NOT APPROVED

NATIONAL STRATEGIC ACTION PLAN FOR THE PREVENTION AND CONTROL OF NONCOMMUNICABLE DISEASESs (RAN PP-PTM) 2016-2019

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DIRECTORATE GENERAL OF DISEASE CONTROL AND ENVIRONMENTAL SANITATION
MINISTRY OF HEALTH OF THE REPUBLIC OF INDONESIA
2016

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FOREWORD

We praise Allah SWT – the Almighty – for His grace and blessing that have allowed this document on National Strategic Plan of Action for the Prevention and Control of NONCOMMUNICABLE DISEASESs (RAN PP-PTM) 2015-2019 to be completed.

The prevalence NONCOMMUNICABLE DISEASES (NCD) has risen sharply in parallel with society's changes in their lifestyles and habits. Unlike acute illnesses, NCDs are often recognized only after complications have occurred. Findings from the Basic Health Research (Riskesdas) 2013 showed that more than 70% of the population who suffer from hypertension and diabetes mellitus has went on undiagnosed. The phenomenon indicates that the burden placed upon the health system is actually much larger that what it currently appears to be.

RAN PP-PTM 2015-2019 is an elaboration of the National Medium Term Development Plan 2015-2019 for the Health Sector, and the Strategic Plan of the Ministry of Health 2015-2019, taking as reference the Global NCD Action Plan and the South East Asia Regional Action Plan on NCDs. As such, RAN PP-PTM 2015-2019 is expected to serve as reference for the Ministry of Health and other ministries/institutions and the sub-national governments in designing activities related to NCD prevention and management.

This planning document has received feedback from many stakeholders including government ministries/agencies, professional bodies, academicians, and health development partners, and the financial support from WHO Indonesia. We express our sincerest gratitude and highest appreciation to all parties who have contributed to the preparation of this document. It is hoped that RAN PP-PTM can be made as reference in efforts to reduce NONCOMMUNICABLE DISEASESs, particularly with regard to the major risk factors, namely consumption of tobacco products, unhealthy diet, lack of physical exercise and harmful consumption of alcohol.

It is my hope that the document can also promote a more effective **planning, implementation and evaluatio**n of programs for the prevention and control of NONCOMMUNICABLE DISEASES at the national and sub-national levels in the effort to reduce the rate of morbidity and mortality and alleviate the economic burden arising from NONCOMMUNICABLE DISEASESs in Indonesia.

Jakarta, December 2015
Director General of Disease Control and Environmental Sanitation
Dr. H.M. Subuh, MPPM

INTRODUCTION FROM THE MINISTER OF HEALTH

The issue of NONCOMMUNICABLE DISEASES has escalated during the last few decades at the global as well as regional setting. NONCOMMUNICABLE DISEASESs (NCDs) have become the major cause of death in the world. The perception that NCD is a problem for the developed world has been proven untrue. This group of diseases has become a public health issue for rich countries as well as the developing nations.

A similar trend is occurring in Indonesia, where predominance in public health issue has shifted from communicable to NONCOMMUNICABLE DISEASES. NCDs that have emerged as the leading cause of death among the population, by order of prevalence, are hypertension, diabetes mellitus, malignant tumor/cancer, heart disease and chronic respiratory problems. The Indonesian people are facing a myriad of issues; on the one hand they still have to contend with communicable diseases, while at the same time they also have to address the rising trend of NCDs. Healthcare facilities are called upon to address challenges in the provision of services to mange acute as well as chronic diseases that require lengthy and costly treatment regimes.

The most dominant causes of NONCOMMUNICABLE DISEASESs are closely linked with unhealthy lifestyle and habits, and therefore efforts to prevent and control such diseases require joint cross-sector measures with the support and participation of the community, including academicians, professional bodies and the business sector, as well as the necessary political support. Measures to mitigate the issue need to be undertaken comprehensively from promotional, preventive, curative to rehabilitative and palliative treatments.

I joyfully welcome the publication of the National Plan of Action for the Prevention and Control of NONCOMMUNICABLE DISEASES (RAN PP-PTM) 2015-2019. It is my hope that the document will be useful **as reference for all health personnel at every administrative stage in developing strategies and strategic actions to mitigate NCDs in their respective work areas**. I also urge that this document is taken as reference for other sectors at every level in supporting efforts to manage NCD.

I extend my highest appreciation and gratitude to all of the people who have contributed to the preparation of this document. May Allah confer His blessing upon all our efforts in creating Indonesian people who are healthy and have high competitive edge.

Jakarta, December 2015
Minister of Health
Prof. Dr. dr. Nila Farid Moeloek, Sp.M (K)

INTRODUCTION FROM THE COORDINATING MINSTER OF HUMAN DEVELOPMENT AND CULTURE

Human development is essentially aimed towards bringing a higher degree of education, health, culture, dignity and prosperity for people. A high quality population – healthy and productive – supports the economic growth of a nation.

Much effort is needed to keep a person healthy throughout his or her life. The health of individuals and the community is affected by the environment, whether physical, biological, or cultural, including habits and lifestyles. Availability of food, clean water, healthy environment, educational opportunities and economic status are important determinants in creating a healthy society, in addition to availability of healthcare.

In order to create healthy society, a country requires its government to be able to integrate measures carried out by every sector that impacts public health. This requirement is the basis of **the fifth of nine priority agenda items (Nawa Cita) set by the current administration**, namely to **enhance the life quality of the Indonesian people**.

However, Indonesia is faced with a major challenge in developing its people, namely the issue of NONCOMMUNICABLE DISEASES (NCD) that have been predicted to experience an increased prevalence during the next two decades. If no effective mitigation action is taken, NCD will continue to be a serious source of illness and death in Indonesia, and become a significant economic burden for the government as well as society.

As such, I enthusiastically welcome the National Plan of Action for the Prevention and Control of NONCOMMUNICABLE DISEASES (RAN PP-PTM) 2015-2019, which consists of four strategic pillars: 1) advocacy and partnership, 2) health promotion and risk reduction, 3) health system strengthening, and 4) surveillance, monitoring & evaluation, and research. The implementation of such strategic actions – particularly those **under pillar 1 and pillar 2 – require active participation across the ministries and relevant agencies, as well as the public in gener**al. I am expecting to see the RAN PP-PTM to be used as reference for the related ministries and agencies in formulating policies and activities oriented towards supporting the prevention and control of NCD risks.

My God always guide us in our work to create healthy, productive and competitive society.

Jakarta, December 2015
Coordinating Minister
Human Development and Culture
Puan Maharani

EXECUTIVE SUMMARY

Globally, around 63 percent of deaths in the whole world is caused by NONCOMMUNICABLE DISEASESs (NCDs), which kill 36 million people ever year. Around 80 percent of these deaths occur in middle- to low-income countries. The concern over the increasing prevalence of NCDs has prompted the conception of an agreement on a global strategy to prevent and manage NCDs, particularly in developing countries. Additionally, the inclusion of NCDs in the 2030 SDG – as part of the agenda to ensure the increased health status of the world's population – indicate that NCD mitigation must be a development priority in every country.

Indonesia also has experienced a dramatic escalation of NCD cases. Findings from the Basic Health Research (Riskesdas) for 2007 and 2013 indicate that there occurred a significant increase of, among others, prevalence of stroke from 8.3 per mill in 2007 to 12.1 per mill in 2013. It was further found that 61 percent of the total number of deaths is caused by cardiovascular disease, cancer, diabetes and chronic obstructive pulmonary disease (COPD). The April 2015 publication of the World Economic Forum estimated the loss potentially caused by NONCOMMUNICABLE DISEASESs in the period of 2012-2030. For Indonesia alone, such loss is predicted to reach US$ 4.47 trillion, 5.1 times the 2012 GDP.

The establishment of the National Action Plan for the Prevention and Management of NONCOMMUNICABLE DISEASES (RAN PP-PTM) 2015-2019 constitute the government's effort to identify strategic actions to be implemented in order to achieve the objectives stated in the Ministry of Health's Strategic Plan of 2015-2019 and the National Medium Term Development Plans (RPJMN) of 2015-2019, and in support of the achievement of the objectives stipulated in the Action Plan for Prevention and Control of NCDs in South East Asia 2013-2020 and the Global Action Plan for the Prevention and Control of NCDs 2013 -2020. It is understood that NCD covers a multitude of conditions/illness, including mental disorder, sensory disorder, injuries sustained during accidents, and other diseases. **The National Action Plan, however, is focused on major NCDs that share common risks.**

Indonesia is committed to reducing NCD morbidity and mortality through intensifying measures to prevent and control NONCOMMUNICABLE DISEASESs**, using key indicators as stated in RPJMN 2015-2019 namel**y by: a) reducing **prevalence of hypertension** among population under the 18 year age group and above, to **become 23.4%,** b) **maintainin**g the proportion of obesity among population in the 18 year age group and above **at 15.4%,** and c) reducing prevalence of smoking among **the ≤ 18 year age group to 5.4**%. Furthermore, several recommended global indicators are also stated in the RAN PP-PTM document with targets that have been adjusted to meet the country's specific conditions.

In achieving such targets, the NONCOMMUNICABLE DISEASES prevention and control programs are still faced with a **number of challenges**, such as:

- Inadequate **political support for NCD prevention and management programs**, as indicated by the lack of commitment exhibited by the national and sub-national governments, lack of cross-program and cross-sector collaboration, and absence of properly implemented Health in All Policies (HiAP).

- **Unhealthy behavior among the public, giving risk to NCD risks**, is still a source of concern, as indicated by the high number of population who: i) consume salt, sugar and fat in excessive proportions, ii) lack physical activities, iii) consume tobacco products, and iv) consume alcohol in a harmful manner. These conditions are greatly affected by the environmental, social, economic and cultural conditions that lie outside the health sector.

- **Lack of healthcare capacity to respond to NCDs**, causing inadequate access for the public to receive quality NCD related services.

- Inadequate **data for program management** as a result of weak surveillance system for NCDs and their risk factors.

Indonesia's NCD prevention and management strategy adopts a global and regional strategy while bearing in mind international experiences in best buy interventions and taking into account the local conditions. The strategy is laid upon four main pillars: 1) advocacy and partnership, 2) health promotion and risk reduction, 3) health system strengthening and 4) surveillance, monitoring & evaluation, and research.

Under each of these strategic pillars, strategic actions have been identified to serve as reference in developing **more operational actions** for the relevant sectors/ ministries/ institutions:

- **Advocacy and Partnership**, consisting of strategic activities aimed at: a) setting NCD prevention and management set as priority in national development; b) establish collaboration among the relevant institutions and the community; and c) identify cross-sector efforts to support NCD prevention and management.

- **Health Promotion and Risk Reduction**, consisting of principal activities aimed at: a) strengthening health promotion with the involvement of the community; b) reduce NCD risk factors, comprising of: i) use of tobacco products, ii) harmful consumption of alcohol, iii) unhealthy diet, and iv) lack of exercise/physical activities.
- **Health System Strengthening**, consisting of principal activities aimed at: a) increasing the public's access to integrated, comprehensive and quality NCD related healthcare, particularly at primary healthcare facilities, including the associated referral system, and b) strengthening NCD related services at referral healthcare facilities (secondary and tertiary).

- **Surveillance, Monitoring & Evaluation and Research**, consisting of principal activities aimed at: a) strengthening surveillance mechanism for NCDs and their risk factors **as part of Health Information System Strengthening,** b) strengthening monitoring and evaluation of activities implemented under the National Action Plan for NCD Prevention and Management, c) **developing research to support NCD prevention and management policies.**

CHAPTER 1: OVERVIEW

As an outcome of the health development undertaken by Indonesia during the last three decades, the life expectancy of Indonesia have gone up from 54.4 years in 1980 (SP 1980) to 69.8 years in 2012 2012 (BPS 2013). This condition, augmented by the successful reduction of the morbidity rate of various diseases, has made Indonesia experience a demographic and epidemiological transition. Currently, the patter of disease shows that Indonesia is having a double burden of disease, where communicable diseases still pose a challenge (albeit having decreased). Prevalence of NONCOMMUNICABLE DISEASESs (NCDs), however, has risen sharply.

At the global level, 64 percent of the world's cause of death is NONCOMMUNICABLE DISEASES, taking 36 million lives every year, where 80 percent of such deaths occur in middle to low-income countries. NONCOMMUNICABLE DISEASES is chronic disease with a long-term duration, and whose healing process or management of clinical condition generally requires a prolonged period of time. The effect of industrialization has brought about a more rapid rate of urbanization to major cities, which has an effect of proliferating unhealthy lifestyle, such as unhealthy diet, lack of physical activities, and smoking. This have resulted in the increasing prevalence of hypertension, high glucose level, high blood fat, overweight and obesity, which in turn increased prevalence of coronary and vascular diseases, chronic pulmonary obstructive disease, various types of cancer that have been the most common cause of death (WHO, 2013). Many developing countries have the double burden relating to nutrition (coexistence between malnutrition and obesity). This is in line with **Barker's hypothesis** which states that malnutrition during pregnancy will affect fetal development and lead to low birthweight babies that can potentially result in stunted infants who then will grow up to become obese adults. (Ricardo Uauy, 2011).

Concern over the increased prevalence of NCDs has prompted the creation of **various initiatives at the global** and regional levels. The annual World Health Organization (WHO) conference - World Health Assembly (WHA) – **in 2000** has initiated an **agreement on a Global Strategy to prevent and manage NCDS, particularly in developing countries**. The strategy is built upon three main pillars, namely: (1) surveillance; (2) primary prevention; and (3) health system strengthening. Since then it various approaches have been adopted to prevent and reduce common risk factors of major NCDs that have been the leading causes of deaths. A number of resolutions were adopted, such as the *WHO Framework Convention on Tobacco Control* (WHO FCTC) in 2003 (WHA56.1), the *Global Strategy on Diet, Physical Activity and Health* in 2004 (WHA57.17), and the *Global Strategy to Reduce the Harmful Use of Alcohol* in 2010 (WHA63.13). In 2008 WHA formalized the *2008-2013 Action Plan for the Global Strategy for the Prevention and Control of Noncommunicable Diseases,* with a main focus on developing countries. A similar document was developed for 2013-2020.

Several studies have proven that there is **strong linkage between NCD and pover**ty. The underprivileged population experience a higher exposure to pollutants including cigarette smoke and unhygienic conditions. Poverty also affects access to service, whether early detection or treatment or health promotion. The chronic nature of NCDs cause the poor population to be sick more often and thus reduces their opportunity to earn a decent income and pose a larger financial risk when they fall ill. To draw the attention of the world's leaders

to this problem, in **September 2011 the United Nations held a High-level Meeting on** the Prevention and Control of NONCOMMUNICABLE DISEASESs attended by government leaders. Meetings to discuss health issues at the United Nations have been held only on two occasions, the first being with regard to HIV-AIDS. This signifies the importance for countries to understand the issue of NCD: the negative impact of NCD on health and people's socio-economic status; and the need to take real and comprehensive actions to address the problem, whether within the respective countries as well as at the international level.

NCD has received serious global attention with its inclusion as one of the goals of the Sustainable Development Goals (SDGs) of 2030, particularly under Goal 3: Ensure healthy lives and well-being. SDGs 2030 has formally been agreed upon by 193 head of states at the UN Summit held in New York on 25-27 September 2015. The event was based on the fact prevailing in many countries that the improving life expectancy and change of lifestyle are also accompanied by the rising prevalence of obesity, cancer, coronary disease, diabetes, and other chronic diseases. Measure to respond to the issue of NCD requires lengthy time and costly technology, and therefore a large financial resource is needed to prevent and overcome the problem. **The April 2015 edition of the World Economic Forum** describes that potential loss caused by NONCOMMUNICABLE DISEASESs in Indonesia in the period of 2012-2030 is predicted to reach US$ 4.47 trillion, or 5.1 times the GDP of 2012. The inclusion of NCD into the 2030 SDGs indicates that it must be made as a national priority that calls for a cross-cutting response.

Indonesia has also experienced a dramatic escalation of NCD. **Result from Indonesia's 2007 and 2013 Basic Health Research (Riskesdas)** indicates that there has been a significant increase, among others the prevalence of stroke, which rose from 8.3 per mill in 2007 to 12.1 per mill in 2013. It is further found that **61 percent of the total number of deaths was caused by cardiovascular disease, cancer, diabetes and chronic pulmonary obstructive disease**. The high prevalence of low birth weight cases (10% in 2013) and stunted birth (20% in 2013), as well as the high number of stunting cases among infants in Indonesia (37.2% in 2013) warrant attention, as they can potentially lead to high prevalence of obesity that is closely related to high number of NCD cases. As such, prevention and control of NCDs also require integration of measures that support the first 1000 days of life (1000 HPK).

Various measures have been done to prevent and mitigate NCDs in line with WHO's approach to Major NCDs related to common risk factors. **At the community level, Integrated NCD Education Posts (Posbindu PTM) have been established**, where early detection of risks are conducted and community activities and education are held towards achieving **Clean and Healthy Living Behavior**. At the healthcare level, strengthening measures have been taken on the PUSKESMAS as the community's first contact point with the health system. It is recognized that currently the referral system is not organized effectively, and will be continually be improved along with refinements to the **National Health Insurance program (JKN),** which is the manifestation of the Universal Health Coverage (UHC) that has been **implemented since 1 January 2014**. However, the above efforts are not sufficient, as cross-sector participation is still limited. It is understood that NCD is related to social determinants for health, particularly with regard to risks associated with behavior and environment.

As described above, NCDs are a group of diseases that are chronic and non-contagious in nature, the diagnosis and therapy for which generally takes a long period and are costly. NCDs can afflict any organ, and therefore there are many types of such disease. In that regard, the approached that should be adopted is through public health. To that end, attention is focused on NCDs that have a potentially large impact on morbidity and mortality and therefore become public health issues. It is recognized that these NCDs, which are often referred to as major NCDs, have several common risk factors including smoking, lack of exercise, unhealthy diet and alcohol consumption. If risk factor prevalence is reduced, it is hoped that prevalence of Major NCDs will also be reduced. Meanwhile, from a clinical aspect, every such disease will require different approaches. Nevertheless, not all NCD with high prevalence have the same risk factors, such as liver cancer and cervical cancer where the role of viral infection is significant. For such conditions, specific intervention is required.

Health is an important aspect of human rights, as stipulated in the United Nations Declaration of Human Rights of 1948, which states that every person has the right to a decent standard of health and wellbeing for one's self and their family. The right to health can also found in the national legislation as specified in Law No. 36 of 2009 on health. In accordance with the prevailing human rights norms, the state is obligated to respect, protect, and fulfill such right to health. The obligation is manifested among others by providing quality health service that is accessible to every member of society, undertaking efforts to prevent the decline of the public health status, taking legislative steps to ensure protection of public health, and developing health policies, as well as providing adequate budget.

The formulation of the National Action Plan for the Prevention and Control of NONCOMMUNICABLE DISEASESs 2015-2019 constitute the effort of the government to identify strategic actions to be implemented in achieving the set targets and the Ministry's Strategic Plan 2015-2019 and the National Medium Term Development Plan 2015-2019 and support the achievement of the goals set under the Action Plan for Prevention and Control of NCDs in South East Asia 2013-2020 and the Global Action Plan for the Prevention and Control of NCDs 2013-2020. It is understood that NCDs also cover many conditions/diseases, including mental illness, sensory problems, injuries from accidences, disabilities, and other NCDs.

The designed strategic plan is focused on the major NCDs that have common risk factors. For other diseases and conditions that also require national response, separate National Action Plans have been or are being prepared that specifically address such condition. Additionally, the National Action Plan are designed to impart understanding to the health as well as other sectors regarding: (i) magnitude of the problem of NCD, (ii) the health impact on the population as well as socio-economic burden on the government and society, and (iii) strategies for NCD prevention and control that need to be implemented. As such, the national action plan will serve as an advocacy tool to reach a consensus on the role and involvement and actions that can be contributed by the health and non-health sectors as well as the community in the effort to prevent and control NCD in Indonesia.

CHAPTER 2: NONCOMMUNICABLE DISEASES: STATUS, CHALLENGES AND OPPORTUNITIES

2.1. Overview of Morbidity and Mortality of NONCOMMUNICABLE DISEASES

The increasing prevalence of NONCOMMUNICABLE DISEASESs (NCD) at the global scale during the last few decades is also occurring in Indonesia, both with respect to morbidity and mortality. The perception that NCD is a problem exclusive to the developed countries have been proven untrue. A review of the causes of death developed by the WHO shows that cardiovascular disease constitute the most common cause of death in south-east Asian countries, including Indonesia, at 37 percent[1] (see Table 2.1). In middle-to-low income countries, more than 80 percent of deaths are attributed to cardiovascular disease and diabetes, while 90 percent of deaths are due to obstructive pulmonary disease. Additionally, two-thirds of deaths among middle to low income countries are caused by cancer.[2]

Table 2.1. Estimated proportion of NCD as cause of death in some SEARO countries (WHO, 2014)

	Cardiovascular	Diabetes	Cancer	Injuries	Chronic Respiratory Disease	Other NCDS
Indonesia	37 %	6%	13%	7%	5%	10%
India	26%	2%	7%	12%	13%	12%
Thailand	29%	4%	17%	11%	9%	12%
Myanmar	25%	3%	11%	11%	9%	11%
Nepal	22%	3%	8%	10%	13%	14%
Sri Lanka	40%	7%	10%	14%	8%	10%
Bangladesh	17%	3%	10%	9%	11%	18%

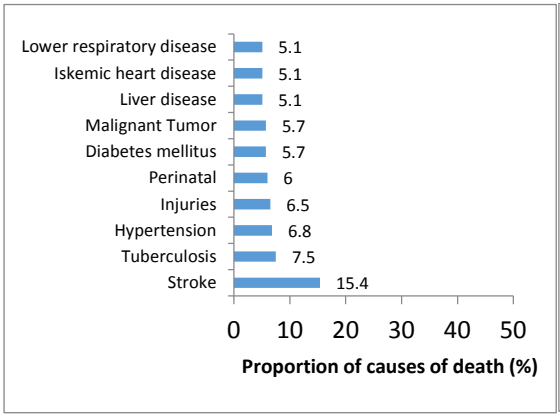
Source: WHO, 2014

Result from Indonesia's Basic Health Research (Riset Kesehatan Dasar - Riskesdas) 2007 shows that of the 10 most common causes of death, six constitute NONCOMMUNICABLE DISEASESs (stroke, hypertension, diabetes, malignant tumor, liver disease, and ischemic heart disease), accounting for 44 percent of deaths, while only 2 communicable diseases (tuberculosis and lower respiratory disease) contribute to a significant number of such deaths. Two other causes of deaths are injuries and prenatal abnormalities. This representation clearly shows that NONCOMMUNICABLE DISEASESs have become leading causes of death in Indonesia. **Initial analysis conducted by the Sample Registration Survey (SRS) in 2014 organized by the Health Research and Development Department (Litbangkes**) of the Indonesia Ministry of Health has produced a similar result. At the national level, the ten most prevalent causes of death are: cardiovascular disease (21%), ischemic heart disease (12.9%), diabetes mellitus (6.7%), TB (5.7%), hypertension along with related complications (5.3%),

[1] World Health Organization. 2014. Noncommunicable diseases country profiles. WHO: Geneva.
[2] World Health Organization, 2011.Global status report on noncommunicable diseases 2010. WHO: Geneva.

