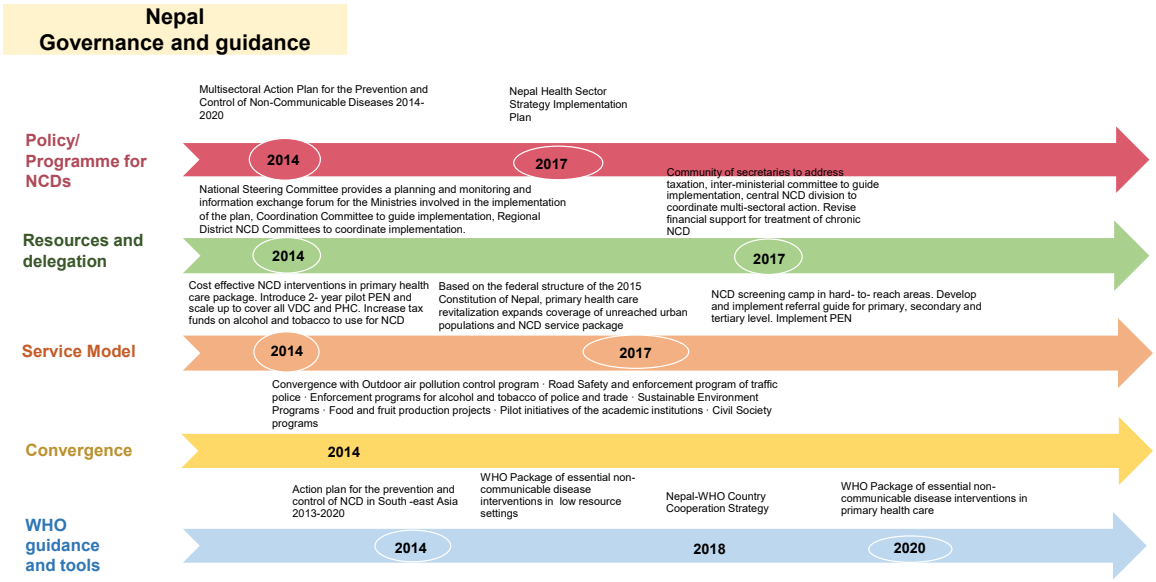
Efforts to integrate mental health into NCD program management have been carried out by the NORAD-WHO Project[86] in eight districts and the Special Initiative for Mental Health (SIMH) in 14 districts. These projects aim to enhance essential NCD services through the Nepal Integrated NCD Care Model (NINCM), incorporating mhGAP into the existing Package of Essential Noncommunicable (PEN) initiatives to provide comprehensive early detection, management, and long-term care. They also focus on integrating mental health and NCD competencies in medical college and university pre-service training, in-service training, and clinical mentoring for primary health care workers by psychiatrists. These efforts have resulted in a well-defined service package with medication availability.

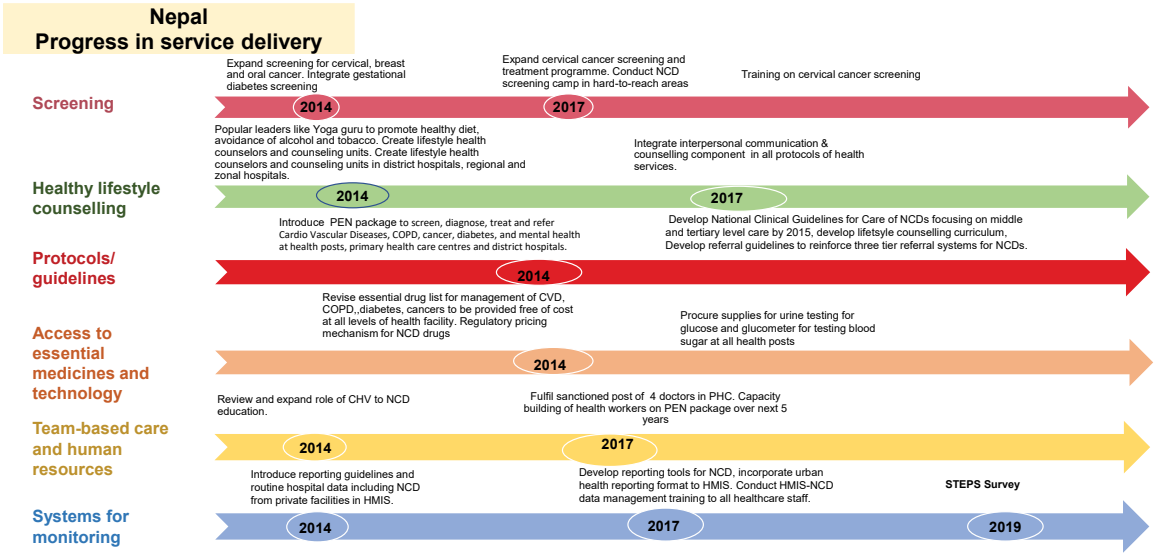
The government's ownership and partnership with medical and health institutions have further strengthened NCD and mental health service delivery. This program's success is evident in the convergence of program management between NCD and mental health within the federal government structure, as well as collaborations for competency-based training integration.

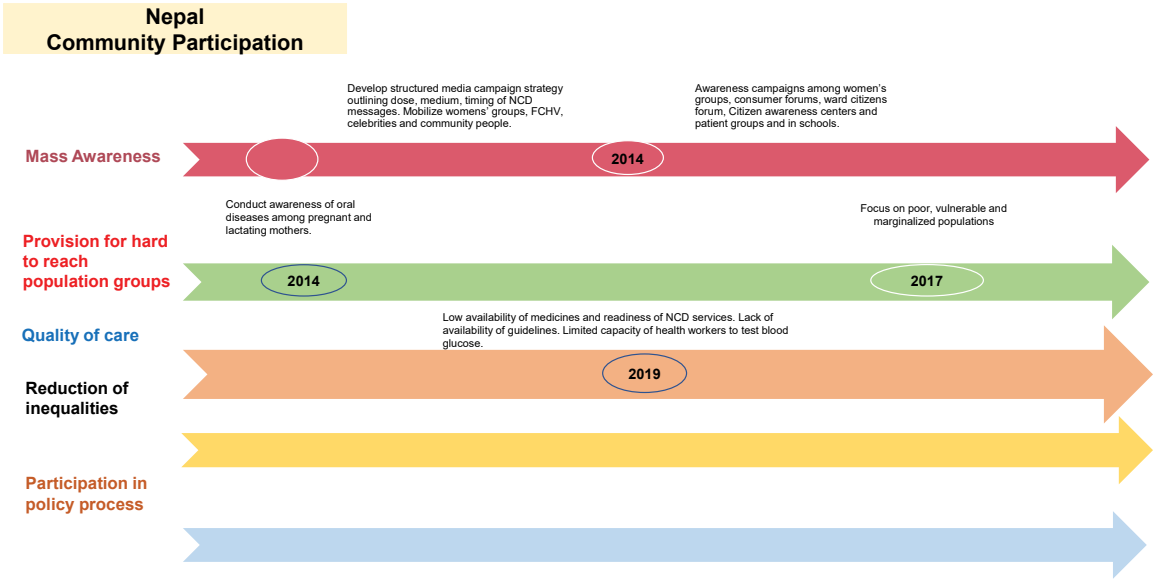
3.8.f. WHO guidance and role

Nepal's policy on NCD is influenced by the Global Strategy for the Prevention and Control of Non-Communicable Diseases (2000), WHO Framework Convention on Tobacco Control (2003), Global Strategy on Diet, Physical Activity and Health (2004), and more recently, the Global action plan, including indicators and voluntary targets, through resolution WHA 66.10, and the Action Plan for the prevention and control of NCDs in South-east Asia, 2013-2020. WHO country office supported the development of the multi-sectoral action plan and provided technical assistance in drafting the action framework. The WHO Package of Essential NCD Interventions (PEN) for Primary Health Care was adopted by the Ministry of Health in its health care delivery system. The WHO Country Cooperation Strategy of 2018 outlined a multisectoral approach to mobilize additional resources from UN funds, programmes, and specialized agencies to achieve reduction and control of NCDs. It also underlined its role in providing technical support to NCD governance capacity and the use of social media to promote healthy lifestyle behaviors.