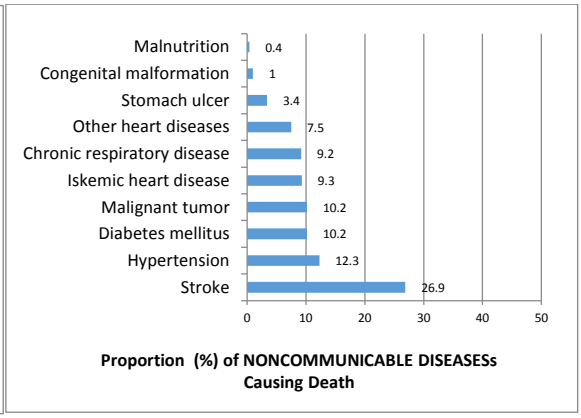
chronic respiratory disease (4.9%), liver disease (2.7%), transportation accident (2.6%), pneumonia (2.1%) and diarrhea (1.9%) (Litbangkes, 2015). As indicated above, the leading cause of death is predominated by stroke, cardiovascular problems, diabetes mellitus and hypertension with its related complications. Among the communicable diseases, only TB and pneumonia hold a significant proportion as a major cause of death. Result from the 2007 Riskesdas also shows that within the NONCOMMUNICABLE DISEASES group, 78 percent of deaths resulting from NCD are caused by stroke, hypertension, diabetes, malignant tumor, ischemic heart disease, and chronic pulmonary disease. These causes of death are conditions brought about by common risk factors.

Figure 2.1 Proportion of causes of death (%) within the population across all age groups (total deaths: 4,552 people).



Source: RISKESDAS2007.

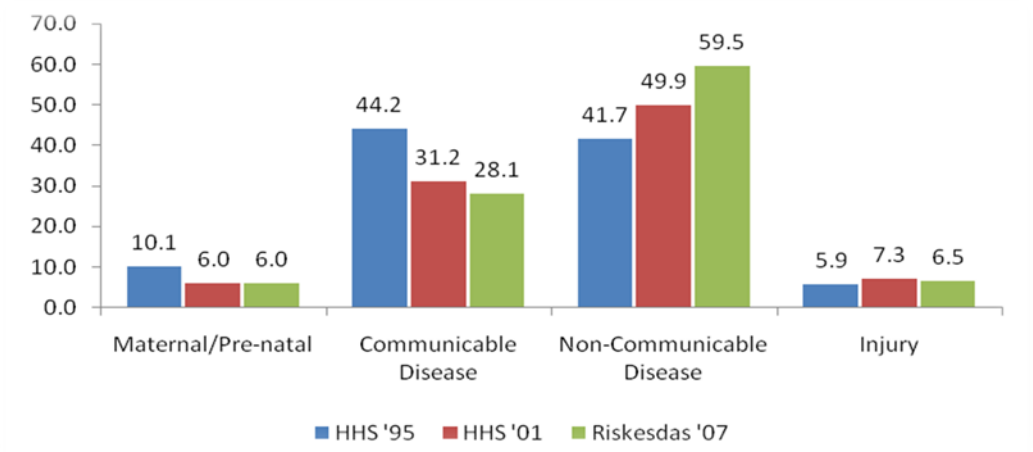
Figure 2.2. Proportion of deaths resulting from NCD (%) across all age groups *)



*) Total deaths: 2,285 people

Data on causes of death from 1995 to 2007 shows a change in the pattern. The proportions of infectious or communicable diseases and maternal and neonatal deaths as a cause of death have gone done, whereas the role of NONCOMMUNICABLE DISEASESs as a cause of death have increased.

Figure 2.3. Change in the Pattern of Causes of Death in the Period Between 1995 to 2007



It is a common misperception that NONCOMMUNICABLE DISEASES is the illness of the rich. The following data shows that this is untrue. There is no significant difference between the

prevalence of stroke and hypertension among the poorest and richest 25 percent of population. Meanwhile, chronic pulmonary obstruction disease (CPOD) and asthma tend to be suffered by those of lower economic status, which may be related to the higher number of smokers and exposure to polluted air and unhealthy living conditions experienced by the poor. Conversely, cancer and diabetes mellitus is shown to most often occur among population with higher economic status, which may attributed to the fact that they have access to better healthcare and thus allowing the diseases to be detected before death is caused. (Figures 2.4 and 2.5).

Figure 2.4. Prevalance (%) of NCD by economic status

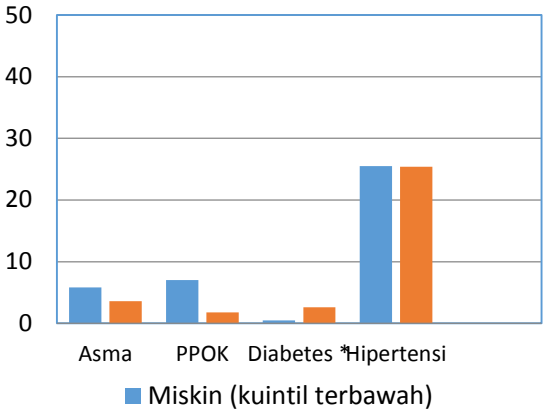
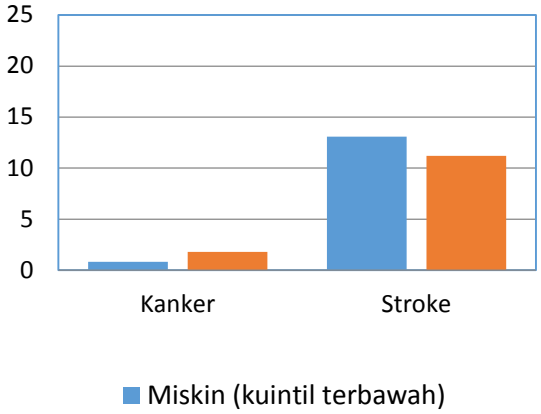


Figure 2.5. Prevalence (‰) of cancer and stroke by economic status



**Note: Diabetes is determined based on interviews (diagnosis history and symptom)*

Prevalence of major NCDs vary significantly among provinces, as indicated in Table 2.2.

Table 2.2 Disparity of NCD Prevalence among Provinces in Indonesia
Source: Riskesdas 2013

NCD	Age Group	Prevalence	Range			
			Lowest	Province	Highest	Province
Hypertension	≥ 18	25.80%	16.80%	Papua	30.90%	Bangka Belitung
Diabetes Mellitus*	≥ 15	6.90%				
CPOD	≥ 30	3.70%	1.40%	Lampung	10%	NTT
Asthma	All age groups	4.50%	1.60%	Lampung	7.80%	Sulawesi Tengah
Cancer	All age groups	1.4 ‰	0.2 0‰	Gorontalo	4.1‰	DI Yogyakarta
Stroke	≥ 15	12.1‰	5.2 ‰	Riau	17.9‰	S. Sulawesi
Coronary Heart disease	≥ 15	1.50%	0.30%	Riau	4.40%	NTT
Obesity	≥ 18	15.4%	6.2%	W. Kalimantan	24.0%	N. Sulawesi

Among population aged 18 years and above, one in every four persons suffer hypertension and one out of five people suffer obesity, while one out of fifteen people aged 15 years and above suffer elevated blood sugar (DM). **According to 2013 Riskesdas, 73.4 percent of hypertension cases have gone undiagnosed and 72.9 percent of diabetics also went undiagnosed**. These three conditions greatly contribute to the sharp increase in the number

of cardiovascular diseases such as stroke and coronary heart disease if no prevention and control measures are initiated.

Table 2.3 Disparity of NCD Burden of Disease Among Provinces in Indonesia

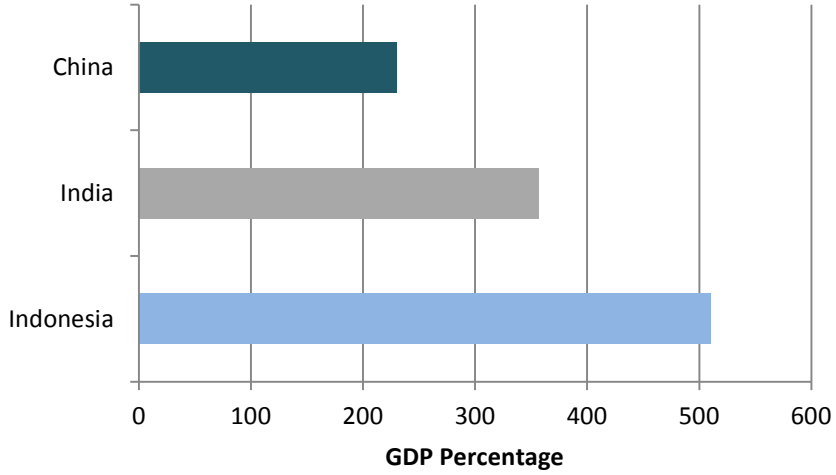
Condition	Age Group	Estimated Number of Sufferers in 2013				
		Total	Lowest	Province	Highest	Province
Hypertension	≥ 18	39,322,834	82,064	West Papua	8,139,130	West Java
Diabetes Mellitus*	≥ 15	2,714,508	4,299	West Papua	597,065	East Java
CRD	≥ 30	4,361,586	7,185	West Papua	835,918	West Java
Asthma	All age groups	11,244,071	26,756	West Papua	2,269,497	West Java
Cancer	All age groups	348,707	220	Gorontalo	69,856	Central Java
Stroke	≥ 15	2,148,640	2,863	West Papua	463,717	East Java
Coronary Heart Disease	≥ 15	2,592,116	5,924	West Papua	516,947	West Java
Obesity	≥ 18	23,471,769	56,044	West Papua	4,553,279	East Java

*) Based on blood sugar test, representative sample at the national level
Source: Riskesdas 2013

Rate of prevalence does not automatically indicate the burden of NCD at the provincial level due to the varying number of population among the provinces. The above table illustrates that the burden of NCD is mainly found in the island of Java **due to its dense population**. This means that the development of programs to control and prevent NCDs must take into account the prevalence rate and burden of NCD. Cancer constitute the disease with the largest variance, namely 0.2 per mil in Gorontalo and 4.1 per mil in Yogyakarta. As mentioned above, there is a large probability that the disease has been underreported. This also shows variations in health services and demographic pattern among the provinces in Indonesia.

Based on the depiction of NCD-related morbidity and mortality at the national level, the economic impact at the national level can be estimated. **The April 2015 Edition of the World Economic Forum shows that the potential loss due to NONCOMMUNICABLE DISEASES in Indonesia during the period of 2012-2030 is predicted to reach US$ 4.47 trillion, or 5**.1 times the 2012 GDP. This figure is very high when compared to India (US$ 4.32 trillion, or 2.3 times India's 2012 GDP) and China (US$ 29.4 trillion, or 3.57 times China's 2012 GDP). In Indonesia, such loss is mainly caused by cardiovascular disease (39.6%) followed by diseases related to mental disorder (21.9%), respiratory disease (18.4%), cancer (15.7%) and diabetes mellitus (4.5%).

Chart 2 Economic loss due to NCD compared to 2012 GDP: Comparison Between Indonesia and China and India



The economic burden brought on by NONCOMMUNICABLE DISEASES can be seen in BPJS data that shows INA-CBG that claim for the period of Jan-July 2014 reached IDR 3.4 trillion for outpatient treatment and IDR 12.6 trillion for inpatient cases. Although catastrophic cases only reached 8% of the total outpatient cases and 28% of inpatient cases, the burden of cost reached 30% and 33% respectively.

2.2. Overview of Risk of NONCOMMUNICABLE DISEASES

RISKESDAS 2013 collected information on a number of high risk behaviors related to major NONCOMMUNICABLE DISEASESs in Indonesia, such as smoking, lack of physical activities, low intake of vegetables and fruits using the operational definition as shown in Box 1.

It was found that prevalence of smoking among 15 year olds increased from 34.7% (2007) to 36.3 percent (2013). These smokers also reported that people are also exposed to cigarette smoke in the home. In 2007, 40.5% of the population in all age groups (91 million) have been exposed to secondhand smoke in their homes. Meanwhile, in 2010, two out of five people were passive smoker, or around 92 million people. In 2013 the figure rose to 96 million. More women (54%) were exposed compared to men (24.2%), while children aged 0-4 years who were exposed to secondhand smoke was at 56 percent, or a total of 12 million children.

Prevalence of low physical activity among population aged 10 years improved to 26.1 percent (2013) from 48.2 percent in 2007. Prevalence of low intake of vegetables and

Box 1. Operating Definition of NCD Risk Factor

***Smoking**: including consumption of smoked cigarettes **and/or consumption of chew tobacco** within the last one month for daily and occasional smokers*

***Low activity**: Undertaking physical activity for less than 150 minutes a week, or conducting no moderate or heavy activities. Heavy physical activities include drawing water from well, hiking up hills, running, cutting down trees, working the field, etc. Moderate physical activities include sweeping the floor, mopping, cleaning furniture, walking, etc.*

***Low consumption of vegetables and fruits**: consuming less than 5 serving of vegetables or fruits in one day. One serving of fruit may be either one avocado, one star fruit, one orange, 10 duku, etc. One serving of fruit may be either five tablespoon of boiled spinach, two tablespoons of boiled chayote, etc.*

***Obesity:** Body mass index/BMI >25*

***Central obesity**: Waist circumference > 90 cm (male) and >80 cm (female)*

***Dangerous consumption of alcohol**:>=5 standard per day. One standard is equal to 1 beer glass (285 ml).+*

fruit is still high among people of 10 years of age both in 2007 and 2013 (93.6% and 93.5%, respectively). 77.4 percent of the population consume vegetables and fruits only one to two servings a day. Meanwhile, biological risk factors such as obesity showed an increase from 14.4 percent in 2007 to 26.2 percent in 2013 (Table 2.4).

Consumption of alcoholic drinks is closely related to risk of physiology abnormality, such as disrupted fat profile, obesity and elevated blood pressure, and has an effect on the prevalence of injuries and death. Result of the 2007 RISKESDAS shows that the national prevalence of alcohol consumption was 4.6 percent, with the highest rate found in the North Sulawesi province (28.3%). Among the population in the province, 13.4 percent consume alcohol in high or dangerous quantity (≥ 5 standard per day). This means that the national prevalence of alcohol consumption is 0.6 percent.

Table 2.4.Prevalence (%) of NCD Risk Factors for 2007 and 2013

No.	NCD Risk Factors	2007	2013
1	Prevalence of Tobacco consumption (aged ≥ 15 years)	34.7	36.3
2	Prevalence of smoking (aged 10-18 years)	N/A	7.2
3	Prevalence of smoking (aged ≥10 years)	N/A	29.3
	- Female	N/A	1.9
	- Male	N/A	56.7
4	Prevalence of low physical activity (aged ≥ 10 years)	48.2	26.1
5	Prevalence of low vegetable & fruit intake (aged ≥ 10 years)	93.6	93.5
6	Prevalence of alcohol consumption	4.6	N/A
7	Prevalence of dangerous alcoholic drink consumption (≥ 5 standard per day)	0.6	N/A
8	Obesity (BMI > 25, age ≥ 18 years)	14.4	26.2
	- Female	14.8	32.9
	- Male	13.9	19.7
9	Central obesity (Male & Female aged ≥ 18 years)	18.8	26.6

Source: Riskesdas2007 dan 2013

In the effort to raise understanding of the public and business community regarding nutritionally balanced diet, the government through **Minister of Health Regulation Number 30 of 2013 requires the display of information on sugar, salt, and fat content on processed food and ready-made food, as well as a health message**. The health message in this context is that consumption of sugar more than 50 gram, natrium/salt of more than 2,000 milligrams, or total fat of more than 67 grams per person per day will increase the risk of hypertension, stroke, diabetes, and coronary failure. The Total Diet Study (2014), which took the same sample as the 2013 Riskesdas, showed that consumption of sugar, natrium and fat is already more than the recommended levels (Table 2.5). Excessive sugar consumption tend to increase in proportion to increase in age, and it was also found that men consume sugar twice as much as women. Excessive consumption of natrium and fat is mostly found among men. Excessive

fat consumption is often found within groups of high economic status. Further analysis shows that 53.7 percent of the population consumes salt above the recommended serving of 5 grams per day. This is crucial to be addressed/ prevented as it relates to increased risk of NCD.

Table 2.5 Proportion (%) of population with daily consumption of sugar, natrium and fat above the recommended serving Indonesia 2014

Characteristics	Sugar >50 gram	Natrium >2000 mg	Fat >67 gram
Age Group			
0 - 59 months	1.3	10.0	11.7
5 - 12 years	1.6	24.6	30.3
13-18 years	2.0	25.9	30.3
19-55 years	5.7	18.0	28.1
>55 years	6.8	10.4	17.1
Sex			
Male	6.4	19.9	30.2
Female	3.1	16.7	22.7
Location			
Urban	4.6	20.6	33.3
Rural	3.7	16.0	19.6
Economic Status			
Lowest	3.7	14.5	12.7
Low-middle	4.6	18.0	20.4
Middle	5.2	18.6	26.3
Middle-high	5.2	20.6	32.1
Highest	4.8	18.3	35.8

Source: Total Diet Study 2014

Based on the condition of mortality, morbidity and NCD risk factors, as well as their adverse impact on the economy, it is clear that prevention and mitigation of NCD must be immediately implemented. NCD in Indonesia has become a serious public health issue as they have greatly contributed to deaths in the population. NCD is also beginning to be suffered by the younger age groups, which condition will disrupt work productivity and render a further negative impact on household economies and the national economic growth and development.

2.3. Achievements in the Prevention and Control of NONCOMMUNICABLE DISEASES in 2010-2014

Strategies for the prevention and control of NONCOMMUNICABLE DISEASES as stated in the **book entitled "*Rencana Pencegahan dan Penanggulangan Penyakit Tidak Menular tahun 2010-2014*" (NONCOMMUNICABLE DISEASES Prevention and Mitigation 2010-2014**) include: 1) strengthening the legal aspect of NCD prevention and mitigation, 2) enhancing surveillance of NCD epidemiology, 3) enhancing early detection of NCD risk factors, 4) enhancing communication, information and education on NCD prevention and mitigation, 5) enhancing the quality of NCD case management, 6) strengthening partnership with and active

participation of the public in NCD prevention and mitigation, and 7) expanding replication of NCD prevention and mitigation programs.
These strategies are implemented through a number of activities grouped into three pillars of stakeholder program roles, namely: 1) role of the government through development and strengthening of primary programs for the prevention and mitigation of NCD, 2) role of the community through development and strengthening of networks for the prevention and mitigation of NCD, and 3) role of the community through the development and strengthening of community-driven activities.

The government's commitment to the control and prevention of NCD has increased, as indicated by the gradually increasing budget allocation. The increasing budget for the control and prevention of NCD for the Directorate of NCD Control of the Ministry of Health is detailed in Table 2.6.

Table 2.6.Increased Budget for NCD Prevention and Mitigation for the Directorate of NCD Control of the Ministry of Health 2010-2015

Year	Allocation (Rp)	Realized (Rp)	Proportion (%)
2010	57,370,000,000	55,971,670,040	97.6
2011	80,083,065,000	74,105,400,089	92.5
2012	52,772,036,000	50,048,370,566	94.8
2013	69,917,707,000	68,805,438,945	98.4
2014	63,810,861,393	57,190,300,606	89.6
2015	131,635,788,000*)	72,351,956,784	55

Note: *) Not all budget allocation 2015 were able to be utilized, as around IDR 23,899,170,000 constitute blocked funds and IDR 11,918,280,000 are reserve output funds. As such, the percentage of realized funds for 2015 is actually 75%.

Source: Dit PPTM, Ditjen P2PL Kemkes RI

A number of outputs produced by the NCD prevention and mitigation program in the period of 2010-2015 implemented by the Ministry of Health are as follows:

a) Development of regulatory instruments

Several regulations have been issued by the Ministry of Health in the period of 2010-2014 aimed to control NCD risk factors, among others:

- **Minister of Health (MoH) Regulation Number 28 of 2013 regarding the affixing of health warning and information label on tobacco product packaging**. This regulation is related to Government Regulation Number 109 of 2012 on the control of materials containing tobacco as an addictive substance.

- MoH Regulation Number 30 of 2013 on **the affixing of information label regarding sugar,** salt and fat content and health message on processed and ready-to-eat food.
- MoH Decree Number 43 of 2007 on Guidelines **for National Cancer Management**.
- MoH Decree Number 796 of 2010 on Technical Guidelines for the Management of Breast Cancer and Cervical Cancer.
- MoH Regulation Number 40 of 2013 on **Roadmap for the Management of the Health Impact of Cigarette Consumptio**n.
- MoH Regulation Number 34 of 2015.
- MoH Regulation Number 63 of 2015.
- MoH Regulation Number 71 of 2015.
- Presidential Instruction Number 4 of 2013 on the Decade Program on Road Safety Action.

b) Development of Guidelines

To guarantee the standardized prevention and control of NCD at all health facilities, **a number of guidelines have been issued,** as follows:

- Guideline for NCD Education Post (Pos Pembinaan Terpadu Penyakit Tidak Menular - Posbindu PTM)
- **Guideline for NCD Surveillance**
- Guideline for Cancer Management
- Guideline for Early Detection of Breast Cancer and Cervical Cancer
- Guideline for Injury Management
- **Guideline for Diabetes Mellitus Management**
- **Guideline for Obesity Management**
- Guideline for Coronary and Cardiovascular Disease
- **Guideline for Hypertension Management**
- Guideline for CPOD Management
- Guideline for Asthma Management
- Guideline for Establishment of Non-Smoking Zones
- ***Te*chnical Guideline for NCD Management at Primary Healthcare Facilities (PUSKESMAS)**
- Technical Guideline for Early Detection of Cancer in Children
- Guideline for Posbindu PTM/Early Detection of NCD Risk Factors Among Haj Pilgrims
- Guideline for Early Detection of NCD Risk Factors at Ministries/Organizations and Workplace
- **Technical Instructions on Law Enforcement Aspects of Free Smoke Zone Implementation**
- Technical Instructions on Efforts to Stop Smoking (UBM) at Primary Healthcare Facilities, Schools and Islamic Schools (Madrasah)
- Technical Instructions on Community Based Diabetes Foot
- Technical Instructions on Gestational Diabetes
- Guideline for Thalassemia Management
- Guideline for Osteoporosis Management

c) Development of Training Modules

- Training module on cancer treatment
- Training module on CPOD-Asthma
- Training module on Posbindu PTM and Posbindu PTM E-learning Module
- Training module on Efforts to Stop Smoking

d) Strengthening of NCD Related Healthcare Services at the PUSKESMAS

Strengthening of healthcare facilities through the implementation of PANDU PTM has been conducted at 2,057 PUSKESMAS **throughout 298 districts/cities in 34 provinces**. This efforts is supplemented by the training of healthcare personnel relating to managerial and technical competence.

- Enhancing Early Detection of NCD

Enhancing early detection of cervical cancer and breast cancer using Acetate Acid Visual Inspection (IVA) Method and clinical breast cancer examination (Sadanis) has been conducted in 2,067 PUSKESMAS throughout 298 districts/cities in 34 provinces. As of the end of 2014, early detection was conducted for 904,099 women, 45,092 women were IVA positive (4.93%), 1,098 women exhibited indications of cervical cancer (1.2 per 1,000), 2,487 had breast cancer (2.7 per 1,000). The activity was carried out by 4,130 early detection personnel, consisting of 1,445 doctors and 2,675 midwives. Presently there are 430 available trainers consisting of 14 oncologist ob-gyn, 22 surgeons, 67 ob-gyn, 226 general physicians, and 102 midwives. The drive is augmented by 428 cryotherapies.

- Development of NCD Education Posts (Posbindu PTM)

Currently there are 7,225 registered community-developed NCD posts, which have received Posbindu Kits. Meanwhile, 3,723 NCD education posts in 2,512 villages/kelurahan have actively input data electronically sing the NCD surveillance information system. These posts operate under the auspice of 1,338 PUSKESMAS in 1,058 sub-districts in 272 districts/cities spread throughout 29 provinces.

- Promotion of Non-Smoking Zones

As up to 2015, non-smoking zones have been established in 34 provinces, specifically in 160 districts/cities. The zones were established under various regulatory instruments, including: (i) 2 Provincial Regulations, (ii) 12 Governor Regulations, (iii) 53 District/City Regulation, and (iv) 92 Bupati/Mayor Regulation. Meanwhile, stop-smoking campaigns were organized by 36 PUSKESMAS in 36 districts/cities in 18 provinces.

- Land Transport Accident Risk Factor Management

Fourteen districts/cities have organized medical check-ups for motorists at major terminals.

Table 2.7.Outputs From NCD Prevention and Management Activities as up to 2015

NO	INDICATORS	OUTPUTS			
		up to December 2014		up to November 2015	
		N	%	N	%
1	PUSKESMAS organizing integrated NCD management	2,057	21.3	2,936	30.4
2	Villages/kelurahan organizing NCD Education Posts	3,723	4.7	6,860	8.6
3	Women within the 30-50 age bracket who are early-detected to have cervical and breast cancer	904,099	2.45	1,025,432	2.8
4	Districts/cities implementing non-smoking zones in at least 50% of the local schools	26	5,0	43	8,3
5	Districts/cities organizing medical check-ups for drivers in major terminals.	14	2.7	62	11.7

2.4. Challenges in NCD Prevention and Management

A number of provinces and districts are still unable to fully implement national policies and strategies due to limited resources, inadequate local policies, and lack of community involvement. In general, human resources, infrastructure, organizational and financial structures are relatively limited at the local level. Policy support at the provincial and district levels is less than optimum due to weak advocacy and ineffective coordination between the health and non-health sectors, including with the local government. As an effect of the **implementation of a decentralized governance, the** local administrations are conferred with the authority to determine their own local development priorities, including development in the health sector. In consequence, district health offices (dinas kesehatan) work using different organizational structures, causing the NCD management programs to operate under either the NCD section, disease control section, health promotion section, surveillance section, or independent of any section.

An NCD related policy that have been implemented nationwide is the Smoke Free Zone policy. However, not all districts/cities have in place regulation on Smoke Free Zone, and in districts/cities which already have such regulations, enforcement is often ineffective. Meanwhile, a number of policies are difficult to be incorporated into regulatory instruments due to issues relating to the role and contribution of relevant sectors. Policies that still pose a challenge include those governing the display of health information and labels displaying sugar, salt and fat content in packaged and ready to eat food.

The national strategies for the prevention and management of NCD are basically already in line with the global strategy. The national strategy consists of three dimensions, namely community based approach, surveillance system, and case management. However, **national policies and strategies as yet are not able to be implemented effectively in all provinces and districts in Indonesia**. Meanwhile, some PUSKESMAS, village administration offices and local

kelurahan offices lack the proper understanding, capacity and the adequate resources to prevent and control NCD, specifically to implement a more effective and sustainable community-based intervention. In general, healthcare services provided at the hospitals and PUSKESMAS are still met with accessibility challenges both in geographical and financial terms, as well as problems of quality in a number of districts.

The most common challenges that arise that plague efforts to manage NONCOMMUNICABLE DISEASESs relate to the following aspects:

a) Lack of Support for NCD Prevention and Management Programs

The national and sub-national governments' commitment has been less than optimum. Even though control and prevention programs at the national level have initiated intensive advocacy and dissemination efforts to the local governments, there are still areas that have not exhibited tangible commitment to make NCD prevention and management programs an agenda of priority. This condition presents a challenge in developing and implementing such prevention and management policies.

Partnership/cooperation across programs and across sectors is less than optimum. The lack of cross-sector support at the national level is a factor that has caused cross-sector cooperation to be *ineffective* at the sub-national level. Political interests and intervention have an effect on the nature of leadership, which in turn cause ineffectiveness in the NCD prevention and management programs in the regions which ought to receive commitment and actual contribution from all the relevant sectors

Health in all Policies (HiAP) has not been implemented properly. HiAP is strongly needed due to the fact that public health is greatly determined by policies outside the health sector, such as agriculture, education, economy, environment and other relevant sectors. HiAP is an approach that takes into account the public health aspect in all policy development carried out in such sectors at all levels of administration. Examples of policies that support the promotion of public health are Ministry of Finance Regulation Number 62/PMK.04/2014 on Trade of Taxable Goods With Tax Collection Through Tax Labels or Other Tax Mark.

b) Behavior of Population with NCD Risk

Limited media and education method. Educational media that are available to support the promotion of Clean and Healthy Living (CHL) are limited to printed media. Meanwhile, health and public facilities as well as schools need more online media channels to disseminate messages on the control and prevention of NONCOMMUNICABLE DISEASES, which approach would allow more audience to be reached. Variety in dissemination method tailored to the target population can enhance the successful outcome of health education.

Limited coverage of Posbindu PTM. Currently not all village have a Posbindu. In communities where a Posbindu has been established, attendance is limited to women above 50 years of age. More effective effort and approach are still needed to increase the participation of male and younger groups at the Posbindu PTM. This challenge is compounded by the limited

number and inadequate capacity of the volunteers as well as the lack of continuous participation by the community in community-based interventions.

Many NCD risk factors are influence by conditions occurring outside the realm of healthcare, such as the supply of unhealthy food, lack of sports facility, modern living habits, as well access to cigarettes and alcoholic drinks and high levels of air pollution. All of this require development of policies that can support a more conducive climate for NCD prevention and management programs. As yet the existing policies still fall short and do not adequately support the implementation of NCD prevention and management.

c) Inadequate Capacity to Provide Services to Manage NCD

Limited human resources to support NCD prevention and management. Priority programs are still dominated by programs on communicable disease prevention and maternal and child health, which affects the capacity of healthcare facilities in their effort to service NCD patients. This condition reveals the importance of bringing in significant investment to build resources (man, money, material) for NCD related services, particularly at primary healthcare facilities.

Community access to healthcare facilities with capacity to manage NCD. Not all primary healthcare facilities have the capacity to provide NCD related services effectively, and therefore there are still many members of the community that do not have access to such services at the primary healthcare level. This condition forces the community to either seek service at the hospital, private clinic or to forego any treatment entirely.

Referral system and the role of the PUSKESMAS and hospitals. The system by which patients are referred from PUSKESMAS to hospitals is well established and has been implemented effectively. However, back-referrals from hospitals to the PUSKESMAS is yet to be supported by an adequate system.

d) Lack of Data for Program Management (Planning and Evaluation)

Inadequate surveillance system. The national NCD management program has recently developed an **online surveillance system to monitor NONCOMMUNICABLE DISEASES and the related risk factors**. The system as yet cannot be effectively implemented due to the fact that many areas still lack internet access and electricity.

Limited data and report management. Recording and reporting are still met with many challenges at every stage of NCD management programs, including at the Posbindu, PUSKESMAS and local Health Offices. The problem is closely linked with the capacity of the supporting manpower, particularly at the **Posbindu, where the majority of volunteers do not really understand the significance of accurate data collection at the Posbindu**. Meanwhile, dedicated personnel charged with data management at the primary healthcare facilities are as yet not available. Data recording is still done manually without the aid of computers and reports are not submitted on a timely manner.

CHAPTER 3: NATIONAL TARGETS FOR NCD PREVENTION AND CONTROL BY 2019

Prevention and control of NONCOMMUNICABLE DISEASESs (NCDs) is an inseparable part of a health development program aimed at improving the quality of human lives, to make every individual productive, having competitive edge, and contribute to the national development. As such, the purpose of NCD prevention and control is geared towards reducing morbidity, mortality and disability, as well as lessening the economic burden brought about by NCD to achieve the goals of national health development and national development.

As a manifestation of the state's participation in the global effort to prevent and control NONCOMMUNICABLE DISEASES, **it is recommended that the targets sets should adopt the global targets established for 2025 as reference**, as follows:

- A 25% relative reduction in risk of premature mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases
- A 10% relative reduction in the harmful use of alcohol
- A 10% relative reduction in prevalence of insufficient physical activity
- A 30% relative reduction in mean population intake of salt/sodium
- A 30% relative reduction in prevalence of current tobacco use in persons aged 15+ years
- A 25% reduction in prevalence of raised blood pressure
- Halt the rise in obesity and diabetes
- 50% of eligible people receive drug therapy and counseling (including glycemic 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
- 50% relative reduction in the proportion of households using solid fuels as the primary source of cooking

In **the National Medium Term Development for 2015-2019, targets have been set that have to be achieved by 2019 in the prevention and control of NONCOMMUNICABLE DISEASES, using the following key indicators**: a) reduced prevalence of **hypertension** among people who are 18 years old and above **23.4**%; b) proportion of **obesity** among people who are 18 years old and above maintained at 26.2%, and c) reduced prevalence of **smoking** among people who are 18 years old or less to 5.4%.

Overall, the indicators set up to measure achievement of the goals established for the prevention and control of NONCOMMUNICABLE DISEASESs for the 2015-2019 period are as stipulated in Table 3.1. The indicators used in the National Plan of Action for the Prevention and Control of NONCOMMUNICABLE DISEASESs already refer to the global and regional agreement as contained in the Global Action Plan for the Prevention and Control of Non Communicable Diseases 2013-2020 and Action Plan for the Prevention and Control of Non Communicable Diseases in South-East Asia 2013-2020. The set targets have been adjusted in accordance with the existing human resources capacity and the NCD epidemiology and its determinants in Indonesia.

Table 3.1 National Targets for the Prevention and Control of NONCOMMUNICABLE DISEASES 2016-2019

		Baseline	Target		Means of Verification
			By 2019	By 2025	
Morbidity and Mortality					
1	Mortality from cardiovascular diseases, cancer, diabetes or chronic respiratory diseases (%)	59.5 (I)	**–10**% (53.6)	25 % relative reduction	Civil registry system
Biological Risk Factors					
2	Prevalence of **hypertension** among person aged ≥ 18 year age group (%)	25.8 (II)	**–10**% (23.4)	25 % relative reduction	RISKESDAS WHO/STEPs
3	**Prevalence of overweight and obesity among age 18+ years (%)** • Prevalence of overweight in persons age 18+ years • Prevalence of **obesity** in persons age 18+ years	26.2 (II) 15.4 (II)	Halt the rise in overweight and obesity	Halt the rise in overweight and obesity	WHO/STEPs RISKESDAS WHO/STEPs
4	Prevalence of raised blood glucose/diabetes among persons aged 18+ years (%)	6.78	Halt the rise in diabetes	Halt the rise in overweight and obesity	WHO/STEPs RISKESDAS
Behavioral Risk Factors					
5	Prevalence of **tobacco use** among persons aged 15+ years (%)	36.3(II)	–10% (32.7)	30% relative reduction	WHO/STEPs RISKESDAS
6	Total **alcohol** per capita (15+ year old) consumption in litres of pure alcohol(to clarify per capita or proportion of population)	4.6 (I)	– 10% (4.14)	10% relative reduction	RISKESDAS
7	Prevalence of **insufficiently physically active** persons aged 18+ years	26.1 (I)	–10% (24.8)	10% relative reduction	WHO/STEPs RISKESDAS
8	Proportion of population aged ≥ 10 years with **low fruit and vegetable consumption** (%)	93.5 (I)	–5% (88.8)	No target	RISKESDAS
9	Age-standardized mean population **intake of salt** (sodium chloride) per day in grams in persons aged 18+ years.	6.5 (III)	–10% (6)	30% relative reduction	Total diet survey RISKESDAS
Health System Response					
10	Availability of **Essential Medicine** and NCD Technology (%)	80% (III)	80%	80%	WHO/SARA
11	Coverage of **drugl therapy and counseling** for at-risk people aged >40 years for the prevention of heart attack and stroke (%)	n.a.	30%	50%	STEPs RISKESDAS
12	Percentage of women aged 30-50 years detected with cervical (IVA) & breast cancer (Sadanis) (%)	9	50		**TBD**

I: From survey in 2007; II: From survey in 2013; III: From survey in 2014

CHAPTER 4: STRATEGY FOR THE PREVENTION AND MANAGEMENT OF NONCOMMUNICABLE DISEASES

4.1. Basic Principles For The Prevention and Management of NONCOMMUNICABLE DISEASES

The National Strategic Action Plan for the Prevention and Control of NONCOMMUNICABLE DISEASES (RAN PP-PTM) is designed to serve as a roadmap for the national and sub-national government in developing and implementing efforts to reduce the burden of NONCOMMUNICABLE DISEASES for the population at every administrative level. The document will also be a source of information for the various ministries/agencies and sectors as well as for the relevant stakeholders with regard to the national strategy for the prevention and control of NONCOMMUNICABLE DISEASES, thus able to provide the best support possible in accordance with their respective duties and responsibilities.

The approach adopted for NCD prevention and management in Indonesia takes as reference the various global and regional agreements that adopt a number of basic principles as follows:

- ***Focusing on equity:*** Policies and programs on NCD prevention and control of must be aimed at reducing disparity in the provision of NCD related services with regard to social determinants such as education, gender, socio-economic status, and ethnicity.

- ***Involvement of all relevant sectors and stakeholders:*** In order to control NCD and their risk factors, coordination is needed, both within the health sector as well as with other sectors, such as agriculture, education, religion, domestic affairs, environment, finance, communications and information, sports, trade, industry and transportation. This also needs to be strengthened by the involvement of stakeholders such as the government, civil society organizations, academicians, private entities, business sector, and international organizations.

- ***Life-course approach***: Life-course approach is key in the prevention and control of NONCOMMUNICABLE DISEASES, beginning with maternal, prenatal, ante natal, and post natal health, as well as nutrition for mothers; continued with proper food for infants, including breastfeeding and adolescent health; followed by health promotion in order to create a healthy productive population, healthy ageing and supported by service and rehabilitation for NCD sufferers.

- ***Balance between population- and individual-based approaches:*** A comprehensive strategy for preventing and managing NCD calls for a balance between approaches/interventions aimed to reduce the risk factors of the general population and approaches specifically targeted at high-risk individuals.
- ***Community empowerment*****:** The population and community must be empowered to improve their health status and become an active partner of the government in disease prevention and management.

- ***Health System Strengthening:*** Revitalization and reorientation of healthcare services particularly at the primary healthcare facilities towards health promotion efforts, disease prevention, early detection and integrated NCD related services.

- ***Universal Health Coverage***: All elements of the population, particularly the poor and vulnerable groups must have access to healthcare with national standard, consisting of promotional, preventive, curative, rehabilitative, palliative services, as well as access to esensial, save, affordable, effective quality medicine without any financing issues.

- ***Evidence-based strategies*****:** The development of policies and programs must be based on scientific evidence, best practices, cost effectiveness, affordability, as well as principles of public health and needs of the community.

- ***Management of conflicts of interest:*** Public health policies for the prevention and management of NONCOMMUNICABLE DISEASES must be free from the vested interest of any specific group or party. As such, conflict of interest must be recognized and managed as best as possible.

4.2. Global and Regional Strategies to Prevent and Manage NCD

4.2.1 Global Strategy to Prevent and Manage NCD

The global initiative to prevent and manage NONCOMMUNICABLE DISEASES (NCD) with a focus on providing attention to developing countries has been internationally agreed upon through the resolution of the World Health Assembly in 2000. The global strategy consists of three pillars: (i) primary prevention; (ii) healthcare service strengthening, and; (iii) surveillance.

a) NCD Prevention

The risk factors of NONCOMMUNICABLE DISEASES are mostly preventable. Prevention can include intervention aimed at the entire population to prevent the emergence of disease risk factors and providing early detection and diagnosis as well as through case management at healthcare facilities in a cost effective and comprehensive manner.

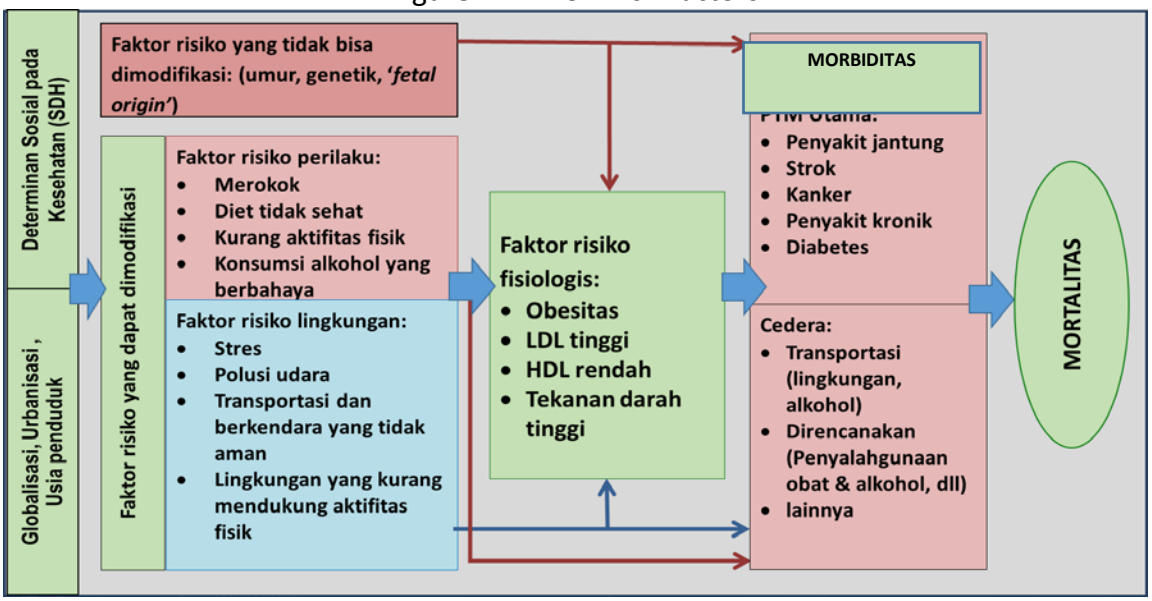
Figure 1 below explains the various types of risk factors and their impact on major NONCOMMUNICABLE DISEASESs. There are four risk factors:

- Non-modifiable risk factors
- Behavioral risk factors
- Environmental risk factors
- Physiologic/biological risk factors

The diagram also shows that there are social health determinants and globalization that has an effect on changes in behavior and environment. As such, the prevention of NONCOMMUNICABLE DISEASES is a series of efforts to reduce the prevalence of risk sectors, whether behavioral risk factors as well as environmental risk factors that affects the occurrence of physiological risks, which in turn will increase the possibility of major

NONCOMMUNICABLE DISEASESs **arising**. It is clear that many of these risk factors are influenced by elements outside the health sector, such as air pollution, supply of healthy food, availability of sports facilities, modern lifestyle, etc. This condition presents the implication that efforts to prevent NCD requires the collaboration of all elements of society consisting of the various stakeholders across the relevant sectors, ministries, professions, NGOs and the general public.

Figure 4.1. NCD Risk Factors



Source: Modified from Global Health 2035: a world converging within a generation. USA, The Lancet. 2013.

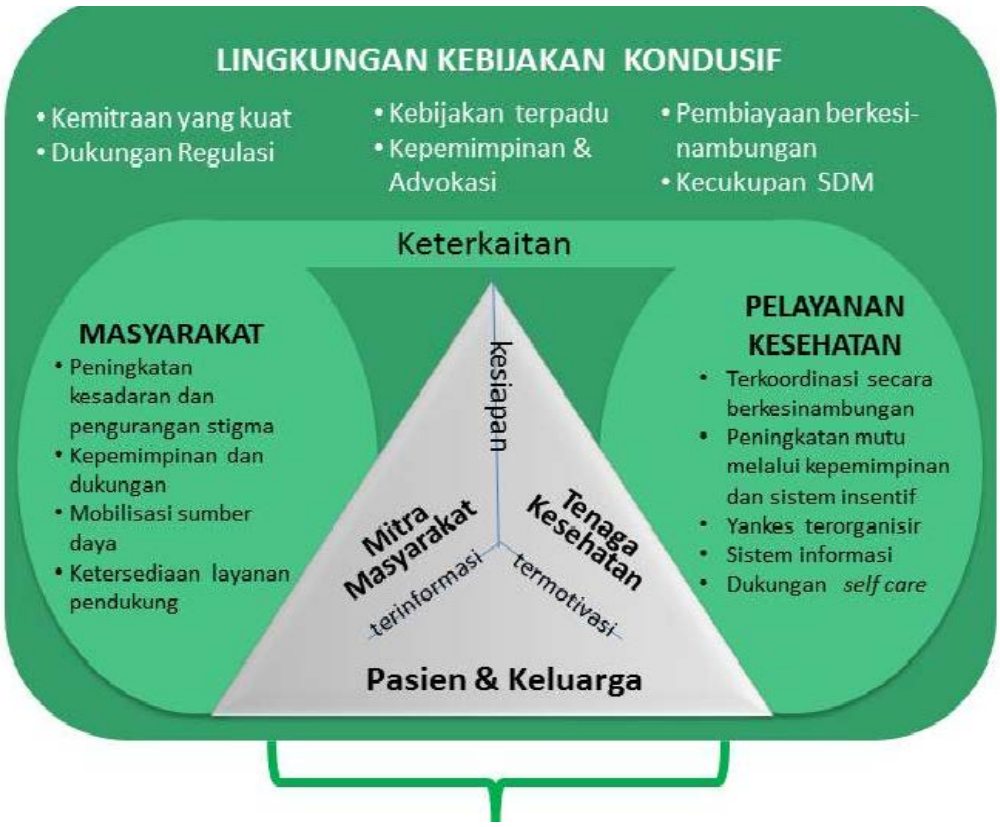
b) Strengthen health systems and improve NCD management

Effective NCD prevention and management requires a robust health system that can guarantee intensive interaction among healthcare networks at all levels, from the primary, secondary to the tertiary levels, including promotional-preventive services as well as palliative and rehabilitative treatments.

The effectiveness of primary healthcare services is essential in controlling risk factors, be it behavioral risk factors (smoking, alcohol consumption, lack of exercise, and unhealthy diet) or biological (high blood pressure, high blood sugar, obesity, and dyslipidemia).

WHO has developed the Innovative Care for Chronic Conditions (WHO-ICCC) model. The principle of this model is that healthcare services for chronic diseases such as NCD not only relies on clinical diagnosis and intervention – despite their obvious importance – but also require the support of the environment that understands the complexity of providing healthcare services as well as collaboration from health personnel and the public, particularly the patients and their family. For example, therapy given for a chronic disease will not bring significant benefit if medicine is not supplied at a stable rate, if the patient does not take the medicine as prescribed, if laboratory technicians are unavailable when needed, if the patient takes the medicine but maintains his habit of smoking, consuming alcohol, consuming unhealthy diet, and lack of exercise.