Noncommunicable Diseases (NCDs) in Primary Health Care- Nepal







3.9 Sri Lanka

3.9.a. Policies and programmes for noncommunicable diseases

Sri Lanka was an early policy actor on cancer in the region, launching the National Policy & Strategic Framework on Cancer Prevention & Control (2014)[89] to decentralize cancer control services. To achieve this goal, the provincial ministries of health with district cancer control

committees were made accountable to implement cancer services in the provinces and districts. The policy focus on primary health care continued with the launch of the National Multi-sectoral Action Plan in 2016 which proposed integrating NCD management in the primary health care (PHC) along with plans for engaging different ministries for promotion of healthy lifestyle.[90] This was also reflected in the country's Health Master Plan (2016-2025). In 2018, the WHO Country Cooperation Strategy built on the ongoing reorganization of PHC by underlining the need for a responsive, people centred PHC model with referral linkages to higher levels of care.[91] Cancer diagnosis and screening transitioned from the district level of healthcare to primary health care units (PHCU) with the launch of the 2020 National Strategic Plan on Prevention and Control of Cancer in Sri Lanka.[92] The plan bolstered the referral system for cervical cancer by mapping colposcopy clinics and histopathology labs to link with each other.

3.9.b. Governance and resources

A state level NCD unit and provincial and district level multi sectoral committees were governance structures established to monitor implementation of the NCD programme, aligned with the structured referral structure already existing in the country (Fig. 19). Funds for the NCD action plan are sourced from The Government of Sri Lanka (GOSL) funds which includes the loan provided by the World Bank for health system improvement from 2013-2018 and a proposed loan from Japan International Cooperation Agency (JICA) for improving tertiary care. Three-fourth of the funds were allocated for health system strengthening for early detection and management of NCDs.

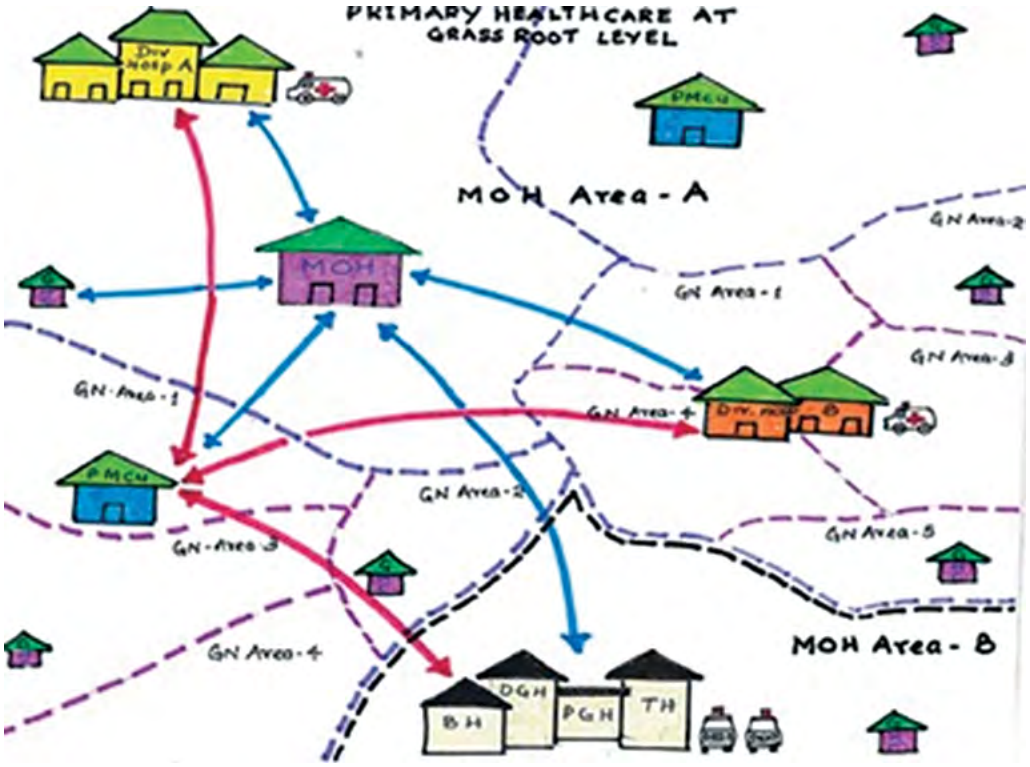
In the present period, there is scope for investment from multilateral financial institutions as part of the country's economic recovery package.

3.9.c. Service delivery

NCD management in primary health care

Integration of NCD management at primary care levels through Healthy Lifestyle Centres (HLCs) had been introduced at the outset of the period examined, early evaluations found some gaps in terms of inclusion of all NCDs, protocol adherence and human resource shortages, which the subsequent National Multisectoral Action Plan sought to address.[93] 'Well Woman Clinics' were another modality at the primary care level, proposed in this period. Cancer policies have well defined comprehensive cancer screening services, while readiness was influenced by features of the centres themselves. Screening for cervical cancer at the primary health care took centre stage in the latest cancer policy guideline by expanding Well Women Clinic Services for cervical cancer screening and piloting of HPV vaccination.

Fig. 19. Design of primary health care services with structured referral



Source: Sri Lanka Ministry of Health, 2017

Protocols and guidelines

The policy documents emphasized the role of lifestyle counselling and accordingly training health providers. Clinical guidelines on the control and management of cancer, cardiovascular disease, diabetes, and chronic respiratory disease were launched in 2016 which furthered a patient centered cancer care protocol for a multi-disciplinary team using evidence-based cost-effective treatment pathways. Diabetes guidelines strengthened the role of PHC health providers, while inclusion of palliative care, survivorship and cancer rehabilitation were welcome steps in the cancer care guidelines.