Figure 4.2. Framework of WHO's Innovative Care for Chronic Conditions)



In order to ensure better outcomes in the management of chronic diseases, a framework involving all elements of society and health sector players and health policymakers is needed.

- The general public including patients and their family must be provided with adequate information regarding risk factors and the severity of the illness and should be motivated to adopt a clean and healthy lifestyle and other measures to improve the social determinants within their environment.

- The surrounding social group/community needs to be prepared to help patients and their family to recognize the risk factors that they are exposed to, whether as individuals or community, and to mobilize resources to provide supporting services, such as the availability of vegetables and fruits, sports locations, smoking free zones, etc.

- Healthcare service providers must also be given the capacity to prepare quality service, properly coordinate, and have the necessary equipment and medicines.

- Positive policies need to be developed and implemented by competent leadership with the ability to develop partnership, create conducive regulatory framework, integrate various health-conscious policies/activities, and mobilize resources.

It is clearly apparent that a transformative leadership at the various administrative level from the policymaker down to the implementing units is greatly needed. Additionally, a common understanding is needed in the effort to prevent and manage NCD due to their multi-faceted nature and long-term treatment/management.

WHO-ICCC recommends a number of basic principles of service:

- Evidence Based Decision Making
- Population Focus
- Prevention Focus
- Quality Focus
- Integration
- Flexibility and Adaptability

The basic principles are then made into a part of an integrated service approach to chronic disease or the Integrated Chronic Disease Management (ICDM) model, aimed at:

Creating a conducive situation to manage chronic disease through:

- A more integrated policy strengthening
- Strengthening of partnership and collaboration with external parties
- Legislative support

Building the community's capacity to manage chronic diseases through:

- Raising awareness and reducing stigma within the community
- Mobilization of community's resources

Reorienting the healthcare service providers to improve the chronic disease sufferers' health status through:

- Building the capacity of health workforce
- Enhancing the efficiency of primary healthcare providers
- Encourage individuals to undertake measures to prevent NCD in a self-reliant manner
- Strengthening referral network for hospitals and the community
- Using health information system, and
- Using innovative technology

In this strategy, the most important element in strengthening the primary healthcare facilities is a special team-based assignment for: 1) NCD related services, 2) risk factor control, and 3) effective mentoring of community-based activities. The team with the assistance of volunteers will visit homes and disseminate information on the importance of clean living behavior to create healthy families. High risk population will be referred to healthcare facilities. Health volunteers will also provide education to family members of patients who are diagnosed with chronic disease on the importance of changing their habits to a more healthy living and following through with the medical treatment. Ideally, patients with chronic NCD will have the capacity to implement self-care.

In order for service to be effective, health personnel need to have the ability to communicate effectively, conduct proper clinical examination, provide accurate diagnosis and manage cases using evidence-based clinical intervention, as well as conduct monitoring to improve service provided to patients.

c) Surveillance

The primary objective of disease surveillance is to make observations of a disease's tendency with the aim of: a) identifying and minimize the negative effect or impact of any extraordinary event or epidemic; and b) assess the efficacy of a program or healthcare service. Surveillance covers risk factors and management interventions of a disease. A comprehensive surveillance system needs to be strengthened for NONCOMMUNICABLE DISEASES. The system must comprise of: (i) monitoring of exposure to risk factors that may cause NCD to occur, such as unhealthy living habits and other risk factors, (ii) monitoring of impact of the disease and cause of death, and (ii) response from the health system including capacity of healthcare providers, access to and quality of intervention programs.

4.2.2 Regional Strategy in NCD Prevention and Management

By taking into account the South-east Asia regional context, SEARO-WHO recommends member states in the region to further breakdown the three pillars into four strategic areas in the prevention and management of NCD, namely: (1) Area 1: Advocacy, partnership and leadership; (ii) Area 2: Health promotion and risk reduction; (iii) Area 3: Health systems strengthening for early detection and management of NCDs; dan (iv) Area 4: Surveillance, monitoring and evaluation and research; as illustrated in Figure 3.

Figure 4.3. Strategic Areas for the Prevention and Management of NCDs (adopted from SEARO-WHO 2013)

Source: Modified from SEARO-WHO 2013

Area 1: Advocacy and Partnership, consisting of advocacy and cross-sector partnership to enhance and accelerate mitigation of NONCOMMUNICABLE DISEASES. Given that many determinants and risk factors of NONCOMMUNICABLE DISEASES lie within non-health related sectors, measures to prevent and manage NCDs will not be met with success without support from other relevant sectors. The output expected from this area is an increased political commitment and the functioning of an effective cross ministry coordination mechanism and availability of resources on a sustainable basis.

Area 2: Health Promotion and Risk Reduction, aimed at developing community interventions to reduce the major risk factors. Implementation of activities in this area focuses on instilling Clean and Healthy Living behaviors which would reduce the consumption of tobacco products, increase consumption of fruits and vegetables, reduce fat, sugar and salt intake, reduce alcohol consumption and increase physical activities.

Area 3: **Strengthen Health system and improve NCD management,** aimed at strengthening the healthcare system, particularly the primary healthcare. Activities carried out in this are expected to enhance access for the community to quality healthcare for managing NCDs, be it public health efforts or individual health efforts.

Area 4: Surveillance, Monitoring, Evaluation and Research of NCD, aimed at increasing availability and use of data to develop policies. The strategy is one of Indonesia's reference in developing the national strategy for NCD prevention and management, which is adapted to suit the currently existing needs and capacity.

4.2.3 International Experience in the Prevention and Management of NCDs

The World Health Organization dan World Economic Forum (2011) has identified various cost effective intervention to prevent and control NONCOMMUNICABLE DISEASES, as listed in Table 4.1.

Table 4.1. International experience in selection of NCD prevention and management intervention
("best buys" intervention)

Risk/Disease	Intervention
Use of Tobacco Products	1. Tax increases 2. Free-Smoking Zone at the workplace and public places 3. Health information and warnings 4. Banning of cigarette commercials, promotion and sponsorships
Consumption of dangerous alcohol	5. Tax increases 6. Restriction of access to retail alcohol 7. Ban on advertisement of alcoholic drinks
Unhealthy diet and lack of physical activity	8. Reduction of salt intake from meals 9. Replacing trans fat with polyunsaturated fat in diets 10. Campaign through mass media on balanced diet and physical activities
Cardiovascular disease and diabetes	11. Counseling and multi-drug therapy for population running a high risk of suffering heart attack and stroke, including for patients who are suffering from cardiovascular disease. 12. Treatment of heart attack with aspirin
Cancer	13. Hepatitis B immunization to prevent liver cancer 14. Screening for and treatment of pre-cancer lesions to prevent cervical cancer

Source: World Health Organization and World Economic Forum. From Burden to "Best Buys": Reducing the Economic Impact of NONCOMMUNICABLE DISEASESs in Low- and Middle-Income Countries. Geneva, 2011

4.3. National Strategy for NCD Prevention and Management in Indonesia

To ensure the achievement of the targets set in Indonesia's 2015-2019 National Medium Term Development Plan (RPJMN) and the Ministry of Health's 2015-2019 Strategic Plan (RENSTRA), a national strategy for NCD prevention and management in Indonesia is needed. The strategy must refer to the global strategy and the south-east Asian regional strategy, subject to the necessary adjustments to suit with the challenges and issues and capacity of the Indonesian people.

Referring to the strategy recommended by WHO, the national NCD prevention and management strategy consists of four pillars, namely: 1) Advocacy and partnership; 2) Health promotion and risk reduction; 3) Health systems strengthening, and 4) Strengthening of surveillance, monitoring and evaluation and research. The logical framework of Indonesia's NCD Prevention and Management Strategy (SN-PP-PTM) can be referred to in Figure 4.4.

Implementation of the national NCD strategy will be affected by: 1) direction taken by the national development policy and strategy, 2) national development policy direction, 3) regulatory framework, 4) institutional framework, 5) financing framework, and 56) the global, regional and national strategic environment.

a) Advocacy and Partnership

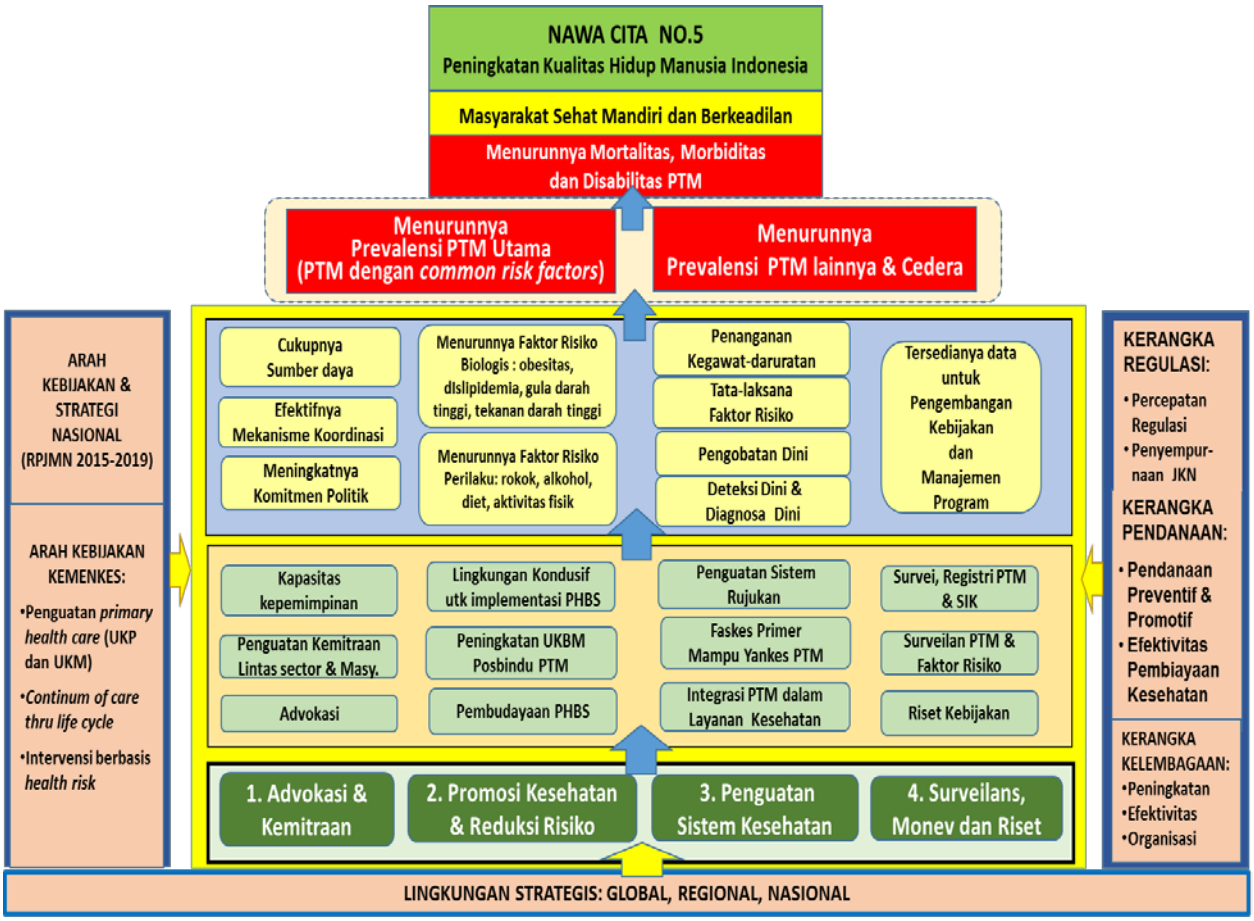
Activities in this area of strategy include advocacy and cross sector partnership to increase and accelerate the mitigation of NONCOMMUNICABLE DISEASES. The focus of the activities in this area is on: (i) increasing intensity of advocacy, (ii) strengthening partnership with the community and across sectors and ministries/institutions, and (iii) efforts to build leadership capacity at all administrative levels. The output expected from this area is an increased political commitment and the functioning of a ministry coordination mechanism which can effectively ensure the availability of resources to implement the program on a sustainable basis.

Advocacy is needed to ensure understanding of the role of every related sector and institution to support the realization of a healthy community. The complex interaction between the socio-cultural, environmental and economic factors that affect the community's health status calls for awareness on the part of all governmental institutions to take into account the health aspect in every policy development process. In other words, the implementation of "health in all policies" and a common awareness of the importance of NCD prevention and mitigation across sectors is key for the success of this program. Additionally, partnership between the government and NGOs/CSOs can give a major contribution in raising the community's awareness regarding health. Health campaign can be undertaken jointly by the government and NGOs/CSOs. CSOs can organize and mobilize the community through education to enable them to make the right choices.

Cross-sector partnership should be preceded by the preparation of a cross sector planning document which will serve as a roadmap and reference in determining the actual activities or actions to be taken by the respective sector/institution within a given period. To facilitate this

effort, the National NONCOMMUNICABLE DISEASES Management Network Team (Tim JKN PPTM) established under Ministry of Health Decree Number 853 of 2009 needs to be revitalized.

Figure 4.4. **Logical Framework of NCD Prevention and Management in Indonesia**



Health Promotion and Risk Reduction

The current situation presents tougher challenges in creating healthy living behavior. A number of industrial sectors have made the public vulnerable to the adoption of unhealthy habits, resulting in increased exposure of the public to risks of NCD, such as smoking, diet that are high in fat, sugar and salt, consumption of alcoholic drinks and other unhealthy food.

The community plays an important role in preventing NCDs, such as fostering clean and healthy living behavior within the community. Clean and healthy living in the prevention of NCDs can be achieved through the implementation of 'CERDIK', an Indonesian acronym for "Undergo regular medical checkup, eliminate cigarette smoke, exercise often, consume healthy diets with balanced calories, take adequate rests, and manage stress."

Community-based health measures such as the NCD Education Post (Pos Pembinaan Terpadu (Posbindu) PTM) is very important in controlling the risks of NCDs. The public must be motivated to be responsible for their own behavior, including the implementation of

CERDIK. The environment should be set up in a way so as to provide space for the public to make the right choices and avoid factors that may cause health problems, including NONCOMMUNICABLE DISEASES.

Additional, controlling of the risks of NCD should be applied through a life-course approach. Therefore, such measures sis recommended to be introduced during the early childhood years, adolescence, productive period and to the senior years. Bearing this in mind, school is an important institution in the campaign to prevent NCD at an early age and during adolescence. The School Health Campaign (Usaha Kesehatan Sekolah or UKS), which among others promote clean and healthy living or implementation of CERDIK within the school community, including the teachers, school administrators, and students. UKS personnel at the schools, PUSKESMAS and local government offices play a major role in these activities, including to act as role models. It is recommended that the NCD prevention and management component of the UKS be made as a compulsory program of the PUSKESMAS so that risk control and early detection can be implemented during the early years. Meanwhile, for the targeted productive age and geriatric groups, NCD prevention and management can be carried out through the "Posbindu PTM" program at the workplace and through community groups, and integrated into the Posbindu PTM and Posyandu Lansia.

Malnutrition during pregnancy will affect fetus development and low birth weight babies (BBLR) who can potentially grow to be stunted infants and become adults with risks of suffering obesity, diabetes and cardiovascular disease.

b) Improve NCD management and strengthen Health System Strengthening

Effective NCD prevention and management requires a robust health system that can guarantee intensive interaction among healthcare networks at all levels, from the primary, secondary to the tertiary levels, including promotion-preventive services as well as palliative and rehabilitative treatments of NCDs. An effective primary healthcare service is key in a successful management of chronic disease. As such, all healthcare facilities at the primary level must gradually be enabled to provide healthcare service for NCD cases in an integrated manner.

Given the wide variety of NONCOMMUNICABLE DISEASES and priorities that must be pursued, WHO has developed a guideline to strengthen services at primary healthcare facilities known as 'Package Essential for NONCOMMUNICABLE DISEASES Interventions (PEN) for Primary Health Care in Low Resource Setting' (2010). The guideline identifies the types of service expected to be provided at the facilities in a cost-effective manner and the standards to be met by the necessary facilities and infrastructure, particularly with regard to minimum availability of medicine and equipment to allow such services to be provided. Referring to this guideline, the Ministry of Health has developed an NCD Integrated Treatment for primary healthcare facilities, particularly the PUSKESMAS. Strengthening the primary healthcare service would ensure early detection, early diagnosis, and early treatment, including the strengthening of risk management. In this area of strategy, the referral system must also be reinforced to ensure the handling of emergencies and cases that need referral. To allow such

strengthening to be as effective as possible, synchronization needs to be done with the National Health Insurance scheme.

At the general level, a reorientation of the healthcare system is needed to enhance the outcome of healthcare services for chronic cases, which can be undertaken among others through the following: (i) raising the competence of the health workforce; (ii) enhancing operational efficiency and effectiveness of primary healthcare facilities; (iii) strengthening the referral system; (iv) encouraging the community, families and patients to undertake prevention and treatment in a self-reliant manner; and (v) utilizing information technology.

c) Surveillance, Monitoring and Evaluation and Research of NCDs and their risk factors

In principle, the output expected from this pillar is an increased availability and use of data for policy development and programs, as well as in the selection of NONCOMMUNICABLE DISEASES prevention and management activities at the national and the sub-national levels.

Strengthening of surveillance is aimed at improving the availability of data on the risks and other determinants of NCD, morbidity and mortality rate, as well as strengthening of monitoring system to evaluate NCD prevention and management programs and activities.

Strengthening through integrating NCD surveillance measures into the Health Information System and regular collection of data covers behavioral risks as well as metabolism risks such as alcohol consumption, physical exercise, use of tobacco, unhealthy diet, obesity, high blood pressure, blood sugar. Such data should also include health determinants such as the marketing of cigarettes and alcoholic products. The collected data should present gender, age, economic status to monitor trend of the disease and progress of the program.

Research on policy and public health relating to NCD is greatly needed to assess the impact of the various activities that has been designed, from advocacy, partnership, health promotion to primary healthcare system strengthening, on the various indicators before measuring the outcome such as prevalence of smoking among the 15-18 year age group. Given that NCD prevention and management require strong cross sector support, an NCD surveillance, monitoring and evaluation and research network is needed that can provide input for policies on NCD prevention and management.

4.4. Identification of Ministries/Institutions In The Prevention And Management of NCD

The success in any NCD prevention and management program require political commitment and adequate and sustainable supply of resources. Additionally, cross-cutting programs need the support of the community, academicians, the business community and other stakeholders. In order to elicit a significant impact from such measures, roles need to be identified under the partnership programs. The following matrix identifies the sector, ministry/institution and other components of community that play a part in managing NCD risks.

Table 4.2. Sectors/Institutions having a role in NCD Prevention and Management

RISK	INTERVENTION	SECTOR/INSTITUTION
Use of tobacco products	1. Monitoring of compliance with the prevailing regulations: • Cigarette packaging and label • Implementation of smoke free zone (KTR) • Restrictions on cigarette commercials • Utilization of cigarette duty to control tobacco and NCD prevention and management 2. Finalize pending regulations: • Regulation on the Use of Tax and cigarette duty • Regulation to increase cigarette tax and duty • Smoking free zone for regions adopting such regulation 3. Identification of required regulations: • Cigarette advertisement ban • Penggunaan/distribusi/ketersediaan produk tembakau 4. Anti-smoking mobilization/campaign 5. Intensive health education, among others through UKS, workplace	o Coordinating Ministry for Human and Culture Development o Ministry of Industry o Ministry of Education and Culture o Ministry of Religious Affairs o Ministry of Manpower o Ministry of Finance o Ministry of Interiors o NGOs, Professional Bodies o Sub-national Government o Development Partners o Ministry of Trade
Dangerous consumption of alcohol	5 Implementation of regulations on consumption of alcoholic drinks: • Implementation of regulations relating to tax and pricing policy to restrict consumption of alcoholic drinks • Implementation of regulation to impose drinking age limit • Regulation to limit supply and access to alcoholic drinks • Restriction or ban on alcoholic drink commercial/promotion • Prohibition of alcoholic drink for drivers 6 Social mobilization for campaign to prevent abuse of alcohol and illegal liquor.	o Coordinating Ministry for Human and Culture Development o Ministry of Trade o Ministry of Religious Affairs o o Ministry of Education o Ministry of Interiors o Ministry of Social Affairs o Ministry of Transportation o Ministry of Tourism and Creative Economy o Food and Drugs Agency o National Drugs Enforcement Agency o NGOs, Professional Bodies o Sub-national Government o International Development Partners
Lack of Physical Activities	o Create conducive environment for physical activities (e.g.: sports facilities, running track, bicycle track, and city zoning) at public places, workplace and	o Coordinating Ministry for Human and Culture Development

	educational institutions o Public education through multi media o Social mobilization for public campaign and community sports	o Ministry of Youth & Sports o Ministry of Education and Culture o Ministry of Public Housing o Ministry of Interiors o NGOs, Sub-National Government
Unhealthy Diet	1. Increase production: • fish products, to make them more affordable for the people • agricultural products: fresh vegetables and fruits at an affordable price for the people 2. Undertake review of regulations and identify regulations needed to promote consumption of fruits and vegetables and reduce consumption of fat, sugar and salt: • Review for setting of tax on unhealthy food (food that are high on sugar, salt and fat) • Strengthening of regulations relating to restriction of sugar, salt and fat content in food • Review of implementation of subsidy for domestic fruits and vegetables • Food Safety • Reduction of import of fresh and processed fruits and vegetables 3. Provide protection and support to: • fruit and vegetable farmers and guarantee their distribution and marketing • fishermen, and ensuring distribution and marketing of fresh fish, to avoid preservatives/salting 4. Conduct strengthening of food safety program, among others through restriction on the use of agricultural and husbandry substances (pesticide, preservatives, etc.) that are hazardous to health in the production process 5. Advocacy to create conducive environment to increase consumption of vegetables and fruits: • developing agricultural innovations to ensure supply of fruits and vegetables that are of high quality, safe, and affordable • strengthening of efforts to use gardens to cultivate fruits and vegetables 6. Raising the public's awareness to reduce consumption of sugar, salt and fat and promoting the habit of consuming a balanced diet.	o Coordinating Ministry for Human and Culture Development o Ministry of Agriculture o Ministry of Maritime Affairs and Fisheries o Ministry of Industry o Ministry of Trade o Ministry of Education o Ministry of Religious Affairs o Ministry of Interiors o National Development Planning Agency (Bappenas) o Ministry of Transportation o Food and Drugs Agency o NGOs o Sub-National Government o Development Partners

CHAPTER 5: STRATEGIC ACTIONS FOR THE PREVENTION AND CONTROL OF NCDS

The national strategy for the prevention and control of NCD as described in the preceding chapter are implemented through a series of strategic activities or actions to meet the targets specified in documents: (i) National Medium Term Development Plan 2015-2019 for health, (ii) Ministry of Health Strategic Plan, and (iii) National Action Plan for the Prevention and Control of NONCOMMUNICABLE DISEASES 2016-2020.

5.1. Summary of key action and indictors of progress

The strategic actions identified under the four pillars of strategy – as detailed in the preceding chapter – are follow up activities and adoption from the global or regional experience that are deemed to be able to provide contribution to the achievement of the program goals (figure 1A).