Access to essential medicines and technology

Sri Lanka's commitment to ensuring access to essential medicines for cancer and other NCDs was evident in its policies and dates back to reforms introduced in 2011, including 16 essential drugs being declared with allocated funding and a priority drug circular.[91] The country aimed to provide necessary drugs and equipment according to the essential drug list at all levels of care. The country aimed to provide necessary drugs and equipment according to the essential drug list at all levels of care. Regular updates of the drug list and annual procurement estimates were included in the plan to strengthen the availability of essential medicines. As early as 2015, the STEPS survey found that 57.7% coverage of those with raised blood pressure were on treatment (Fig. 20). Diabetes medicine coverage was higher still, at 69.5% of those with elevated

blood sugar. Sex differences in medicine coverage were seen in Sri Lanka with hypertension medication coverage being greater among men, while diabetes medication coverage was greater among women in the period assessed. Meanwhile, this same survey found that 15.2% of women aged 18 to 69 years had ever undergone cervical cancer screening.[94]

Fig. 7. Proportion of those with raised blood pressure and raised blood sugar on treatment

Source: Regional NCD Dashboard (STEPS, 2015)

Standard treatment workflows

Establishment of strong referral systems from the primary health care level to tertiary treatment centers is proposed in the action plan of 2016 as well as the National Strategic Plan on management of cancer of 2020. While identifying, training and capacity building of primary care providers was stressed, the WHO CCS emphasized the need for retooling and reskilling of frontline healthcare functionaries. However, an evaluation of the national strategic plan on NCD (2010-2020) conducted by the Ministry of Health, Sri Lanka, found securing available and trained primary health care workers to be a major challenge in implementation.[95]

Systems for monitoring

A monitoring framework was laid down in the action plan of 2016 in four strategic areas, each of has outcome indicators outlined with corresponding indicators and activities, responsible entities to implement the activities and the time frame to accomplish the activities. In the area of monitoring and evaluation, the action plan envisaged setting up a national surveillance and monitoring framework for NCD prevention and control, to initiate a web-based data collection on morbidity, and to develop an IT system for OPD data as a pilot project. It also proposed conducting the STEPS survey every 4-5 years.

3.9.d. Community participation

Mass awareness

Mass media campaigns were proposed to create awareness and encourage the public to utilize screening services. In addition, specific guidelines were introduced to facilitate screening for diabetes targeting individuals above 35 years of age and those between 20 to 35 years with high-risk indicators.

Addressing inequalities/Leaving no one behind

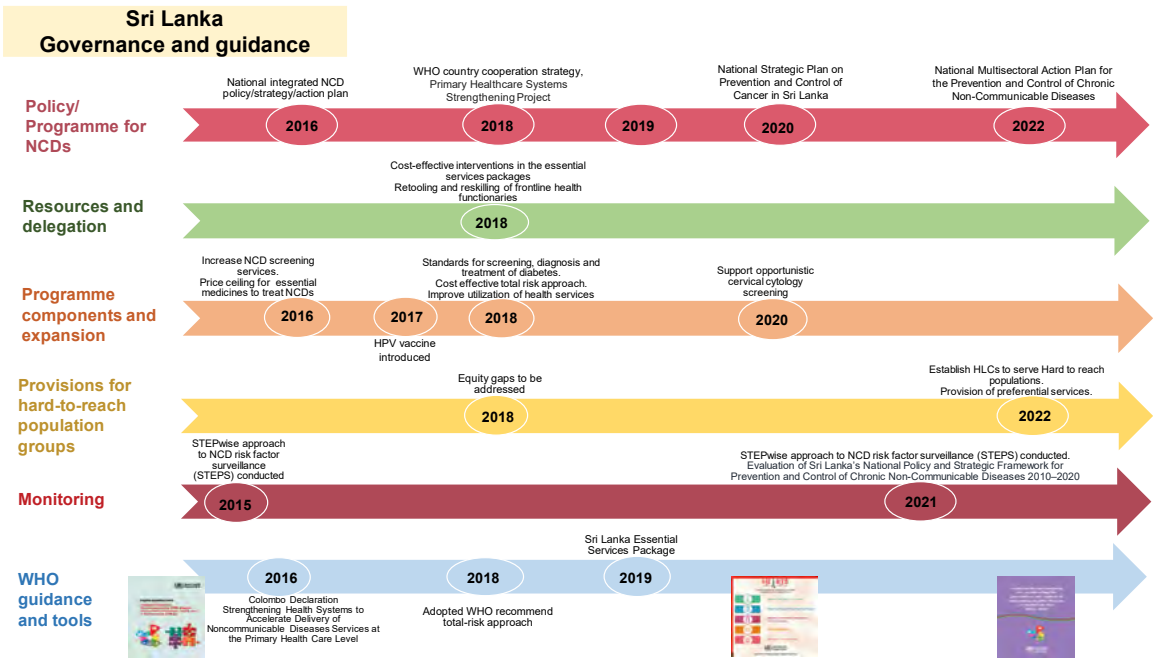
As regards equitable access, the action plan proposed establishing community groups to be engaged in NCD activities and to build capacity in patient groups. Clinical oncology outreach clinics were established to increase accessibility for vulnerable populations. Additionally, developing cancer management plans based on the literacy level of patient is an important direction to achieve equity goals. However, the evaluation of the national programme on NCD highlighted the gaps in screening coverage of young and working people, mostly males.

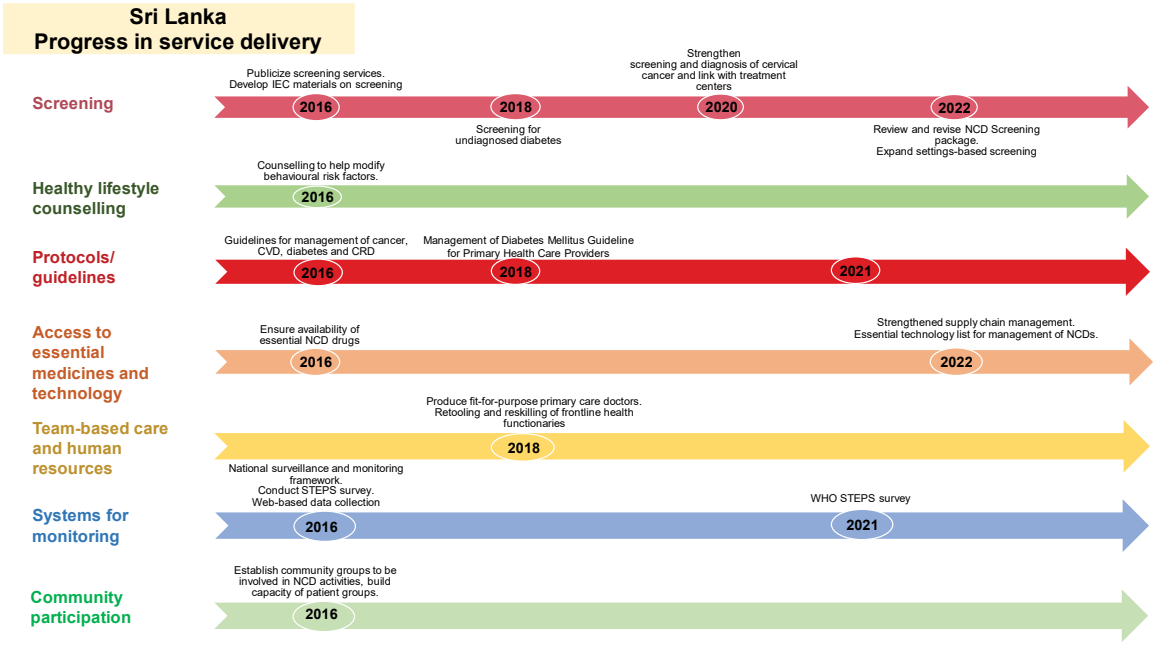
3.9.e. WHO guidance and role

In Sri Lanka, the Country Cooperation Strategy was developed in 2018, in which a key strategic priority was addressing the growing burden of NCDs. The economic crisis in 2022 has brought new challenges in terms of fiscal space, as well as new opportunities, in terms of advancing its shared care cluster approach. The role of WHO in providing technical support to NCD control program was acknowledged by health system actors during our interaction.