KEMENTERIAN KESEHATAN REPUBLIK INDONESIA

Table 5.1 National Multisectoral Action Plan for NCD Prevention and Control 2016-20
--- Summary of key actions

Commitments	Key actions	Indicators of Progress
In the area of Advocacy, partnership and leadership	• Prioritize NCD in the development agenda of Indonesia • Synchronize actions for NCD prevention and control among multisectoral agencies • Build partnership mechanisms with government agencies, social media and media organization, civil society and NCD alliances and initiation of champions • Set up of Joint Steering Committee at the national level and NCD Coordination Committees at provincial and district levels with the presidential decree • Increase investment and introduce new mechanism for financing NCD prevention and control	**1. Establishment of time-bound national targets and indicators based on WHO guidance (1) #** **2. An operational multisectoral national strategy/action plan that integrates the major NCDs and their shared risk factors (4) #** 3. NCD related targets incorporated into the monitoring framework of the Sustainable Development Goals Establishment of joint-secretary for improving coordination 4. No of relevant sectors prioritized and implemented NCD interventions 5. Adequate fund allocated for implementing National NCD MAP 6. Availability of adequate human resources at national, district and grass root levels to perform NCD related activities
Commitment	**Strategic Action**	**Indicators of Progress**
In the area of prevention and reduction of risk factors	• Strengthen fiscal policies, improve legislations and enforce the existing regulations for tobacco and alcohol • Promote food labelling and public education on healthy food and reduction of salt consumption • Incorporate physical activity in urban planning and community actions • Promote healthy settings in villages/communities, schools and work places • Promote community based programmes to reduce risk behaviours	**7. Reduce affordability of tobacco products by increasing tobacco excise taxes (5.a) #** **8. Create by law completely smoke-free environments in all indoor workplaces, public places and public transport(5.b) #** 9. **Warn people of the dangers of tobacco and tobacco smoke through effective health warnings and mass media campaigns (5.c) #** **10. Ban all forms of tobacco advertising, promotion and sponsorship(5.d) #** **11. Regulations over commercial and public availability of alcohol (6.a) #** **12. Comprehensive restrictions or bans on alcohol advertising and promotions (6.b) #** **13. Pricing policies such as excise tax increases on alcoholic beverages (6. C) #** **14. Adopted national policies to reduce population salt/sodium consumption (7. a) #** **15. Adopted national policies that limit saturated fatty acids and virtually eliminate industrially produced *trans* fatty acids in the food supply (7. b) #**

		16. WHO set of recommendations on marketing of foods and non-alcoholic beverages to children (7. c) # **17. Legislation /regulations fully implementing the International Code of Marketing of Breast-milk Substitutes (7. d) #** **18. Public awareness on diet and/or physical activity(8)#**
Commitment	**Strategic Action**	**Indicators of Progress**
In the area of management of NCDs and health care	• Update and revise technical guidelines, protocol and SoPs for improving NCD management • Scale up of early detection and effective treatment of CVDs, diabetes, hypertension, COPDs and cancers through primary health care approach • Strengthen referral links and patient pathways with higher health facilities and PUSKESMAS and linkages between NCD services in maternal and child health and other services within the health facilities • Build capacity of health workforce for early detection, management and patient education on NCDs • Expand coverage of financial protection through basic minimum service package for NCDs	**19. Evidence-based national guidelines/protocols/standards for the management of major NCDs through a primary care approach, recognized/approved by government or competent authorities(9) #** 20. **Provision of drug therapy, including glycaemic control, and counseling for eligible persons at high risk to prevent heart attacks and strokes, with emphasis on the primary care level (10) #** 21. Percentage of PUSKESMAS providing integrated NCD related services 22. Percentage of patients with 30% absolute CVD risk or greater receiving antihypertensive and satins
Commitment	**Strategic Action**	**Indicators of Progress**
In the area of surveillance, monitoring and evaluation	• Incorporate NCDs into national SRS for improving mortality and morbidity data, including IT enabled systems for patient record and follow up • Implement WHO surveillance framework for NCD risk factors • Monitoring progress in implementing NCD programmes • Improve NCD research in order to improve implementation and evaluate effectiveness of economic and fiscal policies for NCD prevention • Document best practices in NCD prevention and control and promote scaling up	23. Inclusion of NCDs and their risk factors in national health profiles **24. A functioning system for generating reliable cause-specific mortality data on a routine basis(2) #** **25. A STEPS survey or a comprehensive health examination survey every 5 years (3) #** 26. Mechanism of monitoring progress in place for implementation of the national NCD MAP 27. Establishment of national research network for NCDs

#: Global monitor process indicators

5.2. Strategic action and activities

The strategic action and activities, output, lead agency, relevant sector and time frame under each of the strategies can be elaborated in relevant tables as follows:

5.2.1 Strategic action area 1: Advocacy, partnership and leadership

Objectives:

- Make NCD prevention and management a priority in the development process
- Establish partnership among the relevant institution and community
- Support cross-sector efforts for NCD prevention and management

Strategic actions	Activities	Outputs	Lead agency	Relevant sector	Time frame
1. Advocacy					
1.1 Strengthen advocacy for NCD prevention and control	• Develop investment case for NCDs showing clear links of NCDs to social and economic burden and needs	• Report of investment case study for NCD prevention and control	Coordinating Ministry of Human development and Culture	Ministry of Planning, Ministry of Finance, Ministry of Health	2017
	• Develop advocacy packages on prevention and control of NCDs for government sectors and non-state actors at national, provincial and district levels	• Advocacy packages on prevention and control of NCDs available	Ministry of Health , Ministry of laws and human right	Ministry of Planning, Ministry of Communication, Information and technologies, MOH	2016
	• Organize parliamentary briefings, high level seminars on NCDs	• Parliamentary briefings, high level seminars on NCDs conducted	Coordinating Ministry of Human development and Culture	Ministry of Planning, MOH,	2017
	• Advocate for inclusion of NCD interventions or link their existing	• Inclusion of NCD interventions or link	Coordinating Ministry of Human	Ministry of Planning, Ministry of Health,	2016

	interventions to NCDs	existing interventions to NCDs in relevant sectors' work plan	development and Culture	Ministry of Law and Human Rights	
	• Convene regular meeting with relevant stakeholders to review progress in implementing NCD MAP	• Report of stakeholder work progress in implementing NCD MAP through regular review meeting	Ministry of Health, Ministry of Home Affairs,	Ministry of national development planning, Ministry of Law and Human Rights, Ministry of Health	2016
	• Conduct advocacy on NCDs to local government and mayors on basic minimum standard of services	• Meetings with local government and mayors conduced and report on promoting basic minimum standard of service submitted	Coordinating Ministry of Human development and Culture, Ministry of Home Affairs	Ministry of Planning, Ministry of Communication, Information and Technologies, Ministry of Health, Ministry of Home Affairs	2017
	• Conduct various activities to advocate UN organizations and development partners to include NCDs in their plans	• Advocacy materials issued and meeting with UN organizations and development partners conducted	Ministry of Health	Ministry of Planning, Ministry of Foreign Affairs	
2. Strengthen coordination through effective partnership					
2.1 Strengthen national coordination for multisectoral action on the prevention and	• Establish a national joint-secretariat for coordinating and facilitating implementation of NCD MAP	• Establishment of national joint-secretariat for coordinating and facilitating implementation of NCD MAP	Coordinating Ministry of Human development and Culture	Ministry of Health, Ministry of Planning	2017

Control	• Set up *provincial and district* NCD governing committee linked to the national joint-secretary for NCDs with clear terms of reference	• Establishment of *provincial and district* NCD governing committee	Ministry of Home Affairs	Coordinating Ministry of Human development and Culture	
	• Conduct stakeholder mapping to design health promotion and NCD scale up response	• Report of mapping stakeholders for promoting health and scaling up response to NCDs	Coordinating Ministry of Human development and Culture,	National Police, Ministry of Health	2016
	• Identify non-state actors and assign NCD related advocacy and service delivery projects to NGOs, CBOs and INGOs	• Report of identification of non-stakeholders and assignation of NCD related advocacy and service delivery projects to NGOs, GBOs and ING0s.	Coordinating Ministry of Human development and Culture,	Ministry of Health	2017
	• Consider a national NCD partnership forum as a platform to bring together various stakeholders	• Establishment of a national NCD partnership forum	Coordinating Ministry of Human development and Culture	Ministry of Health	2017
	• Engage with religious organizations in advocating on key NCD risk factors	• Agreement with religious organizations	Ministry of Religion	Ministry of Health	2016
	• Build partnership with social media personalities and agencies to champion for NCD issues and Identify champions- to generate public awareness on NCD issues	• Agreement with social media and champions for NCDs identified	Media Division, Ministry of Health, Ministry of Communication, Information and Technologies	Coordinating Ministry of Human development and Culture	2017

	• Build partnership with civil society organizations to address NCDs	• Establishment of partnership with civil society organizations and joint activities convened	Coordinating Ministry of Human development and Culture,	Ministry of Health	2016
	• Revitalize NCD alliance in Indonesia with inclusion of civil society organization as Members	• NCD alliance in Indonesia with inclusion of civil society organization revitalized	Coordinating Ministry of Human development and Culture,	Ministry of Health	2016
	• Support activities of consumer protection groups in Indonesia		Coordinating Ministry of Human development and Culture,	Ministry of Health, National Consumer Protection Agency	
2.2 Enhance international cooperation	• Participate in global dialogue and agenda building in NCDs including Global Coordination Mechanism (GCC) and other global forums on NCDs	• Participation in international dialogue on NCDs	Ministry of Health	Coordinating Ministry of Human development and Culture,, Ministry of Foreign Affairs , Ministry of Planning	2016
	• Identify specific contribution to NCD response by UN agencies in the UNDAF within the context of SDGs	• NCDs included in UNDAF	Coordinating Ministry of Human development and Culture,	Ministry of Health	2016
3. Strengthen national NCD leadership					
3.1 Improve public health infrastructure for NCD prevention	• Examine health workforce, in particular at the grass root level to perform NCD activities	• Report on health workforce to performance NCD activities	Ministry of Health	Ministry of Home Affairs, Local Government	2016

and control	• Provide facilities and staff to support and monitor the implementation of the NCD MSAP	• facilities and staff provided for NCDs	Ministry of Health	Ministry of Home Affairs , Local Government	2016
	• Capacity building of the relevant staff	• Training programmes provided	Ministry of Health	Local Government	2016
3.2 Finance NCD prevention and control	• Provide adequate fund to implement NCD MAP	• Adequate fund for NCDs provided	Ministry of Finance	Coordinating Ministry of Human development and Culture, Ministy of Planning, Ministry of Health , BPJS	2018
	• Explore additional financial resource to support implementation of NCD MAP	• New investment mechanism for NCDs identified	Ministry of Finance	Coordinating Ministry of Human development and Culture, Ministy of Planning, Ministry of Health	2018

5.2.2 Strategic action area 2: Reduce risk factors and promoting health

a) Reduce tobacco use

Objectives:

- Reduce consumption of tobacco use in all age groups
- Reduce exposure to second hand smoke increase access to tobacco cessation services
- Strengthen legislation and implementation of tobacco regulations

Strategic actions	Activities	Outputs	Lead agency	Relevant sectors	Time frame
1. Expand and enforce Smoke-Free Laws (P)	• Advocacy to subnational governments (cities and districts) to enact, implement and enforce smoke-free laws • Executive review to amend smoke free article in the prevailing Government Regulation No.109/2012 • Collaborate with relevant Ministries to strengthen implementation and enforcement of SF laws	• Advocacy materials developed and mass media campaigns implemented • Report of review amending smoke free article in the prevailing Government Regulation No.109/2012	MoH, LG MoH MoH		
2. Capacity building for tobacco cessation (O)	• Develop national quitline • Develop national policy/programme to strengthen tobacco cessation • Train health professionals in tobacco cessation services • Integrate Brief Advice in tobacco cessation services in health services including at primary health care	• National quitline established • National policy/programme to strengthen tobacco cessation implemented	MoH MoH MoH MoH		
3. Warn the dangers of tobacco (W)	• Initiate inter-ministerial process to amend the Government Regulation No.109/2012 to increase the size of pictorial health warning to 75% and to introduce plain packaging	• Process to amend the Government Regulation No.109/2012 initiated	MoH	BPOM	2019
	• Monitor compliance of packaging and labelling of tobacco products at retail, distributors and factory	• Report of monitoring compliance of packaging and labelling	BPOM		

	• Develop and disseminate public service announcements on health effects of tobacco and second hand smoke	• Availability of public service on health impact of tobacco use and second hand smoke	MoH		
	• Pubic campaign to discourage tobacco use and to support tobacco control laws and regulations	• Public campaign discouraging tobacco use and supporting tobacco control laws and regulations implemented	MoH		
4. Introduce comprehensive ban on tobacco advertising, promotion and sponsorship (E)	• Amend Broadcasting Law and Press Law to prohibit tobacco advertisements on electronic and printed media	• Broadcasting law and press law banning tobacco advertisement on mass media amended	MoCI, KPI, MoH		
	• Amend Government Regulation No.109/2012 to ban tobacco advertising, promotion and sponsorship	• Availability of stringent Government Regulation No. 109/2012 on banning tobacco advertising, promotion, and sponsorship.	MoCI, KPI, MoH		
	• Advocacy to subnational government to ban outdoor tobacco advertisement and tobacco sponsored/promotional events	• Advocacy materials on banning outdoor tobacco advertisement and tobacco promotion developed in subnational government	MoH, LG		
5. Raise taxes on tobacco product (R)	• Develop and enforce MoF Regulations on tobacco excise tax review and simplification	• MoF Regualtions on tobacco exercise tax review and simplification developed and enforced	MoF	MoH	
	• Raise taxes and inflation adjusted prices on tobacco products	• Taxes raised and prices adjusted for inflation on tobacco products	MoF	MoH	

	• Initiate interagency technical discussions on the issues of tobacco farmers, employment and tobacco trade with related sectors	• Interagency technical discussion on relevant issues of tobacco farmers, employment and tobacco trade initiated	MoH/MoA/MoMT/ MoT		
6. Ban sale of tobacco products to minors	• Strengthen implementation of policies through local government	• Implementation of policies through local government strengthened	LG/MoEdu		
	• Develop policies/regulation on ENDS products	• Policies/regulation on ENDS products developed	MoH,NADFC		
7. Accession to FCTC	• Conduct technical analysis and policy discussions on national impact of FCTC accession	• Report of technical analysis and policy discussion on national impact of FCTC accession prepared	MoH		

b) Reduce alcohol use

Objectives

- Reduce alcohol consumption among key population groups with harmful use of alcohol
- Make alcohol less available less affordable and available through fiscal and regulatory measures

Strategic actions	Activities	Outputs	Lead agency	Relevant sectors	Time frame
1. Increase taxes on alcoholic beverages	• Review and increase taxes on all types of alcohol taking into account the alcoholic content of the beverage, and with broad coverage across beverage types and strength (% alcohol volume)	• Taxes on all types of alcohol increased, accounting for various percentages of alcohol volume	Ministry of Finance	Ministry of Health	
2. Strengthen enforcement of existing	• Monitor compliance with alcohol laws related to sale of alcohol to underage using sting (mystery	• Report of monitor compliance with alcohol laws	Local Government	National Police	

policies on ban of advertisement and promotion of alcoholic beverages	shopping) operation				
	• Conduct assessment on advertisement and promotion of alcoholic drinks	• Assessment on advertisement and promotion of alcoholic beverage conducted and submitted	Ministry of Communication, Information and Technologies	Ministry of Health, National Food and Drug Agency	
3. Review and update alcohol legislations and policies	• Review legislations and policies for off- (convenient stores) and on (bars, restaurants) -premise sales of alcohol for individuals who are underage	• Report of current legislations and policies for off and on - premise sales of alcohol for the underaged developed and published	Ministry of Trade, Local Government	Ministry of Health	
4. Restrict production and sale of cheap local alcohol	• Enforce rules on illegal sale of cheap illegal alcohol products (eg, oplosan)	• Rules on illegal sale of cheap illegal alcohol products enforced	Ministry of Trade, Local Government	National Police, National Food and Drug Agency	
5. Promote programs to reduce alcohol related violence and injuries	• Conduct assessments on alcohol related violence such as domestic, street violence and social disorder	• Assessment on alcohol related violence conducted	Ministry of Health	Ministry of Women Empowerment and Child Protection	2019
	• National Ban use of alcohol among motorists(drivers)	• National ban on use of alcohol among motorists implemented	Ministry of Transportation	National Police	
	• Strengthen road side police inspections among motorists using alcohol breath analyzers and other tests	• Road side police inspection on motorists using alcohol breath analyzers and other tests strengthened	National Police	Ministry of Transportation	

6. Integrate alcohol abuse screening intervention in high problem areas	• Scale up training primary health care workers on brief interventions in high problem areas and regions	• Training for primary healthcare workers on brief interventions in high problem areas and regions scaled up	Ministry of Health	Local Government	2017
7. Advocate community based and political support for enforcement of alcohol laws and policies	• Support community groups, local leaders, and religious leaders to advocate on enforcement of alcohol rules such as drink driving, underage sales, advertisement and promotion of by the industry	• Advocacy materials on enforcing alcohol rules among commmunity groups, local leaders, and religious leaders developed	Ministry of Health	Local Government	
	• Conduct social mobilization campaigns against alcohol abuse and illegally produced alcoholic drinks	• Social mobilization campaigns against alcohol abuse and illegally produced alcoholic drinks conducted	Ministry of Health	Local Government, National Food and Drug Agency	

c) Promote healthy diet high in fruit and vegetables and low in saturated fat/trans-fat, free sugar and salt

Objectives

- Increase consumption of vegetables and fruits
- Reduce consumption of sugar, salt and fat
- Promote balanced diet

Strategic actions	Activities	Outputs	Lead agency	Relevant sectors	Time frame
1. Implement the Global Strategy	• Create mechanisms for monitoring health, content and	• Inspectors	National Food and	Ministry of Health, Ministry of Trade,	

on Diet, Physical and Health	nutrition claims on food and beverages advertisements		Drugs Agency	Ministry of Industry , National Consumer Protection Agency	
	• Implementing national policies on Controlling Childhood Obesity	• The national guideline on controlling Chilldhood Obesity	Ministry of Health	National Food and Drugs Agency, Ministry of Education, Local Government	2017
	• Enhancing the capacity of provider to control childhood obesity	• Trained provider at national and province	Ministry of Health	Local Government	2017
	• Integrating growth monitoring, healthy diet and physical activity in posyandu, Nursery, elementary school	• MoU integrated sectors on controlling obesity	Ministry of Health	Ministry of Education, Local Government	2018
	• Develop national policies on implementing WHO's recommendations on marketing of food and nonalcoholic beverages to children	• The policy on marketing of food and non-alcoholic beverages to children developed	Ministry of Health	National Food and Drugs Agency, Ministry of Education, Ministry of Finance, Ministry of Communication, Information and Technologies, Ministry of Trade, Ministry of Industry	2018
2. Advocate for healthy diet	• Develop national communication and implementation strategy to advocate the food based Indonesian dietary guidelines	• National strategy for communication and implementation	Ministry of Health	Ministry of Communication, Information and Technologies, Ministry of	2017

				Agriculture, Ministry of Education	
	• Integrate education of food-based dietary guidelines in teaching institutions and health workers training curricula	• MoU between MOH and Ministry of Education	Ministry of Health	Ministry of Education	2018
	• Review and revise the national food based dietary guidelines (current	• Report of national food based dietary guidelines • The national food dietary guidelines revised	Ministry of Health	National Food and Drugs Agency,	2019
3. Strengthen food and nutrition labelling	• Started the implementation of Ministry of Health regulations No. Year 2016 on Introducing mandatory food labelling and health messages for processed, pre-packaged foods	• Ministry of Health regulations on mandatory food labelling and health message for processed food Implemented	Ministry of Health	National Food and Drugs Agency, Ministry of Industry, Ministry of Trade, Ministry of Foreign Affairs	2019
	• Develop standard for nutrition labelling	• MOH Regulation on nutrition labelling	Ministry of Health	National Food and Drugs Agency,	2018
4. Use economic measures to promote healthy diets	• Develop fiscal policies to subsidize consumption of vegetables and fruits.	• Fiscal policies available	Ministry of Finance	Ministry of Agriculture, Ministry of Health -	-
	• Conduct research on trans-fat and sugar sweetened drinks and make a position paper to inform fiscal policy decisions on products high in sugar and trans fat	• Report of trans-fat and sugar sweetened drinks prepared	- Ministry of Health	NIHRD/NFDA/ Ministry of Finance	2018

	• Develop pricing and taxation methods to discourage consumption of products with high sugar	• Pricing and taxation methods to discourage consumption of products with high sugar developed	Ministry of Finance	Ministry of Health	
	• Develop/adapt national guidelines on sugar, salt and fat	• National guidelines on sugar, salt and fat developed	Ministry of Health	National Food and Drug Agency	2018
	• Establish national mechanism to monitor compliance of food producers and processors with requirements for salt, sugar and fat	• National mechanism established	Ministry of Health	National Food and Drug Agency, Ministry of Industry, Ministry of Trade, National Consumer Protection Agency	2018
5. Advocacy to create a conducive environment to increase consumption of fruits and vegetables	• Strengthening of efforts to utilize home gardens to grow fruits and vegetables	• Utilization of home gardens to grow fruits and vegetables increased	-Ministry of Agriculture	Local Government	2019

d) Promote physical activity

Objectives

- Increase physical activity levels at the population
- Increase access to conducive environment for physical activity

- Build vibrant partnership among stakeholders to promote physical activity

Strategic actions	Activities	Outputs	Lead agency	Relevant sectors	Time frame
1. Promote physical activity (PA) awareness across all age groups	• Develop national or sub-national PA guideline and recommendation for Indonesia for different age groups	• National or subnational PA guideline available	Ministry of Health	Ministry of Youth and Sports, Ministry of Education and Culture, Ministry of Higher Education and Research and Technology	
	• Develop mass media communication strategy for education on national recommendation on physical activity across all age groups	• Mass media communication strategy available	Ministry of Health	Ministry of Youth and Sports	
	• Integrate PA in community-based campaigns and events	• PA in community-based campaigns and events integrated	Local Government	Ministry of Youth and Sports, MoH, Ministry of Home Affairs	
2. Create conducive urban environment for active life-styles	• Organize healthy built environment policies for urban planners to develop pedestrian friendly structures, bicycle lane, public arears and parks for physical activities	• PA integrated in urban development plan	Ministry of Public Works	Local Government, Ministry of Home Affairs, Ministry of Health, Ministry of Village Affairs and Underdeveloped Areas and Transmigration	2019

3. Promote public and private partnerships to develop physical activity promoting venues including sports	• Establish collaborative mechanisms between public and private sectors to promote healthy workplace, healthy community, and support events for physical activities	• Collaborative mechanism between public and private sectors to promote healthy workplace, healthy community, and support events for physical activities established	Ministry of Health	Ministry of Social Affairs, Ministry of Village Affairs and Underdeveloped Areas and Transmigration, Ministry of Manpower , Local Government	2019
	• Review regulations and standards to ensure housing developers to construct healthy public housing and provide sports facilities, pedestrian track and bicycle path, public areas/park for recreation for children and elderly, as well as outdoor activities	• Report of the review regulations and standards	Ministry of Public Works	Ministry of Health , Local Government, Ministry of Youth and Sports	
4. Support PA promoting events	• Encourage the local governments to provide safe and affordable facilities for physical activities including sports and exercise at school, at workplace and in public area, as well as events similar to 'car free day', walk for health, family rally, etc.	Facilities for physical activities including sports and exercise at school, at workplace and in public areas improved by the local government	Ministry of Planning, Ministry of Home Affairs	Ministry of Health , Ministry of Youth and Sports, Ministry of Public Works	

e) Promote healthy behaviors and reduce NCDs in key settings

Objectives

- Increase participation of community, school and workplace in implementing healthy setting interventions