In 2019 a WHO evaluation of the Sri Lanka Essential Health Services Package revealed over-specialization. Disconnected laboratory services, fragmented data, and drug procurement systems. This has since helped drive the direction of current support being offered by WHO to the Ministry of Health, Traditional Medicine and Nutrition in the post economic crisis period. Current reform efforts spearheaded by WHO are aimed at data and evidence-driven strategies that continue to hold NCD service delivery at the heart of primary care upgradation.

Noncommunicable Diseases (NCDs) in Primary Health Care- Sri Lanka





3.10. Thailand

3.10.a. Policies and programmes for noncommunicable diseases

Thailand gained international recognition for its achievement in implementing UHC through its National Health Security Act of 2002; providing Universal health coverage to its citizens through Civil Servant Medical Benefit Scheme (CSMBS), the Social Health Insurance (SHI) and the Universal Coverage Scheme (UCS) providing outpatient and inpatient treatment coverage and positively impacts addressing the population's health care needs.[96] The Asia Pacific Observatory on Health Systems and Policies Review 2015 noted weaknesses in urban areas with specific reference to Chronic NCD care at the primary level, calling for improved infrastructure and proposing contracting-in approaches.[97] Soon after, the National Health Security Office (NHSO) requested that all contracted health providers register all NCD patients for better data management and support the formation of a disease registry for NCDs. The 5-Year National NCDs Prevention and Control Plan (2017-2021)[98] aimed to reduce the harm of NCDs through collaborative efforts at all levels and improve public health and economic development by 2021.

3.10.b. Governance and resources

In Thailand, the Ministry of Public Health (MoPH) oversees the development of national health policies and offers medical services, particularly in rural regions. Healthcare financing in Thailand is primarily funded by general tax revenue with household contributions lowering as

UCS coverage expands. The National NCD Prevention and control plan 2017 suggested that to reduce the risk of NCDs, the Ministry of Public Health should work with local administration, Thai health, businesses, and education-related agencies etc, to create a long-term prevention plan. The Health Promotion Department and Consumer Protection Section should coordinate in central and provincial zones. Businesses, workplaces, and educational institutions should have a systematic approach to managing NCDs and reducing risk. Policies and communication with the public should be improved, and resources should be invested in promoting the prevention and control of NCDs. Thailand has strong decentralised governance system with strong local governments who are key partners in advancing the NCD program in community level and the MoPH provides technical guidance to these governments to help them in health planning. A MoPH official noted:

> ***"We try to connect with the local administration, to give them knowledge, give them a connection, to make a plan, to collaborate with them....They will depend on us for knowledge only. They do not depend on us for financing, or governance.., we have only the knowledge that we can share with them and make them work closely with us because family healthcare is big part, is an important part for Thailand."***

3.10.c. Service delivery

NCD management in primary health care

Thailand started investing in health care from early 1977, starting with the fourth National Social and Economic Development Plan, focusing on primary care, district infrastructure, and referral hospitals. By 1990, district hospitals and sub-district level health centres were established, and the subsequent human resource policies promoted recruitment, training, and retention of staff in rural areas, which lead to a self-sufficient and skilled health workforce. A well-functioning primary healthcare system, backed by a strong workforce, has paved the way for Thailand to achieve universal health coverage. The district health system includes a district hospital with inpatient facilities and subdistrict health centres and serves a population of 30,000 to 50,000. District hospitals have 30 to 150 beds, each district hospital has physicians, nurses, pharmacists, dentists, and paramedics. Each hospital is connected to 8-12 Health centres covering 3,000 to 5,000 persons. The health centre team comprises 3-5 nurses, paramedics and 10 village health volunteers. A clear referral pathway is established, allowing for referrals and back referrals from health centers at the subdistrict district level to district and regional hospitals. The well-trained health work distributed across rural and urban areas, from community volunteers to specialist physicians, ensures continuity of care, although gaps in awareness of protocols have been noted. Hospital-based screening for all adult populations at risk for non-communicable diseases (NCDs) and cardiovascular disease (CVD) risk scores demonstrates the system's responsiveness in providing comprehensive and integrated care for NCDs.

Screening

Community-based screening for hypertension, diabetes and other NCD risk factors is covered under the essential health services package of UHC crucial for UHC. Nurses and health volunteers organize annual screenings for adults over 35 years who have not been diagnosed with hypertension or diabetes. Village Health Volunteers (VHV) mentored by health professionals perform initial screening of population in villages and record NCD risk factors. A medical officer in PHC summarized the role of VHV as

> *"The Village Health volunteers, first of all they work on fingerpicking for DM patients and they can interpret the results as well. Secondly, they do HT screening so for those who have a high risk of developing HT they would work on those patients. They would also conduct BMI screening, so they would measure around the waist to determine the BMI level as well. And they would also screen those who have been consuming alcohol and also those who are smoking and also screen those who usually have high sodium intake"*

Clinical practice guidelines and protocols exist for annual diabetes screening of persons aged 35 years and above, and retinopathy, kidney disease and foot lesions for those with diagnoses. Screening of hypertension and risk assessment for cardiovascular disease (CVD) is done for all adults visiting hospitals by licensed medical doctors, with treatment and follow-up care in accordance with Thai hypertension guidelines. The diagnosis and treatment initiation for NCDs is assigned to a physician in Thailand.

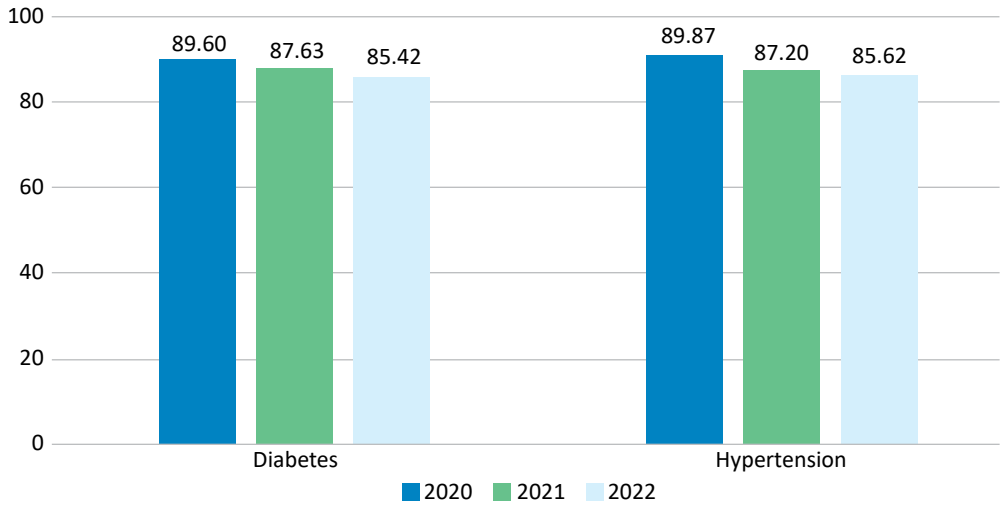
> *"Village Health Volunteers serve as our screeners and they would do some preliminary interpretation for us but in the end, it's the clinicians who diagnose and make decisions on patient care."*

A medical officer pointed about absence of interventions targeted towards at risk population in NCD care provision, the current system has laid out a robust path for patients who are diagnosed but little focus given to population at risk.

> *" So just get the screening done, but what happens once they are screened? ... So for example, they have high risk factors that could be a little obese. I mean overweight. So at-risk-people, basically, there's nothing... There's no such programs for people... just come back next year and be screened again so that has been a big gap for us. So, the program is all about screening, but then there's nothing left what we do with them until we diagnose. Once they're diagnosed, then they get good care".*

National health security schemes cover the cost of drug therapy and counselling provided at health facilities. The Thai national cervical cancer screening program provides pap smear screening for woman aged 35-60 years and Visual Inspection with Acetic acid (VIA) screening for woman aged 35-45 years. At a recent workshop on PHC, it has been reported that some coverage ground has been lost for both blood glucose and blood pressure screening, which needs to be caught up (Fig. 21).

Fig. 21. Proportion aged 35 and above screened for Diabetes Mellitus (DM) and Hypertension (HT) in Thailand (2020, 2021, 2022)



Source: Thailand Country Presentation, Workshop for implementing South-East Asia Regional NCD Roadmap, 2022-2030 Dhaka, Bangladesh (June 2023). Used with permission.

Healthy lifestyle counselling

The Thai government is dedicated to encouraging a healthy lifestyle for its citizens. They have launched the National Plan to Promote Physical Activity (2018-2030) and the five-year plan to prevent and control NCDs (2017) to achieve this goal. The Thai Health Promotion Foundation (Thai Health), a government agency established in 2001, supports civil society and promotes physical activity. Additionally, the Department of Public Works and Town and Country Planning strives to create safe and accessible public open spaces to help achieve SDG 11.7. The Bureau of Non-Communicable Diseases and the Office of Healthy Lifestyle Management are responsible for implementing the national strategic plan for preventing and controlling NCDs. The Diet and Physical Activity Clinic established by the department of Health offers physical activity counselling services. Since 2005, Thailand has organized national mass media campaigns to promote physical activity and combat obesity. These campaigns include, "Fatless belly Thais" (2011–2019) targeting the working age population," "Run for new life" (2012–2018) and "National step challenge (2020–2021)" Thailand National Sports development plan aimed to increase exercise and sports awareness and participation. With several plans and guidelines

in place, a medical officer mentioned a challenge faced by communities in adhering to the guidelines and lifestyle advice prescribed by the program.

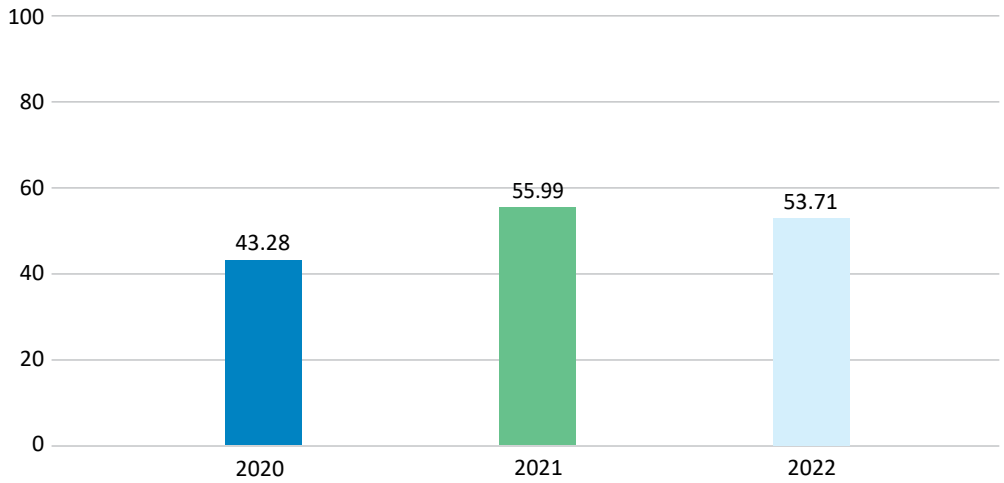
> *"We have differences, we have different contexts. Let's say people are living in poverty, they cannot afford this and that so they cannot just all of a sudden change their lifestyle"*

The solution suggested by the medical officer was to programs need to better understand the community and circumstances they live in and act as mentor and empower them to lead to behavioral change towards a healthy life. A localized solution relevent to the context would be more appropriate that centralized guidelines the MO added.

Access to essential medicines and technology

The Prevention and Control of Non-Communicable Diseases in Thailand: The Case for Investment report found that 80% of facilities in Thailand are equipped with essential medicines and technologies to treat NCDs.[99] The report also adds that at least half of the population eligible for drug therapy to attain glycaemic control and prevent CVD and stroke receives it. Recent data on this was presented suggesting that the peak of controlled hypertension was attained in 2021 with a minor decline in the past year (Fig. 22). Overall, however, over half of those on medication have controlled hypertension, which is an encouraging outcome.

Fig. 22. Proportion of those on medication with controlled hypertension



Source: Thailand Country Presentation, Workshop for implementing South-East Asia Regional NCD Roadmap, 2022-2030 Dhaka, Bangladesh (June 2023). Used with permission.

A PHC KI mentioned that Primary care unit in Thailand has access to diagnostic kits and basic medicines to manage NCDs and advanced care is available at provincial hospitals

"HT measurement machines and finger pricking supplies are available in every village. So each village would have some 300-400 population we have basic supplies. Some PCUs would have ultrasound machines to conduct preliminary cancer screening for liver cancer... Metformin and medcines like that are available at the PCU. Now the more complicated medication for instance the one at a higher price range would be available at the provincial-level hospital"

A Team based care and health human resources

Early investments in health care reform, including a strong public health system has served as a strong foundation to build the NCD program. Thailand's density of healthcare workers slightly surpasses the WHO's benchmark of 2.28 per 1000 persons benchmark for doctors, nurses, and midwives. A Medical officer mentioned the role of primary care act in providing team based care to people.

"Primary care act in Thailand is a mandate now... every single patient should have three health workers assigned to them.. one, is a village health volunteer, one is a public health nurse and one is a family physician leading that team".

The country is committed to providing comprehensive healthcare services to rural communities through various initiatives such as recruiting students from rural areas, integrating rural health issues into the curriculum, and mandating rural services for healthcare practitioners. National licensing exams and continuing education requirements are in place to maintain quality.

Systems for monitoring

The National Statistical Office conducts regular national household surveys, which are utilised to monitor the impact of health policies on households and estimate capitation fees for the Universal Coverage Scheme (UCS) support. To ensure a robust data capturing mechanism, identity cards, family folders, patient booklets, and referral forms are provided to people; digital health records are available to facilitate communication between healthcare workers and facilities, making it easier to manage patient information**.** In order to ensure quality and people centred NCD care, for hypertension care, the Thai health system has assigned a unique ID to each individual, maintains family health records at health centers, and provides patients with a booklet containing information on diagnosis and treatment. Thailand has a Health Data Centre that records and stores health information using a unique ID number in a standardised format called the "43 folders" system. The MoPH requires healthcare facilities to provide disaggregated and individualised raw data to the provincial level via the same system

for easy accessibility and organisation. Key Performance indicators are closely tracked across various levels, from national down to district and individual health facilities.[100] while the data of people who use the public system is available, the data of people using private facilities are not integrated to the government system and this become a challenge especially in Urban areas.