Strategic actions	Activities	Outputs +	Lead agency	Relevant sectors	Time frame
1.Establish healthy villages	• Develop guideline for healthy village	• Guideline for healthy village available	Ministry of Health	LG, Ministry of Village Affairs and Underdeveloped Areas and Transmigration	2018
	• Train community-based health workers on healthy lifestyle promotion and NCD prevention	• Training programmes for community health workers implemented	LG	Ministry of Health	2018
2.Establish health promotion schools	• Adapt WHO guideline for health promotion school	• WHO guideline for health promotion schools adapted	Ministry of Education and Culture	Ministry of Health	
	• Implement physical activity programmes for school children within school premise based on Ministry of Education Regulations	• PA programmes for school children implemented	Ministry of Education and Culture	Ministry of Health	2019
	• Orient school management and teachers on healthy lifestyle requirements for children	• School management and teachers oriented on health lifestyle requirements for children	Ministry of Education and Culture	Ministry of Health	
	• Review and update health promotion criteria in current school competency regulations	• Report of current health promotion criteria and updated criteria	Ministry of Education and Culture	Ministry of Health	
3.Establish healthy	• Develop guidelines for healthy work places	• Guidelines for healthy workplace	Ministry of Manpower	Ministry of Health,	2017

work places		available		Local Government	
	• Promote consortia of workplace (public and private) signing for healthy workplace programmes	• Healthy workplace programmes signed by consortia of public and/or private workplace	Ministry of Manpower	Ministry of Health, Local Government	2017
	• Support identification of best practice and best performers	• best practice and best programmers identified	Ministry of Manpower	Ministry of Health, Local Government	2016-2019

f) Reduce household air pollution

Objectives

- Increase awareness on household air quality among population
- Reduce the number of household using of biomass fuel for cooking and heating

Strategic actions	Activities	Outputs	Lead agency	Relevant sectors	Time frame
1. Strengthen capacity for documentation of indoor air quality and household pollution	• Develop indoor air quality guidelines	• Indoor air quality guidelines available			
	• Train environmental inspectors on measuring indoor air quality	• Training programmes for environmental inspectors implemented			
	• Conduct assessment on indoor air quality in selected sites	• Report of indoor air pollution assessment in the selected sites submitted			

2. Support cleaner technologies for cooking	• Support economic measures including government subsidies for improving cook stoves and cleaner technologies for low income group	• Households using • improved cook stoves increased			
3. Advocate on reducing household air pollution	• Develop education materials on household air quality	• Education materials on improving household air quality developed	Environment sector, MoH		
	• Conduct media and community campaigns on household air quality including prevention of exposure to passive smoking	• Media and community campaigns implemented	Environment sector, MoH		

5.2.3 Strategic action area 3: Strengthen management of NCDs and health systems

Objectives

- Make early detection and treatment for CVDs, diabetes, hypertension, COPDs and cancers available at primary health care facilities with effective referral links to higher tier of health facilities
- Build competency of health workforce for early detection, management and palliative care services of CVDs, diabetes, hypertension, COPDs and cancers
- Expand financial protection schemes for the poor for major NCDs

Strategic actions	Activities	Outputs	Lead agency	Relevant sectors	Time frame
1. Improve NCD management through strengthening health system					
1.1 Improve access and availability to essential NCD medicines and	• Review/ implement current treatment guidelines and protocols and endorse a	• Guidelines for NCD treatment reviewed	Ministry of Health	BPJS, Professional Associations	

technologies	nationally agreed protocol for management of NCDS (including referral pathways)	and or implemented			
	• Undertake synergistic budgeting exercise between MoH and local governments to ensure provision of essential NCD medicine and basic medical equipment and diagnostics including services for testing for glucose, Hb1C and lipid for primary health care centers	• Harmonized budget allocation report	Ministry of Health	Local Government, BPJS	
1.2 Strengthen capacity building for health workforce	• Train NCD teams with task sharing for NCD services in health facilities	• Training materials developed and pilot training conducted	Ministry of Higher Education and Research and Technology	Ministry of Health, Medicine's Faculties, Professional Associations	2016-19
	• Orient primary health care workforce on integrated approach to delivering package of NCD services at PUSKESMAS and through POSBINDU	• Guidance on orienting PHC workforce available	Ministry of Health	Local Government	2016-2019
	• Engage training institutions for capacity development of health work force (Engage Bapelkes to provide competency based refresher NCD management short term trainings/courses)	• Training materials available	Bapelkes	Ministry of Health	
1.3 Improve information on NCD management	• Improve use of ICT and use of mHealth for NCD case management, and record keeping with unique identifier	• ICT and mHealth for NCD care management widely	National data information Center (Ministry	NCD Directorate, Primary Health Care Directorate	2017

		used	of Health)	(Ministry of Health)	
	• Update patient record system for chronic care management	• Regular report of chronic care management	UHC(BPJS)	NCD Directorate , Primary Health Care Directorate (Ministry of Health)	2019
	• Promote use of Open source MRS	• Open source MRS widely used	BPJS	NCD Directorate , Primary Health Care Directorate (Ministry of Health)	2019
1.4 Increase financing for NCDs through innovative funding mechanisms and other government allocation	• Expand coverage of NCD package services within the JKN focusing on poor and unreached	• 100% of population covered by UHC, including NCD package service	BPJS , Ministry of Health	Local Government	2019
	• Provide funds for POSBINDU services through local government mechanisms	• Increased fund for POSBINDU service	Local Government	Ministry of Health	
1.5 Strengthening NCD services linkages with other health services	• Strengthen integration of NCD health education on diet, salt, physical activity, gestational diabetes screening, etc, in *posyandu* through maternal and child health areas	• Information package	Ministry of Health	Local Government	2016
2. Strengthen NCD management					
2.1 Improve access to basic NCD screening and management	• Scale up WHO PEN intervention and implement all four disease protocols	• 50% of PUSKESMAS implementing CVD risk charts	Ministry of Health	Local Government	2019

services at primary health care system	• Increase coverage of diabetes, hypertension, CVDs, COPDs through minimum service standard package of LGs	• Coverage of four main NCDs through minimum service standards package of LG increased	Local Government		
	• Develop and promote self-care management guidelines for major NCDs (diabetes, CVDs, cancers, and CRDs)	• Self-care management guidelines available	NCD Directorate, Ministry of Health		
2.2 Strengthen diabetes services	• Expand HbA1C testing at PUSKESMAS through JKN	• 100% of PUSKESMAS providing HbA1C testing	Ministry of Health	Local Government	2019
	• Establish the distribution system of life saving insulin and ensure availability at the appointed pharmacy and public health facilities	• The distribution system of life saving insulin available	Ministry of Health	Local Government	
	• Set up referral procedures for diabetes patients for regular ophthalmic examination	• Referral procedures developed	Ministry of Health	Professional Associations	
	• Develop referral protocol for screening gestational diabetes and orient midwives for referrals	• PUSKESMAS implementing gestational screening for diabetes	Ministry of Health	Professional Associations	
2.3 Strengthen of cancer services	• Expand Clinical Breast Examination (CBE) and VIA and pap smear facilities at PUSKESMAS	• 2400 centers conducting CBE and cervical cancer screening	NCD Directorate, Primary Health Care Directorate, Ministry of Health	BPJS	2019

	• Introduce HPV vaccination as a routine national immunization programmes	• All PUSKESMAS implementing HPV vaccination	Immunization sub directorate, Ministry of Health		2020
	• Establish common childhood cancer screening programme PUSKESMAS	• 5% of Puskemas (500)	NCD Directorate, Primary Healh Care Directorate Ministry of Health	Professional Associations, National Commission for Cancer	2020
2.4 Strengthening chronic respiratory diseases services	• Review guidelines on management of CRDs for PUSKESMAS and POSBINDU and initiate early detection	• Report of the review guidelines on management of CRDs for PUSKESMAS and POSBINDU	Ministry of Health	Professional Associations	2017
2.5 Improve the quality of care and outcome of NCD management	• Establish a quality assurance system for PUSKESMAS to improve the quality of care with focus on clinical services quality standards, management systems and risk management	• Establishment of a quality assurance system for PUSKSMAS	Ministry of Health	BPJS, Professional Associations	
3. Strengthen palliative care					
3.1 Expand palliative care services at primary health care level	• Develop guidelines and standards for PHC including access to severe pain killer	• Palliative care guidelines developed and Oral morphine available at PHC	Ministry of Health	Professional Associations , National Board of Narcotics, National Police	
	• Train primary health care workers on provision of palliative care services at PUSKESMAS and	• Training modules developed	Ministry of Health	Local Government, Professional	2017-2019

	through posbindu			Associations	
4. Community based approaches					
4.1 Build community networks for NCD screening and health education	• Engage community organizations and religious bodies for health promotion and NCD prevention	• A network with community organizations and religious bodies for NCD established	Local Government	Ministry of Social Affair, Ministry of Religion, Ministry of Women Empowerment and Child Protection	2016-19
	• Orient community groups, volunteers on home care (including palliative) for chronic diseases	• Community groups, volunteers on home care (including palliative) oriented for chronic diseases	PHCs, Ministry of Health	Community groups	
	• Orient *kadre* at Postbindu for NCD education and risk factor identification and screening	• *kadre* at Postbindu oriented for NCD education and risk factor identification and screening	Local Government	Ministry of Health	

5.2.4 Strategic action 4: Surveillance, monitoring and evaluation, research

Objectives

- Strengthen surveillance of major NCDS as a part of Health Information System
- Strengthen monitoring and evaluation of key interventions of the national strategic action plan for RAN PP-PTM 2015-2019
- Promote implementation of translational research and evaluation on NCDs and their risk factors

Strategic actions	**Activities**	**Outputs**	**Lead agency**	**Relevant**	**Time**

				sectors	frame
1. Strengthen Surveillance of main NCDs and their risk factors					
1.1 Integration of NCD related information into national health information system	• Strengthen facilities for health information system, particular at district level • Incorporate NCD information into "data & information-- national health profile" • Improve NCD information collection from district through province to ministry of health	NCD profiles at district, provincial and national level established	Center for data and information (PUSDATIN)	NCD Directorate	• 2020
	• Improve NCD website for user friendly and informative	Improvement of NCD website	NCD Directorate		• 2017
1.2 Improve mortality and morbidity data in SRS	• Incorporate mortality data related to NCDs into the Indonesia Sampling Registry System (SRS) in 128 sub districts with support of civil registry office/ ministry of home affairs MOHA) , and National statistics bureau, .	National mortality report with cause of death; Mortality data related to NCDs improved in the selected areas	National institute of Health research and development (NIHRD)	Center for data and information (PUSDATIN) and NCD Directorate /MOH	• 2020
	• strengthen population level cancer registry	Report of cancer registry	BKR (Health Service Directorate)	NCD Directorate	• 2018
1.3 Strengthen surveillance on NCD risk factors and health	• Conduct STEPS survey and GSHS	Report of STEPs	NCD Directorate/NIHRD		• 2018

service for NCD management	• Conduct GATS	Report of GATS	NCD Directorate/NIHRD		• 2019
2. Improve monitoring and evaluation of implementing NCD programmes					
2.1 Strengthen capacity and promote network for monitoring and evaluation	• Conduct workshop and training for surveillance personnel on tobacco and NCD surveillance, data management and analysis	Report of workshop and training	BKR(Health Service Directorate)	NCD Directorate, Center for data and information (PUSDATIN)	
	• Review a set of core indicators to monitor the implementation of NCD MAP	A set of core indicators developed and implemented	NCD Directorate (Ministry of Health)		2017
	• Adapt the SARA for monitoring essential medicines and basic technologies for NCDs	Report of essential medicines and technologies for NCDs	Health service Directorate (Ministry of Health)	NCD UNIT Directorate for basic health service	2017
	• Conduct evaluation of PEN services including follow up care of patient for NCD services	Report of evaluation of PEN including follow up care of patient for NCD services	NCD Directorate		
	• Review monitoring checklists for provincial and district level health supervisors and include tobacco and NCD services in the checklists	The checklists for provincial and district level health supervisors and include tobacco and NCD services in the checklists developed	NCD Directorate (Ministry of Health)		
3. Strengthen NCD research					
3.1 Increase research to generate	• Mapping national NCD research activities	Report of mapping NCD research activities	(Ministry of Health)	NIHRD	

local evidences related to burden of diseases, health services, health economics	• Facilitate establishment of networking of national health professional organization for NCD research	National network for NCD research established	(Ministry of Health)	NIHRD	
	• Conduct NCD burden study including cause of death	Report of NCD burden	NIHRD	NCD Directorate (Ministry of Health)	2018
	• Conduct economic evaluation of NCD services at primary health care services	Report of economic evaluation of NCD	NIHRD	NCD Directorate (Ministry of Health)	2018
	• Document best practices in NCD risk factor management in Indonesia	Report of best practices in NCD risk factors management in Indonesia	NCD Directorate (Ministry of Health)		2018
	• Undertake research on economic burden of tobacco and agro-economics studies	Report of economic burden of tobacco and agro-	NIHRD	NCD Directorate (Ministry of Health)	2018
	• Conduct evaluation on laws on advertising and marketing of alcohol products	Report on evaluation on laws on advertising and marketing of alcohol products			
	• Undertake impact analysis of tobacco and alcohol control policies/laws	Report of impact analysis of tobacco and alcohol control policies/laws	NAPZA (alcohol and substance abuse)	NCD unit	

CHAPTER 6: COORDINATION MECHANISM AND ACCOUNTABILITY FRAMEWORK

6.1 National Joint Secretariat for Multisectoral Response for NCDs

Effective prevention and control of NCDs is a multisectoral response involving multiple agencies. Coordination of stakeholders require a strategic mechanism that can optimize meaningful participation at the national and sub-national levels. Various overarching committees will coordinate the multisectoral coordination and engagement under the presidential decree.

At the national level, a Joint Secretariat will coordinate the multisectoral NCD response among various sectors. The Joint Secretariat will be constituted and managed by the Coordinating Ministry for Human and Cultural Development. The committee will be chaired by the **Vice President or the Minister of Health**. Members of the Joint Secretariat will be comprised of high- level bureaucrats from the various sectors and representation from the academia and civil society organization**.** The broad terms of reference for the Secretariat are to:

- Provide political leadership and guidance to relevant sectors for the prevention and control of NCDs
- Enhance the integration of NCD prevention and control in the policies and programmes of relevant Ministries and agencies of the Government
- Provide a dynamic platform for dialogue, stock taking and agenda-setting and development of public policies for NCD prevention and control
- Facilitate resourcing of the RAN PP- PTM
- Coordinate technical assistance for mainstreaming NCDs in relevant sectors at national, provincial and district levels
- Monitor implementation of the action plan and review progress at national and sub national levels
- Meet six monthly to review the progress of the implementation status of the RAN PP-PTM 2015-2019
- Submit a minimum of one yearly implementation status report of the RAN PP-PTM 2015-2019 to the Presidential Office
- Report on intergovernmental commitments pertaining to NCDs

6.1.1 Coordination

The Coordinating Ministry for Human and Cultural Development will serve as the coordinating office for the Joint Secretariat for NCDs. It is critical that full time staff with sufficient technical expertise to ensure coordinating responsibilities is dedicated for the coordination of multisectoral response for NCDs to ensure time conduct of meeting of the Joint Secretariat, and undertake effective coordination for multisectoral response initiatives. Key functions of the Coordinating Ministry for Human and Cultural Development are to:

- Organize meetings of the committee
- Develop the agenda for the meeting in consultation with the Chair and other sectors
- Follow up on decisions taken by the coordinating body

- Identify implementation gaps and propose measures to implement newer strategies and programmes
- Support stakeholder in accessing resource needs for implementing their commitments
- Facilitate bilateral/ multi-lateral meetings to advance work on thematic issues and agreed NCD goals, and
- Prepare consolidated reports on the implementation of the NCD response

6.1.2 Provincial and district Level NCD Committees

The NCD committees will be constituted at the provincial and district levels under the chair of the governor and mayors respctively. The core functions of these committees are to:

- Provide cross sectoral coordination to mainstream NCD prevention and control at provincial and district levels;
- Identify and access local Government resources for the implementation of the RAN PP-PTM;
- Conduct a quarterly meeting to monitor the implementation of the RAN PP-PTM);

6.1.3 Multisectoral collaboration accountability indicators

The progress of work of the coordination mechanism will be monitored in an accountability framework consisting of both process indicators and outcome indicators. The multisectoral coordination mechanism will be monitored using the following accountability process indicators:

- Number of full time and part time staff for multisectoral coordination
- Number of coordinating body meetings convened in a year at national and provincial levels
- Number of agencies attending the coordinating body meetings
- Sector-wise process indicators for the plan
- Resource allocation and utilization for NCDs by relevant sectors
- Policy decisions taken by the Coordinating body and other sublevel committees
- Number and nature of assistance requests received and processed by the Secretariat

6.1.4 Annual Consolidated Progress Report on NCD response to the President

The Joint Secretariat will generate an Annual Consolidated NCD Report on implementation of NCD prevention and control at the end of each financial year to the President. The report will highlight the overall achievements, performance of each implementing agency, document success, identify challenges and recommend solution to overcome the barrier in implementing the NCD action plan. The report will also be made available to the other stakeholders and international partners.

Similarly, provincial governments will generate annual report on multisectoral NCD response in thier jurisdiction.

6.2 Monitoring and evaluation of implementing NCD MAP

6.2.1 A logic model for monitoring a National Multisectoral Action Plan for NCDs

6.1 Figure 1 provides a logic model for monitoring a national multisectoral action plan for NCD prevention and control from inputs, process to outcomes. (Figure 6.1). The comprehensive global framework for monitoring prevention and control of NCDs will guide this process (Annex 1)

6.2.2 A framework for monitoring and evaluating progress in implementing national NCD MAP

Table 6.1 provides a national framework for monitoring and evaluating progress in implementing national NCD MAP, including key elements such as strategic action, output, leading agency, relevant agency, timeframe, process indicators and outcomes (targets).

6.2.3 Data sources and main methods for monitoring and evaluation

Mortality and morditiry data from the SRS

There are many data sources from health sector and relevant sectors that can be used to estaimate the health status of the population and monitor the trends of noncommunicable diseases, for instance, mortality and morbidity due to NCDs can be gained from the annual report of national health information generating from **sample registry system**. In addition, data of cancer can be get from national cancer registry areas in country in order to estimate the cancer morbidity.

Risk factors and health care data from WHO STEPs and GSHS

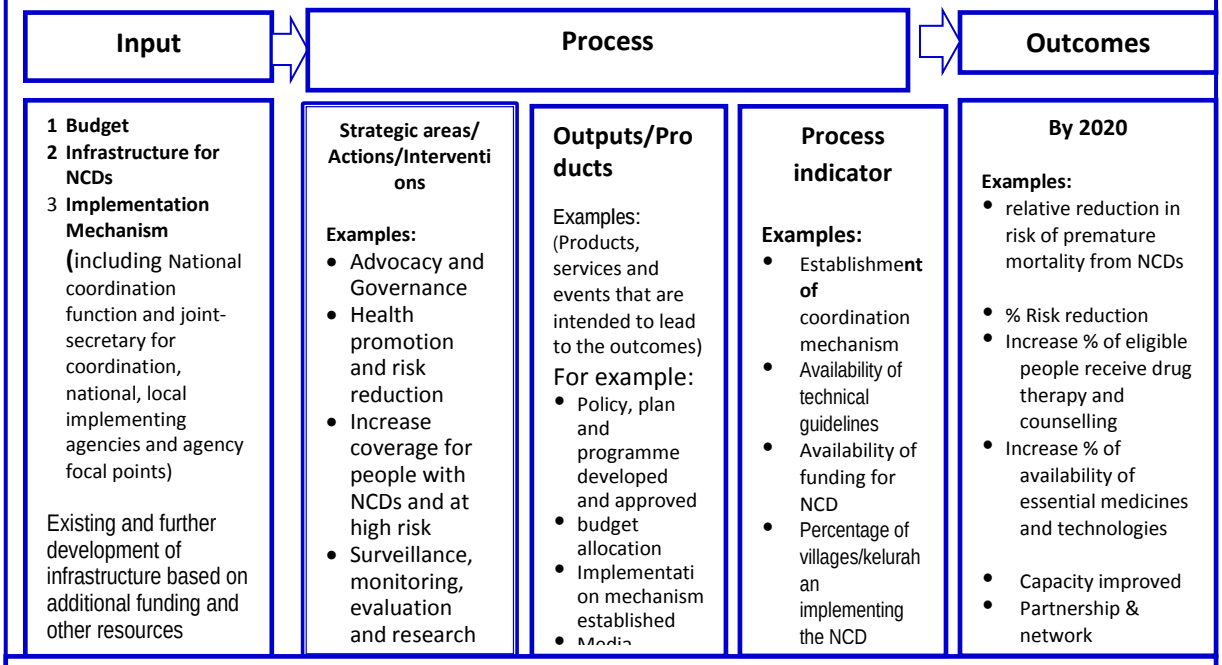
WHO/STEPs and GSHS surveys can provide information on prevalence of main risk factors and coverages of risk factors and national response to NCDs every five years

National survey on progress in implementation of NCD MAP

An important component of the monitoring and evaluation framework is monitoring and reviewing the progress in implementing activities included in the program. Therefore, a national survey with **a set of core process indicators** is necessary to collect information on the status of implementing the activities. In addition, adapting WHO SARA can also provide information on the essential medicines and basic technologies in country.

Figure 1 A National Monitoring Framework

Goal: To improve healthy life and reduce the preventable and avoidable burden of morbidity, mortality and disability due to NCDs through multisectoral action at the national, local and community levels.



Data sources: National NCD Risk Factor Survey (STEPS), Global School-based Health Survey (GSHS), Global Youth Tobacco Survey (GYTS), Civil Registration, Cancer and Other NCD Registries and NCD Hospital-based Mortality Registry, and national adapted SARA for essential medicines, and natioanl capcity survey for implementing NCD MAP.