> *"We (MoPH) have just the data from the people using government health system. But yeah, in urban areas we have many private hospitals that do not incorporate the data into our system. There's just a big gap"*

3.10.d. Community participation

The NHSO has created various initiatives to encourage participation, including health insurance coordinating centers, patient groups, and community health funds. Civil society groups oversee implementation through the National and Regional Health Security Committees. The impact of these structures and processes remains to be assessed. NCD alliance a global collective that leads civil society movements for NCD is active in Thailand works closely with MoPH. A WHO official explained how patient associations play a role in the country and how the UHC act ensures that decision makers hear the community's voices.

> *"In Thailand, the patient with kidney disease, the diabetes patient, they get together and they form an association...they have a strong voice.... there is the decision for the health service under the universal health coverage act to establish committee, Representative of these organisations and NCD patients are also the member of the committee when making a decision about the service package.*

The National Health Commission Office (NHCO) coordinate and facilitate the work of the National Health Assembly in developing policy proposals to implementation, evaluation, and policy revision. National health assemblies serve as platform to hear community voice, and are organized in national, provincial and district level.The NCD guidelines developed by a MopH has strong component on patient empowerment and health workers try to make the care mor patient centric by empowering communities a MoPH official mentioned

> *"The guideline for the NCD clinic, one of the items is patient empowerment - to make the mechanism to support the management for patients.. we know that health issues are not just about the health sector. It belongs to the community as well. So we try to encourage people, try to enter a community to work together"*

3.10.e. Good practices

Thailand- Universal Health Coverage for NCDs101

Patients' rights to access essential medicines and treatment are protected by the Thai constitution. To this end, and in alignment with its target of UHC, Thailand strengthened the primary, secondary, and tertiary care of NCD including CVD, chronic kidney disease, cancer, and hypertension. The introduction of digital technology namely mobile app screening and telemedicine resulted in a high coverage of population screening for diabetes mellitus (DM) and hypertension (HT) and a favorable percentage of controlled HT. Simultaneously there was an introduction of medical dispensing at community pharmacy, mechanical thrombectomy and "cancer anywhere" policy that increased coverage in screening and treatment.

3.10.f. WHO guidance and role

WHO policies and action plans are key reference points for policy development around preventing and controlling NCDs in Thailand. Our interaction with key informants from MoPH revealed that technical support offered by WHO was useful in i) developing guidelines for NCD management by adapting the global guidelines ii)developing monitoring framework for measuring the health outcomes and iii) preparing regulatory frameworks controlling risk factors like tobacco usage and salt intake . An MoPH official added that the regular interactions with WHO officials and the technical documents produced by WHO were a useful resource to better the understand about the program.

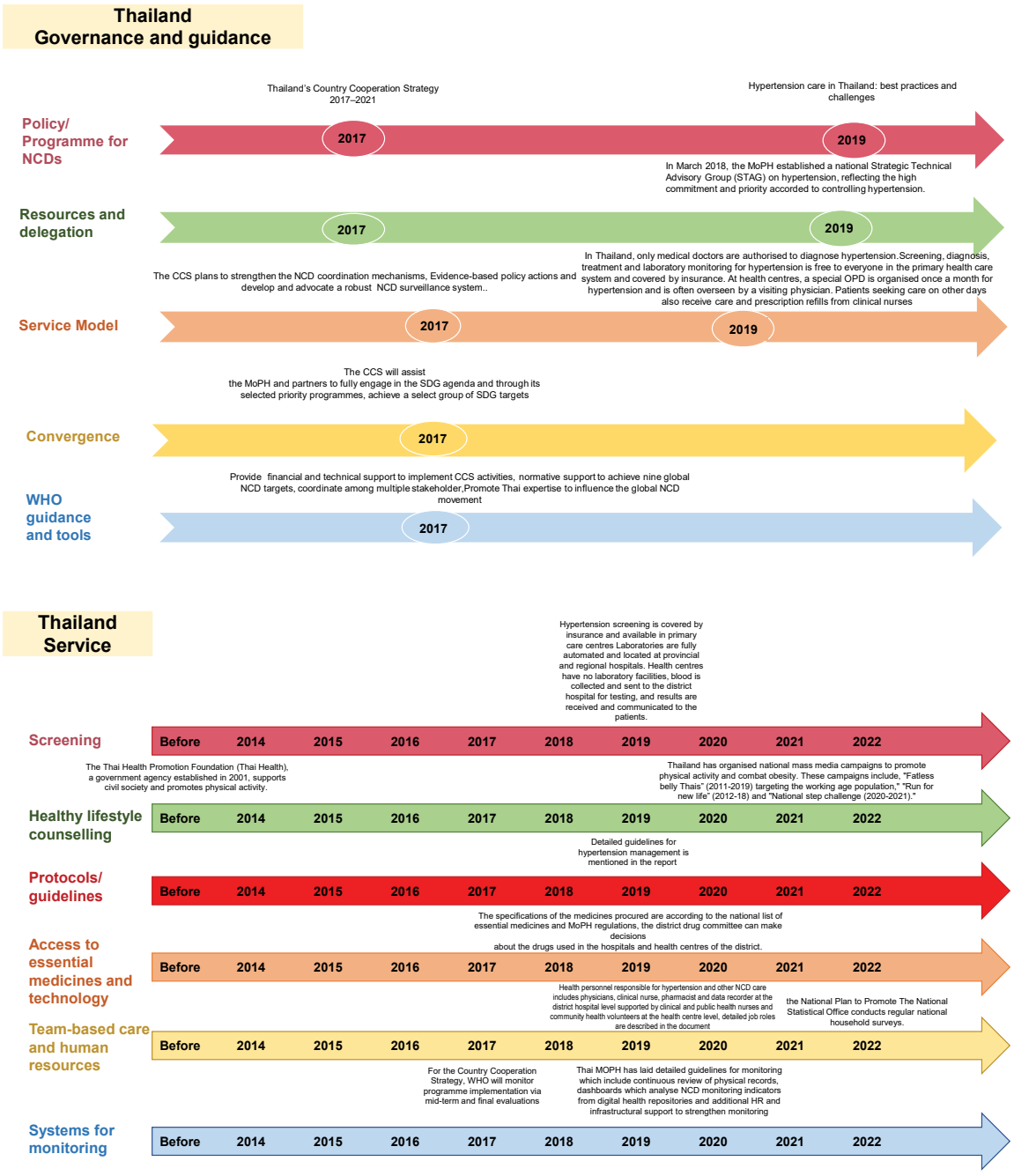
> ***"I contacted Dr. (Name masked) but I just talked to her about many, things that we tell each other. I think that was integral in helping the health system in Thailand. Honestly, I learned a lot from the document of the WHO when I became Director of this division"***

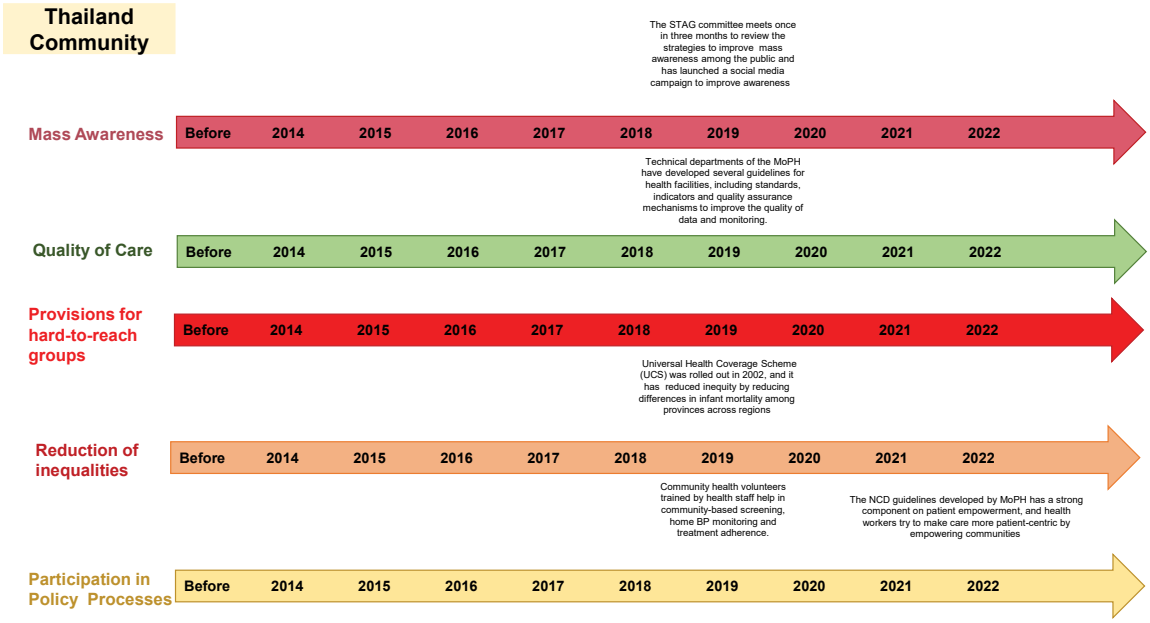
WHO provides indicators for monitoring, and as of 2020, Thailand has achieved 12 out of the 19 indicators for monitoring NCD disease progression.[102] WHO also conducts health system reviews to evaluate the NCD program and provide data to support policymaking.[102] Thailand also adopted WHO's Framework Convention on Tobacco Control and has implemented a comprehensive tobacco control policy.

WHO officials in country office spoke about the unique position of WHO Thailand office working in a country with high capacity with the government departments. The major focus areas are (i) Interacting with ministry and political leadership to keep the momentum going for NCD control especially with changing governments, (ii) facilitate local and global partnerships to support MoPH in improving the efficiency in health planning and (iii) support the leadership of Thailand in public health by focusing on highlighting the achievements country have made which is a learning experience for other countries in the region and across the globe

"We (WHO) are trying to look at the strategy in different directions, international cooperation, engaging champions, having our partners at the Ministry of Health, but also now we are trying to link the Bangkok Metropolitan Authority and the Ministry of Public Health together ..its actually one of our(WHO) six Country Cooperation Strategy areas promoting Thailand's leadership in the in public health, regionally and globally".

Noncommunicable Diseases (NCDs) in Primary Health Care- Thailand





3.11. Timor-Leste

3.11.a. Policies and programmes for noncommunicable diseases

In 2011, the Ministry of Health introduced the National Health Strategic Plan (2011-2030) focused on strengthening primary health care services in the country.[103] In 2015, the Ministry of Health introduced the National Strategy for Prevention and Control of Noncommunicable Diseases, Injuries, Disabilities and Care of the Elderly, and the NCD National Action Plan (2014-2018).[104] In the same year, the WHO Country Cooperation Strategy (2015-2019) also supported federal actions addressing NCDs through technical assistance.[105] Focusing on partnership, the Multisectoral Action Plan for the Prevention and Control of Noncommunicable Diseases (2018-2021) was introduced in 2018.[106] Finally in 2021, United Nations Sustainable Development Cooperation Framework (2021-2025) aim to support primary health care services and the reduction of NCDs.[107]

Convergence

The National Health Strategic Plan (2011-2030) recognized the need for inter-sectoral collaboration, including involvement of the public and private sectors, such as ministries, public institutions, developmental partners, civil society organizations and the community. The NCD National Action Plan (2014-2018) and the Multisectoral NCD Action Plan (2018-2021) for instituting a multisectoral working group as well. The WHO Country Cooperation Strategy (2015-2019) recognized the need to strengthen partnerships both with the Ministry of Health and other relevant ministries, such as social welfare, education, finance and environment.[105]

Finally, the United Nations Sustainable Development Cooperation Framework (2021-2025)[107] acknowledged that PHC strengthening would involve strengthening relationships with multisectoral partners, such as the Ministries of Health, Education and Tourism.

Sustainability

The National Health Strategic Plan (2011-2030)[108] aimed to ensure cost-effectiveness of the strategy while United Nations Sustainable Development Cooperation Framework (2021-2025) aimed to align the plan with the sustainable development goals.

3.11.b. Governance and resources

The Ministry of Health led both the National Health Strategic Plan (2011-2030), the National Strategy for Prevention and Control of Noncommunicable Diseases, Injuries, Disabilities and Care of the Elderly as well as the NCD National Action Plan (2014-2018), with clearly defined roles for management and responsibilities of various stakeholders within the plans. Although budgets were not specified, the NCD National Action Plan (2014-2018) called for an increased allocation of funds in the government regular budget for health, and specifically for NCD prevention and control through primary health care services. he Multisectoral NCD Action Plan (2018-2021) and United Nations Sustainable Development Cooperation Framework (2021-2025) also advocated for an increased budget for NCD control and prevention. The WHO Country Cooperation Strategy (2015-2019) was led by the WHO Country Office for Timor-Leste, involving partnerships with key stakeholders including the Ministry of Health, and non-health developmental partners. No specific budget for the strategy was outlined.

3.11.c. Service delivery

The National Health Strategic Plan (2011-2030) focused on the improvement and further development of primary healthcare services, investment in human capital and healthcare infrastructure and strengthening of health management and administration. The NCD National Action Plan (2014-2018) and the Multisectoral NCD Action Plan (2018-2021) had emphasized a multisectoral response, health promotion and primary prevention, early detection and management of NCDs, as well as surveillance. The WHO Country Cooperation Strategy (2015-2019) aimed to strengthen health systems capacity to reduce the burden of various communicable and noncommunicable diseases. The United Nations Sustainable Development Cooperation Framework (2021-2025) aimed to implement the PHC Essential Service Package across all levels of the primary health care system. Some key priorities included increasing skills and capacities of the health care workforce, improving health care facilities (e.g., hygiene and basic equipment) and improving quality of care based on best practice.

Screening

Under the NCD National Action Plan (2014-2018), health posts would conduct opportunistic screening for selected NCDs, such as hypertension and diabetes. Community health facilities (secondary care) also provided laboratory services and screening for common NCDs. Under the Multisectoral NCD Action Plan (2018-201), community- and family-based health promotion and screening programmes were scaled up, including follow-up and treatment for hypertension, common cancers, and diabetes mellitus.

Healthy lifestyle counselling

The NCD National Action Plan (2014-2018) and the Multisectoral NCD Action Plan (2018-2021) focused on health promotion on tobacco and alcohol use, healthy eating, physical activity and reduction of household pollution through strategies such as mass media use and legislation.

Protocols/Guidelines

No information on protocols and guidelines supporting the NCD policies and programmes was provided.