Table 6.2 National monitoring and evaluation of implementing NCD MAP

Strategic area	Strategic Action	Output	Lead agency	Relevant sector/	Timeline	Indicators of Progress	Outcomes
Strategic area 1: Advocacy, partnership and leadership							
1.1 Advocacy, partnership and leadership	• **Strengthen advocacy for NCD prevention and control**	• Advocacy packages on prevention and control of NCDs available. produced and advocate activities conducted	• Ministry of human development and culture • Ministry of health (NCD unit)	KESJAOR and health promotion UNIT	2016-2020	• **Establishment of time-bound national targets and indicators based on WHO guidance (1) #** • **An operational multisectoral national strategy/action plan that integrates the major NCDs and their shared risk factors (4)#** • NCD related targets incorporated into the monitoring framework of the Sustainable Development Goals Establishment of joint-secretary for improving coordination • No of relevant sectors prioritized and implemented NCD interventions • Adequate fund allocated for implementing National NCD MAP • Availability of adequate human resources at national, district and	• All NCD targets
	• **Strengthen national coordination for multisectoral action on the prevention and control**	• Establishment of national joint-secretariat for coordinating and facilitating implementation of NCD MAP	• Human development and culture • Ministry of Health • Ministry of home affairs	• All other relevant sectors	2016-2020		
	• **Enhance international cooperation**	• Participation in international dialogue on NCDs	• Ministry of Health	• All relevant sectors	2016-2020		
	• **Finance NCD prevention and control**	• Adequate fund for NCDs provided	• Human development and culture • Ministry of finance • Ministry of health	• Relevant sectors	2016-2020		

						grass root levels to perform NCD related activities	
Strategic area	**Strategic Action**	**Output**	**Lead agency**	**Relevant sector/**	**Timeline**	**Indicators of Progress**	**Outcomes**
Strategic area 2: Reduce risk factors and promoting health							
2.1 Reduce tobacco use	• Raise taxes on tobacco product (R)	• A taxation mechanism for tobacco established	• Ministry of Finance	• Ministry of Health		• **Reduce affordability of tobacco products by increasing tobacco excise taxes (5.a) #** • **Create by law completely smoke-free environments in all indoor workplaces, public places and public transport(5.b) #.** • **Warn people of the dangers of tobacco and tobacco smoke through effective health warnings and mass media campaigns (5.c)** • **Ban all forms of tobacco advertising, promotion and sponsorship(5.d) #** • *Percentage of districts that has small free zone law in school*	**3 A 30% relative reduction in prevalence of current tobacco use in persons aged over 15 years** • Minimum 50% of districts that has implemented smoking free zone law in schools
	• Expand and enforce Smoke-Free Laws (P)	• Report of executive review to amend smoke free article in the prevailing Government Regulation No.109/2012					
	• Warn the dangers of tobacco (W)	• Process to amend the Government Regulation No.109/2012 initiated					
	• Introduce comprehensive ban on tobacco advertising, promotion and sponsorship (E)	• Broadcasting Law and Press Law to prohibit tobacco advertisements on mass media amended					
	• Ban sale of tobacco products to minors	• Policies/regulation on ENDS products developed					
	• Capacity building for tobacco cessation (O)	• National quitline established					

	• Accession to FCTC	• Report of technical analysis and policy discussions on national impact of FCTC accession prepared					
2.2 to reduce alcohol use	• Increase taxes on alcoholic beverages	• Taxes on all types of alcoholic beverages Increased, accounting for various percentage of alcohol volume				• **Regulations over commercial and public availability of alcohol (6.a) #** • **Comprehensive restrictions or bans on alcohol advertising and promotions (6.b) #** • **Pricing policies such as excise tax increases on alcoholic beverages (6. C)**	• **A 10% relative reduction in the use of alcohol**
	• Strengthen enforcement of existing policies on ban of advertisement and promotion of alcoholic beverages	• Report of assessment on advertisement and promotion of alcoholic drinks conducted and submitted					
	• Review and update alcohol legislations and policies	• Report of alcohol legislations and policies developed and published					
	• Restrict production and sale of cheap local alcohol	• Rules on illegal sale of cheap illegal alcohol products enforced					
	• Promote programs to reduce alcohol related violence and injuries	• National Ban use of alcohol among motorists (drivers) implemented					
	• Advocate community based and political support for enforcement of alcohol laws and policies	• Social mobilization campaigns against alcohol abuse and illegally produced alcoholic drinks conducted					

2.3 Promote healthy diet high in fruit and vegetables and low in saturated fat/trans-fat, free sugar and salt	• Implement the Global Strategy on Diet, Physical and Health(DPAS)	• New work plan for implementing DPAS developed and implemented				• **Adopted national policies to reduce population salt/sodium consumption (7. a) #** • **Adopted national policies that limit saturated fatty acids and virtually eliminate industrially produced *trans* fatty acids in the food supply (7. b). #** • **WHO set of recommendations on marketing of foods and non-alcoholic beverages to children (7. c). #** • **Legislation /regulations fully implementing the International Code of Marketing of Breast-milk Substitutes (7. d). #** • Proportion of population aged ≥ 10 years with **low fruit and vegetable consumption** (%) • Number and duration of unhealthy food and drink advertisements during children programmes on major TV channels. • Number of companies following the nutrition labelling guidelines	• **A 30% relative reduction in mean population intake of salt/sodium** • **A 25% reduction in prevalence of raised blood pressure and or contain the prevalence of raised blood pressure** • Halt the rise in obesity and diabetes • **A 5% reduction in population aged ≥ 10 years with low fruit and vegetable consumption**
	• Advocate for healthy diet	• Advocacy material developed and activities conduced					
	• Develop and update national food based dietary guidelines	• National food based dietary guidelines updated					
	• Strengthen food and nutrition labelling	National communication and implementation strategy to advocate the food based Indonesian dietary guidelines developed and approved					
	• Develop fiscal policies to subsidize consumption of vegetables and fruits	• Fiscal policies to subsidize consumption of vegetables and fruits developed and implemented					
	• Increase availability food products low in fat, salt and sugar	• National guidelines on sugar, salt and fat developed and adapted					
2.4 Promote physical activity	• Promote physical activity (PA) awareness across all age groups	• National or sub-national PA guideline and recommendation				• **Public awareness on diet and/or physical activity(8)#**	• **A 10% relative reduction in prevalence of**

		for Indonesia for different age groups developed					**insufficient physical activity**
	• Create conducive urban environment for active life-styles	• PA integrated in urban development plan					
	• Promote public and private partnerships to develop physical activity promoting venues including sports	• Collaborative mechanisms between public and private sectors to promote healthy workplaces, healthy communities, and support events for physical activities established					
	• Support PA promoting events	• Facilities for physical activities including sports and exercise at school, at workplace and in public areas improved by local government					
2.5 Promote healthy behaviours and reduce NCDs in key settings	• Establish healthy villages	• Guideline for healthy village developed				• No of health village in selected areas	• **All NCD targets**
	• Establish health promotion schools	• WHO guideline for health promotion schools adapted					
	• Establish healthy work places	• Guidelines for healthy work places available					
2.6 Reduce household air pollution	• Strengthen capacity for documentation of indoor air quality and household pollution	• Report on on indoor air pollution assessment in selected sites submitted				• Availability of advocacy materials on reducing household air	• Reduction of premature mortality due to NCDs

	• Support cleaner technologies for cooking	• Government subsidies for improved cook stoves and cleaner technologies for low income groups available					• Reduction of Cancer
	• Advocate on reducing household air	• Advocacy materials available					
Strategic area	**Strategic Action**	**Output**	**Lead agency**	**Relevant sector/**	**Timeline**	**Indicators of Progress**	**Outcomes**
Strategic area 3: Strengthen management of NCDs and health system							
3.1 Improve NCD management through Strengthening health system	• Improve access and availability to essential NCD medicines and technologies	• Guidelines for NCD treatment reviewed and/or implemented				• **Evidence-based national guidelines/protocols/standards for the management of major NCDs through a primary care approach, recognized/approved by government or competent authorities(9)#** • **Provision of drug therapy, including glycaemic control, and counseling for eligible persons at high risk to prevent heart attacks and strokes, with emphasis on the primary care level (10)** • Proportion of PUSKSMAS with providing PANDU	• At least 50% of eligible people receive drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes • An 80% availability of the affordable basic technologies and essential medicines • 50% by 2019
	• Strengthen capacity building for health workforce on NCD management	• Training materials developed and pilot training conducted					
	• Increase financing for NCDs through innovative funding mechanism and other government allocation	• 100% of population covered by UHC, including NCD package service					
3.2 Strengthen NCD management	• Improve access to basic NCD screening and management services at primary health care system	• 50% of PUSKESMAS implementing CVD risk charts	MOH				
	• Strengthen diabetes services	• 100% of PUSKESMAS providing HbA1C testing	MOH				

	• Strengthen cancer services	• 2400 centers conducting CBE and cervical cancer screening	MOH			PTM • Proportion of villages that has pos Bindu • Proportion of PUSKAMAS providing CBE and VIA or pas smear text • Percentage of patients with 30% absolute CVD risk or greater receiving antihypertensive and satins • Percentage of women aged 30-50 years screened d with cervical (IVA) & breast cancer (Sadanis) (%)	• 50% by 2019 • 20% of BUSKSMAS by 2019 • 50% of women gaged 30=50 years screened
	• Strengthening chronic respiratory diseases services	• Report of the reviewed guidelines on management of CRDs for PUSKESMAS and POSBINDU					
	• Build community networks for NCD screening and health education	• A network with community organizations and religious bodies for NCD established					
3.3 Strengthen palliative care	• Expansion palliative care services at primary health care level	• Palliative care guidelines developed and Oral morphines available at PHC	MOH				
3.4 Community based approaches	• Build community networks for NCD screening and health education	• A network with community organizations and religious bodies for NCD established				• Participation of community organizations and religious bodies	
Strategic area	**Strategic Action**	**Output**	**Lead agency**	**Relevant sectors**	**Timeline**	**Indicators of Progress**	**Outcomes**
Strategic area 4: Surveillance, monitoring and evaluation, research							
4.1 Strengthen surveillance of main NCDs and their risk factors	• Integration of NCD related information into national health information	• NCD profiles at district, provincial and national level established			Annual	• Inclusion of NCDs and their risk factors in national health profiles	All NCD targets

	system					• **A functioning system for generating reliable cause-specific mortality data on a routine basis(2) #** • **A STEPS survey or a comprehensive health examination survey every 5 years (3) #** • Mechanism of monitoring progress in place for implementation of the national NCD MAP • A set of research topics are provided for MOH to take action for support the implementation of the National NCD MAP	
	• Improve mortality and morbidity data in the SRS	• Mortality data related to NCDs improved in the selected areas			Regular		
	• Strengthen surveillance on NCD risk factors and health service for NCD management	• Report of STPES			2019		
4.2 Improve monitoring and evaluation of implementing NCD programmes	• Strengthen capacity and promote network for monitoring and evaluation	• Monitoring system in place with trained staff members • Report of evaluation of PEN including follow up care of patient for NCD services				• A country survey with a set of core indication for monitoring progress	
4.3 Strengthen Research	• Increase research to generate local evidence related to burden of diseases, health services, health economics	• National NCD research network established					

: Global progress monitor indicators

Annex 1. Ten Causes of Death by Age and Sex, 2012 (%)

Aged 15-34 years: Male and Female

No	Cause of Death	Male (n=1014)	Cause of Death	Female (n=731)
1	Transport accidents	23.5	Respiratory tuberculosis	12.4
2	Respiratory tuberculosis	8.3	Transport accidents	7.4
3	All other external causes	4.9	Direct obstetric deaths	6.4
4	Other heart diseases	4.2	Other heart diseases	6.0
5	Cerebrovascular	3.9	Remainder of diseases of the nervous system	3.1
6	Remainder of diseases of the nervous system	3.7	Cerebrovascular	3.0
7	HIV	3.0	Septicemia	2.9
8	Intestinal infectious	2.8	Remainder of diseases of the digestive system	2.9
9	Symptoms, and sign	2.7	Pneumonia	2.7
10	Ischemic heart diseases	2.6	Chronic kidney disease	2.7

Aged 35-44 years: Male and Female

No	Cause of Death	Male (n=926)	Cause of Death	Female (n=785)
1	Ischaemic heart diseases	9.7	Cerebrovascular	10.8
2	Respiratory tuberculosis	8.2	Other heart diseases	7.0
3	Other heart diseases	7.8	Respiratory tuberculosis	6.1
4	Cerebrovascular	7.5	Diabetes mellitus	5.9
5	Transport accidents	7.5	Malignant neoplasm of breast	5.6
6	Diabetes mellitus	4.1	Ischemic heart diseases	5.0
7	Chronic kidney disease	4.1	Chronic kidney disease	4.3
8	Remainder of diseases of the digestive system	3.5	Transport accidents	3.6
9	Diseases of the liver	3.3	Hypertensive diseases	3.3
10	Sirosis Hepatis	3.1	Malignant neoplasm of cervix uteri	3.2

Aged 45-54 years: Male and Female

No	Cause of Death	Male (n=1794)	Cause of Death	Female (n=1513)
1	Cerebrovascular diseases	16.3	Cerebrovascular diseases	18.0
2	Ischemic heart diseases	11.3	Diabetes mellitus	9.9
3	Diabetes mellitus	8.6	Ischemic heart diseases	7.9
4	Respiratory tuberculosis	6.1	Other heart diseases	7.3
5	Other heart diseases	6.1	Malignant neoplasm of breast	5.5
6	Chronic kidney disease	4.4	Respiratory tuberculosis	5.4
7	Hypertensive diseases	4.1	Chronic kidney disease	4.6
8	Chronic lower respiratory diseases	3.2	Hypertensive diseases	3.8
9	Diseases of the liver	3.1	Malignant neoplasm of cervix uteri	3.7
10	Transport accidents	3.1	Chronic lower respiratory diseases	2.6

Aged 55-64 years and 65+ years

No	Cause of Death	55-64 years	Cause of Death	65 years +

		(n=4523)		(n=10809)
1	Cerebrovascular diseases	20.6	Cerebrovascular diseases	22.4
2	Ischemic heart diseases	10.4	Ischemic heart diseases	8.9
3	Diabetes mellitus	9.1	Other heart diseases	7.7
4	Other heart diseases	7.6	Chronic lower respiratory diseases	7.5
5	Respiratory tuberculosis	6.9	Hypertensive diseases	5.9
6	Hypertensive diseases	4.5	Respiratory tuberculosis	5.3
7	Chronic lower respiratory diseases	4.1	Diabetes mellitus	5.0
8	Chronic kidney disease	3.6	Remainder of diseases of the nervous system	4.6
9	Remainder of diseases of the digestive system	2.9	Remainder of diseases of the digestive system	3.3
10	Sirosis Hepatis	1.8	Diarrhea and gastroenteritis of presumed infectious origin	2.9

Source: Health Research and Development (Litbangkes), 2012: Cause of Death Study on 12 Districts/Cities in Indonesia

Annex 2. Proportion and Estimation of Population by Affliction of Noncommunicable Disease by Province, 2013

Province	No. of Population	Asthma (All Ages)		Cancer (All Ages)		Diabetes ≥ 15 years		CPOD ≥ 30 years		Hypertension ≥ 18 years		Coronary ≥ 15 years		Stroke ≥ 15 years		Joints Disease ≥ 1	
		%	N	per 1000	N	%	N	%	N	%	N	%	≥ 15 years	per 1000	N	%	
Aceh	4,823,572	4.0	192,943	1.4	6,753	2.6	42,268	4.3	83,143	21.5	510,085	2.3	74,855	10.5	34,173	18.3	
North Sumatera	13,613,050	2.4	326,713	1.0	13,613	2.3	177,549	3.6	201,950	24.7	1,938,746	1.1	99,950	10.3	93,590	8.4	
West Sumatera	5,086,841	2.7	137,345	1.7	8,648	1.8	44,637	3.0	67,242	22.6	663,774	1.2	41,941	12.2	42,640	12.7	
Riau	6,043,515	2.0	120,870	0.7	4,230	1.2	39,245	2.1	51,384	20.9	713,300	0.3	12,227	5.2	21,193	6.8	
Jambi	3,292,022	2.4	79,009	1.5	4,938	1.2	24,712	2.1	30,356	24.6	479,727	0.5	11,561	5.3	12,255	8.6	
South Sumatera	7,846,355	2.5	196,159	0.7	5,492	1.3	50,016	2.8	95,468	26.1	1,233,288	0.7	38,399	7.8	42,788	8.4	
Bengkulu	1,819,395	2.0	36,388	1.9	3,457	1.0	11,000	2.3	18,396	21.6	231,565	0.6	7,661	9.4	12,002	10.2	
Lampung	7,943,991	1.6	127,104	0.7	5,561	0.8	39,039	1.4	50,741	24.7	1,183,298	0.4	22,418	5.4	30,265	11.5	
Bangka Belitung Islands	1,317,284	4.3	56,643	1.3	1,712	2.5	19,678	3.6	21,183	30.9	247,469	1.2	11,244	14.6	13,680	5.8	
Riau Islands	1,869,651	3.7	69,177	1.6	2,991	1.5	16,664	2.1	16,760	22.4	258,135	1.1	14,206	8.5	10,977	5.9	
Special Capital Territory of Jakarta	9,989,755	5.2	519,467	1.9	18,981	3.0	185,289	2.7	128,645	20.0	1,331,434	1.6	119,986	14.6	109,487	8.9	
West Java	45,389,940	5.0	2,269,497	1.0	45,390	2.0	415,686	4.0	835,918	29.4	8,139,130	1.6	516,947	12.0	387,710	17.5	5,
Central Java	33,264,674	4.3	1,430,381	2.1	69,856	1.9	387,764	3.4	581,278	26.4	5,608,012	1.4	343,911	12.3	302,150	11.2	2,
DI Yogyakarta	3,616,242	6.9	249,521	4.1	14,827	3.0	72,451	3.1	60,389	25.7	640,806	1.3	36,842	16.9	47,895	5.6	
East Java	38,354,291	5.1	1,956,069	1.6	61,367	2.5	597,065	3.6	733,363	26.2	6,627,550	1.3	376,770	16.0	463,717	11.1	3,
Banten	11,442,789	3.8	434,826	1.0	11,443	1.6	101,252	2.7	132,733	23.0	1,563,013	1.0	80,286	9.6	77,075	9.5	
Bali	4,072,329	6.2	252,484	2.0	8,145	1.5	40,367	3.5	73,444	19.9	533,666	1.3	39,458	8.9	27,014	19.3	
Nusa Tenggara Barat	4,716,567	5.1	240,545	0.6	2,830	1.3	29,966	5.4	109,840	24.3	657,140	2.1	67,693	9.6	30,946	9.8	
Nusa Tenggara Timur	4,976,334	7.3	363,272	1.0	4,976	3.3	37,083	10.0	194,807	23.3	602,456	4.4	137,189	12.1	37,727	12.6	
Westl Kalimantan	4,654,246	3.2	148,936	0.8	3,723	1.0	25,887	3.5	70,182	28.3	773,046	0.9	28,704	8.2	26,153	13.3	
Central Kalimantan	2,392,383	5.7	136,366	0.7	1,675	1.6	19,255	4.3	44,176	26.7	380,660	1.7	28,162	12.1	20,045	12.6	
South Kalimantan	3,859,877	6.4	247,032	1.6	6,176	2.0	37,226	5.0	87,307	30.8	716,151	2.2	59,745	14.5	39,377	9.5	
East Kalimantan	3,878,850	4.1	159,033	1.7	6,594	2.7	62,295	2.8	47,142	29.6	685,247	1.0	27,091	10.0	27,091	8.2	
North Sulawesi	2,365,541	4.7	111,180	1.7	4,021	3.6	41,094	4.0	46,408	27.1	401,365	1.7	29,332	14.9	25,709	10.3	
Central Sulawesi	2,797,602	7.8	218,213	0.9	2,518	3.7	29,906	8.0	99,563	28.7	468,678	3.8	73,257	16.6	32,002	11.4	
South Sulawesi	8,351,064	6.7	559,521	1.7	14,197	3.4	92,720	6.7	250,908	28.1	1,381,879	2.9	168,183	17.9	103,810	10.6	
South-East	2,412,025	5.3	127,837	1.1	2,653	1.9	16,736	4.9	46,597	22.5	292,802	1.7	26,467	8.8	13,701	12.0	

Sulawesi																
Gorontalo	1,101,175	5.4	59,463	0.2	220	2.8	11,509	5.2	25,140	29.0	188,973	1.8	13,803	12.3	9,432	10.4
West Sulawesi	1,238,542	5.8	71,835	1.1	1,362	2.2	6,570	6.7	33,747	22.5	154,309	2.6	21,430	15.5	12,775	8.0
Maluku	1,634,752	5.3	86,642	1.0	1,635	2.1	10,405	4.3	27,507	24.1	210,498	1.7	17,990	8.7	9,207	8.9
North Maluku	1,118,316	5.0	55,916	1.2	1,342	2.2	8,499	5.2	23,108	21.2	127,970	1.7	12,389	10.7	7,798	5.9
West Papua	743,236	3.6	26,756	0.6	446	1.2	4,299	2.5	7,185	20.5	82,064	1.2	5,924	5.8	2,863	8.3
Papua	3,050,453	5.8	176,926	1.1	3,355	2.3	16,376	5.4	65,579	16.8	296,598	1.3	26,094	9.4	18,868	15.4
Total	249,076,656	4.5	11,244,071	1.4	348,707	2.1	2,714,508	3.7	4,361,586	25.8	39,322,834	1.5	2,592,116	12.1	2,148,640	11.9

Annex 3. Roles of relevant sectors in the Prevention and Control of NCDs

(Strategies 1 & 2) *

No.	Agency	Role in the Prevention and Management of NCDs
1.	Education and Culture	• Health education and dissemination of information on NCD and the associated risks at schools (CERDIK at Schools) • Medical examination at school through UKS and strengthening of UKS as performance credit points for teachers • Increase availability of healthy environment at schools, including healthy cafeteria • Promotion of physical activities at an early age (since 5 years old) through moderate physical exercise of 150 minutes per week → exercise before lessons • School-based NCD risk factor intervention program • Implementation of Smoke Free zone at Schools and the related sanctions
2	Ministry of Religious Affairs	• Health education and dissemination of information on NCD and the associated risks at schools (CERDIK at Schools) • Medical examination at school through UKS and strengthening of UKS as performance credit points for teachers • Increase availability of healthy environment at schools, including healthy cafeteria • Promotion of physical activities at an early age (since 5 years old) through moderate physical exercise of 150 minutes per week → exercise before lessons • School-based NCD risk factor intervention program • Implementation of Smoke Free zone at Schools and the related sanctions • Revision of Minister of Religious Affairs Regulation on the minimum age for marriage to become 21 years
3	Ministry of Higher Education and Research and Technology	• Health education and dissemination of information on NCD and the associated risks in higher learning institutions (CERDIK on Campus) • Promotion of physical activities and provision of facilities for physical activities within higher education institutions • Initiation of research and technology development to manage NCDs • Development of 'best buy' interventions to manage NCDs and disseminate such information to the general public and mass media • Review of curriculum related to NCDs at medical schools (more of a public health basis)
4..	Ministry of Youth and Sports	• Promotion of physical activities/sports to the community along with education on the benefits (exercising the population and popularizing exercise) • Provision of facilities and programs within the community or at the workplace • Encourage regional governments to provide sports/physical exercise activities that are safe and affordable
5.	Ministry of Public Housing	• Provision of open green space and physical exercise and sports facilities in every residential area