Access to essential medicine and technology

The National NCD Action Plan (2014-2018) aimed to universalize access to essential drugs and basic technologies, including essential medicines and technologies for NCDs in national essential medicine lists. It also aimed to improve efficiency in procurement, supply management of generic drugs and technologies. Both the WHO Country Cooperation Strategy (2015-2019) and the Multisectoral NCD Action Plan (2018-2021) acknowledged the need importance of access to medicine and technology to strengthen quality of care. The United Nations Sustainable Development Cooperation Framework (2021-2025) aimed to promote greater than 80% of health facilities having a core set of relevant essential medicines available and affordable on a sustainable basis.

Team-based care and human resources

Little information was provided on the roles and capacities of specific individuals (e.g., healthcare professionals) involved in the implementation of NCD policies and programmes.

Systems for monitoring

The NCD National Action Plan (2014-2018) aimed to establish a National NCD Monitoring Framework including monitoring indicators and conduct a Nationally representative NCDs Risk

Factor Survey to generate baseline data and repeat it every five years. A mid-term and final evaluations were set to be undertaken for the WHO Country Cooperation Strategy (2015-2019). Finally, strategic action areas for Multisectoral NCD Action Plan (2018-2021) include to identify an NCD focal point in the existing Department of Surveillance and train the person in NCD surveillance and conduct the WHO STEPS survey for risk factors.

3.11.d. Community participation

Mass awareness

The NCD National Action Plan (2014-2018) drew on mass media to engage in health promotion activities. The Multisectoral NCD Action Plan (2018-2021) further recognized the need to strengthen the capacity of the health promotion unit within the MoH and of other stakeholders by developing training modules and programmes for them.

Provision for access for hard-to-reach population groups

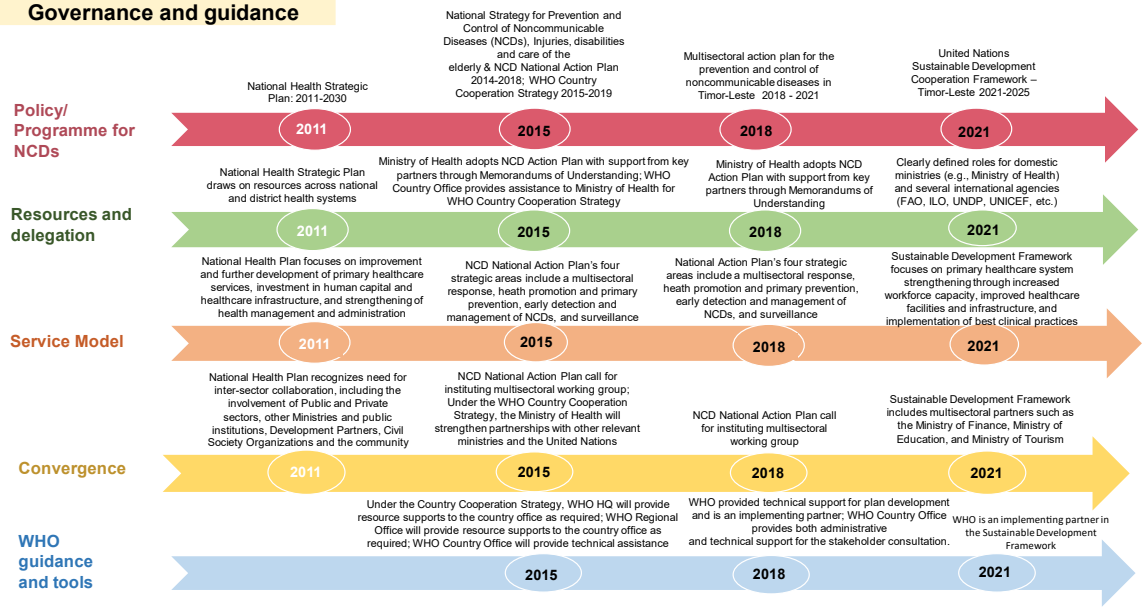
The National Health Strategic Plan (2011-2030) aimed to develop guidelines for mainstreaming gender issues in health sector planning, in line with the National Gender Policy. A core value of the plan also included equity (ensuring equal access to health services for all people with the same health conditions) and building a culturally sensitive health system. The NCD National Action Plan (2018-2018) also emphasized the value of equity by acknowledging that the government needs to ensure equal access to quality care according to needs of individuals with same medical conditions. The United Nations Sustainable Development Cooperation Framework (2021-2025) aimed to improve the quality of primary health care services and health coverage with a particular focus on the needs of the poor, less educated, rural communities, women and children, persons with disabilities, migrant and mobile populations and other marginalized groups, by drawing on best practices.

3.11.e. WHO guidance and tools

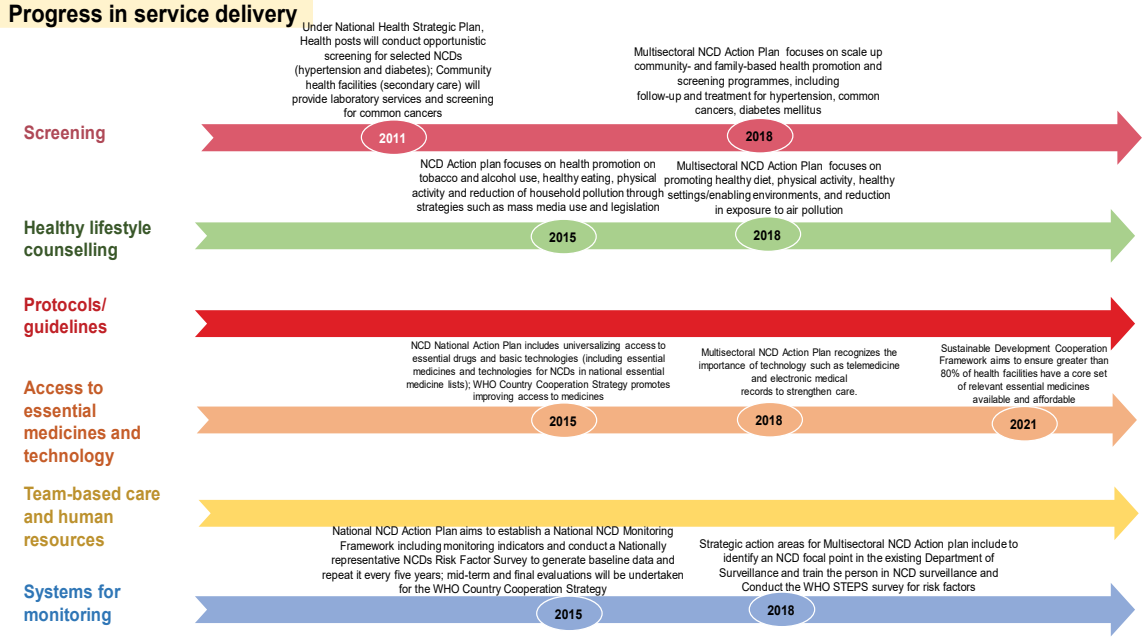
Under the WHO Country Cooperation Strategy (2015-2019), the WHO Country Office would provide technical assistance, and the regional office as well as WHO HQ would provide resources to support the country office as required. WHO also provided technical support for the development of the Multisectoral NCD Action Plan (2018-2021). Finally, WHO served as an implementing partner of the United Nations Sustainable Development Cooperation Framework (2021-2025).

Noncommunicable Diseases (NCDs) in Primary Health Care- Timor-Leste

Timor-Leste Governance and guidance



Timor-Leste Progress in service delivery



Timor-Leste
Community participation

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