		• Law enforcement against any person violating regulations/requirements regarding the provision of parks and open space • Policy strengthening for the development of healthy public housing, equipped with facilities for physical activities/sports
6.	Ministry of Agriculture	• Increasing agricultural production: fresh vegetables and fruits, to make them affordable for the people at a low price (subsidize if necessary) • Provide protection and support to fruit and vegetable farmers and ensure distribution and marketing • Restrict the use of agricultural and husbandry substances (pesticide, preservatives, etc.) that are hazardous to health in the production process • Campaign for the consumption of locally produced vegetables and fruits according to season, reducing import of fruits and vegetables, whether fresh or processed • Campaign for the consumption of locally produced plant and animal protein and reduction of import of fresh and processed materials • Encourage the cultivation of vegetables and fruits to make use of gardens • Encourage production and use of seeds and nuts • Encourage farmers to diversify tobacco with crops that are beneficial to health
7.	Maritime & Fisheries	• Increase fish production to make them affordable for the people at a low price • Provide protection and support to fishermen and guarantee distribution and marketing of fresh fish products, to avoid preservation/salting • Promote the consumption of fish as a diet to prevent cardiovascular disease including heart attack, stroke and peripheral artery disease
8.	Ministry of Communication and Information	• Media campaign on the prevention and management of NCD (regulation must be introduced to compel electronic and printed media to allocate time for public service announcement), the non-compliance of which would carry a penalty or action related to registration/license renewal • Regulations regarding advertisement, preventing promotion of cigarettes and unhealthy food/drinks particularly for children and the public in general • Use of state-owned national television and radio stations to broadcast public service announcement • Use of private television broadcast companies to broadcast public service announcements • Use of social media to promote CERDIK • Ban of misleading public service announcements
9.	Ministry of Trade	• Promotion of healthy meals/drinks • Restrict trade of unhealthy food/drinks through regulatory and fiscal measures • Monitor food packaging and require affixing of label and expiry date • Restrict and monitor access to cigarette and alcoholic drinks only for those above 21 years old

		• Improve access and affordability of healthy food for the public, particularly fruit, locally produced vegetables, and locally produced sources of plant and animal protein sources
10.	Food and Drugs Agency	• Strengthening regulation on processed food labeling (revision of Government Regulation no 69/1999) • Monitor and regulate misleading messages/commercials of processed food and medicine • Intensify post marketing surveillance of food and drinks • Monitor food packaging and require affixing of label and expiry date
11.	Ministry of Transportation	• Develop joint regulations with the relevant agencies to ensure that all operators of public transport undergo medical checkup with a focus on controlling blood pressure and alcohol consumption • Drafting policies on restriction on the use of personal vehicles and provision of safe, comfortable, healthy and disabled friendly public transport to reduce air pollution • Expansion of efficient public transportation system throughout Indonesia to facilitate distribution of fruits, vegetables, fish and other healthy food products • Preparation of public transport infrastructure to encourage the public to undertake physical activity (walk to stations/public terminals) • Develop regulations to ensure ban of vehicles with high emission
12.	Ministry of Women Empowerment and Child Protection	• Promotion to mobilize participation of women in community-based efforts to prevent and manage NCDs and implement designed programs • Promotion of First 1000 Days of Life to the community • Increase of women's role in maintaining family's resilience towards NCDs and the associated risks (obesity, physical activity, consumption of vegetables/fruits, low sugar, salt and fat diet) • Advocacy for regulations by the Ministry of Manpower to prepare specific policies to allow women workers undertake their function as homemakers • Recommendation for a higher minimum age for marriage to 21 years (reproductive organ maturity occurs at 21 years old) • Encourage protection for women from domestic violence
13	National Family Planning Coordination Agency	• Promote and revitalize the family planning program for all segments of society, particularly for the middle to low income groups • Recommend a more mature minimum age for marriage at 21 years old • Encourage the use of safer contraceptives in terms of NCD (long term contraceptive methods) • Promote the intensification of family planning use under the JKN financing scheme, including promotional efforts • Monitor the President's recommendation that National Civil Servants serve as family planning counselors • Promote First 1000 Days of Life to the public • Intensify Family With Under Five Children guidance program in conjunction with NCD management (CERDIK)

14	Ministry of Village Affairs, Underdeveloped Areas and Transmigration	• Promotion to mobilize public participation in community-based measures to prevent and manage NCDs and implement designed programs down to the village level. • Promote information system (networking) to allow the public to understand efforts to prevent and manage NCDs. • Promote accessibility for the public in remote and hard-to-access areas to quality and comprehensive healthcare service, particularly with regard to NCDs. • Guarantee access to and availability of healthy and fresh food to avoid NCDs (people in remote and hard-to-access areas tend to consume salted processed food) • Integrate promotional-preventive NCD efforts (Posbindu PTM) under the Village Healthy Home program • Use of village funds to manage NCDs
15.	Ministry of Social Affairs	• Encourage private companies to allocate funds from their Corporate Social Responsibility (CSR) program for the prevention and management and early detection of NCDs for the benefit of marginal groups • Provision of social benefit funds to support NCD programs, particularly for palliative and rehabilitative treatment within the community
16.	Ministry of Interiors	• Mobilize public participation in community-based efforts to prevent and manage NCDs and implement designed programs under the sub-national government structure • Scale up 'car free day' to cover all cities/districts in Indonesia • Monitor and evaluation implementation of minimum standard of service, carry out health screening in accordance with the applicable standards (blood sugar, blood pressure, body mass index, waistline, Sadanis, IVA). • Guarantee access to referrals on a tiered basis for all community members who are detected to have risk of NCD • Intensify the role of PKK in NCD promotional and preventive measures • Expand smoking free zone to cover all cities/districts in Indonesia • Conducive city ordinance to prevent NCDs (city parks, bicycle tracks, roads, etc.) • Promote healthy district/city competition.
17.	Ministry of Industry	• Only provide industrial permits for healthy food/drinks. • Develop regulations and monitoring to ensure that all processed food companies display sugar, salt and fat content and preservatives used. • Develop regulations and monitoring to ensure that all processed drink companies display sugar, carbonated additive (CO), salt content and other preservatives used. • Limit production of processed food and drinks that are hazardous to health (having high sugar, salt and fat content) • Monitor cigarette packaging, to provide warning on the dangers of smoking • Monitor labels that display alcohol content in packaged drinks • Promote the healthy food and drink industry and apply fiscal incentive where possible • Encourage and advocate for special duty on unhealthy food and drink and those that are harmful to health (NCD related) to limit the public's

		access • Encourage and advocate for tax increase on cigarettes and alcoholic products
18.	Ministry of Finance	• Apply high tax and duty rate for cigarettes and alcoholic drinks • Apply high tax rate for unhealthy processed food and drinks that are harmful to health • Apply subsidy to locally produced agricultural products (vegetables and fruit) to make the affordable for the people. • Provide adequate budget for health, to allow NCD prevention and management programs to be implemented effectively . • Ensure adequate budget allocation to implement cross sector NCD supporting activities as agreed under RAN PPTM 2015-2019. • Eliminate tax on health equipment and products, particular life-saving products to make the affordable for the public.
19	State-Owned Enterprises, Armed Forces, Police, Civil Service Agency	• Encourage the Civil Service Agency, state-owned enterprises, armed forces/police to provide free medical screening to all members/staff on a regular basis based on age group. • Use of obesity status and other health status related to NCD/risk to test potential government employees and to decide promotions. • Include smoking habit and obesity as criteria for recruitment and promotion for civil servants/armed forces and police personnel • Provide sports facilities and healthy cafeteria at offices
20.	BPJS MoH	• Ensure financing for NCD prevention and management programs, including for early detection and setting the proper fee for NCD treatment. • Expand the coverage of chronic disease management programs to cover NCDs (ages 40 years and above) in addition to hypertension and diabetes, including screening of cholesterol level, spinometer, and one-minute osteoporosis test. • Expand the coverage of Back Referral Programs for all NCDs in addition to those listed in MoH Regulation No. 59/2015. • Acceleration of expansion of JKN universal participation by 2019. • Increasing co-financing cooperation between JKN and private insurance providers. • Review of INA CBG tariffs related to NCDs on a regular basis to ensure quality service.
21	Ministry of Forestry and Environment	• Enforce regulatory instruments on emission. • Develop regulations in accordance with the ministries authority and responsibilities to ensure that the public received clean and healthy air. • Undertake efforts to prevent forest fires and minimize impact of forest fires on health, particularly those related to NCDs.
22	National Development Planning Agency (BAPPENAS)	• Coordinate cross-sector planning to ensure adequate allocation of funding to implement cross sector NCD support activities in accordance RAN PPTM 2015-2019 • Coordinate monitoring and evaluation of the achievement of National Medium Term Development Plan indicators relating to NCDs. • Facilitate availability of special financing to accelerate achievement of NCD related indicators (SDGs).
23	Ministry of	• Encourage the business sector to enroll all their employees in JKN.

	Manpower and Transmigration	• Encourage regular health screening to allow early detection of NCD risks and test health levels to ensure highest productivity possible. • Enforce discipline in the implementation of Smoking Free Zones and impose sanctions against violations. • Disseminate information on NCD Management in transmigration areas and ensure access to healthcare, healthy food and healthy environment.
24	Coordinating Ministry for Human and Cultural Development	• Coordinate activities among ministries under its coordination and among coordinating ministries relating to NCD on a regular basis • Encourage and undertake efforts to facilitate the transformation of RAN PPTM into legal norms/regulations (Presidential Regulation) that are binding on all relevant sectors. • Promote the acceleration of achievement of performance indicators in NCD management within ministries under the coordination of the Coordinating Ministry.
25	Ministry of Law and Human Rights	• Facilitate the acceleration of issuance of enabling regulations to manage NCDs (Health in all policies)
26	Law Enforcement	• Law enforcement against officials or institutions who fail to comply with the prevailing regulations
27	National Drug Enforcement	• Support regulation on the use of drugs and addictive substances in managing pain in palliative care
28	National Atomic Agency (BATAN)*	• Encourage atomic research and technological discoveries to diagnose NCD and provide the associated therapy.
29	Atomic Energy Supervisory Agency (BAPETEN) *	• Support the harnessing of radio-nuclear for NCD diagnosis and therapy.
30	National Consumer Protection Agency (BPKN) *	• Provide advice and recommendation to the government in formulating policies relating to consumer protection relating to NCDs. • Conduct research and review of legislations that apply to consumer protection. • Conduct research on goods, and materials/services relating to consumer safety. • Disseminate information through the media regarding consumer protection and propagate consumer oriented attitude. • Conduct survey relating to consumer needs.

*Result of discussion during RAN PP-PTM Workshop in Jakarta on 29-30 September 2015 and *Meeting at Park Lane 7-8 December 2015.*

Annex 4: Comprehensive Global Monitoring Framework for Noncommunicable Diseases, Including a Set of Indicators

Table 1 presents a set of 25 indicators. The indicators, covering the three components of the global monitoring framework, are listed under each component. The comprehensive global monitoring framework, including the set of 25 indicators, will provide internationally comparable assessments of the status of noncommunicable disease trends over time, and help to benchmark the situation in individual countries against others in the same region, or in the same development category. In addition to the indicators outlined in this global monitoring framework, countries and regions may include other indicators to monitor progress of national and regional strategies for the prevention and control of noncommunicable diseases, taking into account country- and region-specific situations.

Table 1. Indicators to monitor trends and assess progress made in the implementation of strategies and plans on noncommunicable diseases

Mortality and morbidity
1. Unconditional **probability of dying** between ages 30 and 70 years from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases. 2. **Cancer incidence**, by type of cancer, per 100 000 population.
Risk factors
Behavioural risk factors: 3. Harmful use of **alcohol**: Total (recorded and unrecorded) alcohol per capita (15+ years old) consumption within a calendar year in litres of pure alcohol, as appropriate, within the national context. 4. Harmful use of **alcohol**: Age-standardized prevalence of heavy episodic drinking among adolescents and adults, as appropriate, within the national context. 5. Harmful use of **alcohol**: Alcohol-related morbidity and mortality among adolescents and adults, as appropriate, within the national context. 6. Age-standardized prevalence of persons (aged 18+ years) consuming less than five total servings (400 grams) of **fruit and vegetables** per day. 7. Prevalence of insufficiently **physically active** adolescents (defined as less than 60 minutes of moderate to vigorous intensity activity daily). 8. Age-standardized prevalence of insufficiently **physically active** persons aged 18+ years (defined as less than 150 minutes of moderate-intensity activity per week, or equivalent). 9. Age-standardized mean population intake of **salt (sodium chloride)** per day in grams in persons aged 18+ years. 10. Age-standardized mean proportion of total energy intake from **saturated fatty acids** in persons aged 18+ years.[i] 11. Prevalence of current **tobacco** use among adolescents. 12. Age-standardized prevalence of current tobacco use among persons aged 18+ years. Biological risk factors:

13. Age-standardized prevalence of raised **blood glucose**/diabetes among persons aged 18+ years (defined as fasting plasma glucose value ⩾7.0 mmol/L (126 mg/dl) or on medication for raised blood glucose).
14. Age-standardized prevalence of raised **blood pressure** among persons aged 18+ years (defined as systolic blood pressure ⩾140 mmHg and/or diastolic blood pressure ⩾90 mmHg); and mean systolic blood pressure.
15. Prevalence of **overweight and obesity** in adolescents (defined according to the WHO growth reference for school-aged children and adolescents, overweight – one standard deviation body mass index for age and sex, and obese – two standard deviations body mass index for age and sex).
16. Age-standardized prevalence of **overweight and obesity** in persons aged 18+ years (defined as body mass index ⩾25 kg/m^2 for overweight and body mass index ⩾ 30 kg/m^2 for obesity).
17. Age-standardized prevalence of raised **total cholesterol** among persons aged 18+ years (defined as total cholesterol ⩾5.0 mmol/L or 190 mg/dl); and mean total cholesterol.

National systems response

18. Proportion of women between the ages of 30–49 screened for **cervical cancer** at least once, or more often, and for lower or higher age groups according to national programmes or policies.
19. Proportion of eligible persons (defined as aged 40 years and over with a 10-year cardiovascular risk ⩾30%, including those with existing cardiovascular disease) receiving **drug therapy and counselling** (including glycaemic control) to prevent heart attacks and strokes.
20. Availability and affordability of quality, safe and efficacious essential noncommunicable disease **medicines, including generics, and basic technologies** in both public and private facilities.
21. Vaccination coverage against **hepatitis B** virus monitored by number of third doses of Hep-B vaccine (HepB3) administered to infants.
22. Availability, as appropriate, if cost-effective and affordable, of **vaccines against human papillomavirus**, according to national programmes and policies.
23. Policies to reduce the impact on children of **marketing of foods and non-alcoholic beverages** high in saturated fats, *trans*-fatty acids, free sugars, or salt.
24. Access to **palliative care** assessed by morphine-equivalent consumption of strong opioid analgesics (excluding methadone) per death from cancer.
25. Adoption of national policies that limit **saturated fatty acids and virtually eliminate partially hydrogenated vegetable oils** in the food supply, as appropriate, within the national context and national programmes.

VOLUNTARY GLOBAL TARGETS FOR THE PREVENTION AND CONTROL OF NONCOMMUNICABLE DISEASES

Table 2 provides nine voluntary global targets for consideration by Member States. Achievement of

these targets by 2025 would represent major progress in the prevention and control of noncommunicable diseases.

Table 2. A set of voluntary global targets for the prevention and control of noncommunicable diseases

Mortality and morbidity	**Indicator**
Premature mortality from noncommunicable disease	
Target 1: A 25% relative reduction in overall mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases.	• Unconditional probability of dying between ages 30 and 70 from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases.
Risk factors	**Indicator**
Behavioural risk factors	
Harmful use of alcohol[ii]	
Target 2: At least a 10 % relative reduction in the harmful use of alcohol[iii], as appropriate, within the national context.	• Total (recorded and unrecorded) alcohol per capita (15+ years old) consumption within a calendar year in litres of pure alcohol, as appropriate, within the national context. • Age-standardized prevalence of heavy episodic drinking among adolescents and adults, as appropriate, within the national context. • Alcohol-related morbidity and mortality among adolescents and adults, as appropriate, within the national context.
Physical Inactivity	
Target 3: A 10% relative reduction in prevalence of insufficient physical activity.	• Prevalence of insufficiently physically active adolescents defined as less than 60 minutes of moderate to vigorous intensity activity daily. • Age-standardized prevalence of insufficiently physically active persons aged 18+ years (defined as less than 150 minutes of moderate-intensity activity per week, or equivalent).
Salt/sodium intake	
Target 4: A 30% relative reduction in mean population intake of salt/sodium.[iv]	• Age-standardized mean population intake of salt (sodium chloride) per day in grams in persons aged 18+ years.
Tobacco use	

Target 4: A 30% relative reduction in prevalence of current tobacco use in persons aged 15+ years.	• Prevalence of current tobacco use among adolescents. • Age-standardized prevalence of current tobacco use among persons aged 18+ years.
Biological risk factors:	
Raised blood pressure	
Target 6: A 25% relative reduction in the prevalence of raised blood pressure or contains the prevalence of raised blood pressure according to national circumstances.	• Age-standardized prevalence of raised blood pressure among persons aged 18+ years (defined as systolic blood pressure od pressure according to national circumstances.quiv
Diabetes and obesity[v]	
Target 7: Halt the rise in diabetes and obesity.	• Age-standardized prevalence of raised blood glucose/diabetes among persons aged 18+ years (defined as fasting plasma glucose value ⩾ 7.0 mmol/L (126 mg/dl) or on medication for raised blood glucose. • Prevalence of overweight and obesity in adolescents (defined according to the WHO growth reference for school-aged children and adolescents, overweight – one standard deviation body mass index for age and sex and obese – two standard deviations body mass index for age and sex). • Age-standardized prevalence of overweight and obesity in persons aged 18+ years (defined as body mass index ⩾25 kg/m2 for overweight and body mass index ⩾30 kg/m2 for obesity).
National system response	**Indicator**
Drug therapy to prevent heart attacks and strokes	
Target 8: At least 50% of eligible people receive drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes..	• Proportion of eligible persons (defined as aged 40 years and over with a 10-year cardiovascular risk ontrol) to prevent heart attacks and strokes..index ⩾30 kg/m2 for obesity). body mass index for age and sding glycaemic control) to prevent heart attacks and strokes.
Essential noncommunicable disease medicines and basic technologies to treat major noncommunicable diseases	

Target 9: An 80% availability of the affordable basic technologies and essential medicines, including generics, required to treat major noncommunicable diseases in both public and private facilities.	• Availability and affordability of quality, safe and efficacious essential noncommunicable disease medicines, including generics, and basic technologies in both public and private facilities.

TABLE OF TERMS

Unhealthy Diet	Diet consisting of varied foods, excessive sugar and fat and which do not follow a balanced nutritional proportion, and consumption of food containing dangerous ingredients that carry risk of causing NCD.
Double burden of diseases	Burden carried by the state and civil society due to consistently high prevalence of communicable diseases and concurrent increase of prevalence of noncommunicable diseases and which have become a public health challenge.
NCD Risk Factors	Items or variables that can cause noncommunicable disease in a person. Some risk factors can be modified, such as lifestyle, smoking, unhealthy diet, etc., while others cannot be modified such as sex, age, and genetics.
Common NCD Risk Factors	Risk factors that can become the cause of a number of diseases categorized as major NCDs.
Tier One Healthcare Facility	Healthcare facilities providing primary healthcare, whether state-owned (PUSKESMAS) or privately owned (clinics).
Health in All Policies (HiAP)	A strategy aimed at making the health aspect to be taken into account by sectors that affects public health.
Smoke free Zone (KTR)	Room or area declared as prohibited for smoking or the production, sale, or advertisement and/or promotion of tobacco products, in accordance with Government Regulation 109 of 2012. KTR include: 1) healthcare facilities; 2) education facilities; 3) children playground; 4) religious facilities; 5) public transport; 6) workplace; and 7) other designated public areas.
Availability of essential NCD medicine and technology	List of minimum medicines and health equipment availbe at healthcare facilities to manage major NCD cases.
Dangerous consumption of alcohol	Alcohol consumption level exceeding 5 standards per day. One standard is equivalent to one glass of beer (285 ml), 120 ml of wine or 30 ml of whiskey.
Excessive consumption of salt	Consumption of salt exceeding five grams or equivalent to 2000 mg of natrium per person per day.
Excessive consumption of sugar	Consumption of sugar exceeding 50 gr per person per day.
Excessive consumption of fat	Consumption of fat exceeding 67 gr per person per day.
Low consumption of fruits and vegetables	Consumption of vegetables or fruit of less than five portions per day. One portion may be one half of large avocado, one star fruit, one sweet orange, ten duku, etc. One portion of vegetable may be five spoonful of boiled spinach, two spoonful of boiled chayote, etc.
Lack of physical	Conducting moderate or heavy physical activity for less than 150 minutes

activity/exercise	a week. Heavy physical activities include drawing water from a well, hiking, running, cutting down trees, tilling the field, etc. Moderate physical activities include sweeping, mopping, cleaning furniture, walking, etc.
Integrated NCD Services	An approach based on major NCD risk factor for early detection and monitoring of NCD risk factors that is integrated into and implemented through the Posbindu PTM in the community, and integrated hypertension and diabetes related services and other specialized NCD services at primary healthcare facilities. This constitute an adaptation of the WHO-PEN (*Package Essensial of NCDs Intervention*) at primary healthcare facilities.
Smoker	A person who smokes or chews tobacco on a daily or occasional basis.
Obesity	Chronic condition due to accumulation of fat in the body that exceeds the health threshold. Determination of a person being obese may utilize the use of Body Mass Index (BMI) calculation.
Major NCDs	Chronic disease that is non-infectious or non-transmissible, and which last for long periods of time and progress slowly. According to WHO, the four major NCDs are: 1) cardiovascular disease (heart disease and stroke), 2) cancer, 3) chronic pulmonary disease (such as chronic pulmonary obstruction and asthma), and 4) diabetes mellitus. The four major NCDs have common risk factors.
Integrated NCD Education Post (Posbindu PTM)	Integrated early detection of common risk factors of major NCDs (cardiovascular disease, diabetes, chronic pulmonary obstruction and cancer) managed by community groups, organizations, industries, campus, etc.
Sustainable Development Goals (SDGs) 2030	Agenda for sustainable development up to 2030 agreed globally through the UN Assembly representing 193 countries on 25 September 2015. The agenda contains 17 goals, 169 targets and 304 indicators, one of which is NCD. Goal 1 through 6 have direct relationship with disparity in health, particularly in developing countries.
NCD Surveillance System	Continual monitoring of major NCD risk factors particularly aimed at: 1) early detection and management of risk factors, NCDs and injuries, 2) monitoring of NCD trends, 3) feeding into the planning and evaluation of programs/interventions, 4) monitoring of progress in the achievement of the activity goals, 5) monitoring of program performance, and 6) predicting the impacts of NCDs.
WHO-ICCC (Innovative Care for Chronic Conditions)	A healthcare model developed by WHO for chronic diseases such as NCDs that do not only rely on clinical diagnosis and intervention but also require: 1) support of an environment that understands the complexity of health services delivery, and 2) cooperation between health personnel and the community, particularly the patient and their family.

[i] Individual fatty acids within the broad classification of saturated fatty acids have unique biological properties and health effects that can have relevance in developing dietary recommendations.
[ii] Countries will select indicator(s) of harmful use as appropriate to national context and in line with WHO's global strategy to reduce the harmful use of alcohol and that may include prevalence of heavy episodic drinking, total alcohol per capita consumption, and alcohol-related morbidity and mortality among others.
[iii] In WHO's global strategy to reduce the harmful use of alcohol the concept of the harmful use of alcohol encompasses the drinking that causes detrimental health and social consequences for the drinker, the people around the drinker and society at large, as well as the patterns of drinking that are associated with increased risk of adverse health outcomes.
[iv] WHO's recommendation is less than 5 grams of salt or 2 grams of sodium per person per day.
[v] Countries will select indicator(s) appropriate to national context.

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