

Management Response

Evaluation Title	Comprehensive Review of the WHO Global Action Plan on Antimicrobial Resistance
Commissioning Unit	WHO Evaluation Office
Link to the evaluation	Main report : Volume 1 Annexes : Volume 2 Evaluation Brief
Evaluation Plan	Organization-wide Evaluation Workplan for 2020-2021
Unit Responsible for providing the management response	HQ/AMR/AMA
<p>Overall Management Response: Accept</p> <p>WHO welcomes and accepts the recommendations of the evaluation. We thank the evaluation team for the comprehensive review of the WHO Global Action Plan on Antimicrobial Resistance (AMR-GAP), and the identified findings, learning and recommendations that will support WHO's efforts to further strengthen collaboration with partners and to scale up support to achieve impact at country level. Specific actions and details related to the 12 recommendations are provided in this Management Response (MR). We were pleased to be able to respond to the recommendations by referring to various key actions already in progress, and reference is also made to STAG-AMR recommendations and Global Leaders Group (GLG) priorities, as they often overlap with the recommendations provided by the GAP comprehensive review. Please note that the MR addresses only those recommendations directed to WHO and to the Quadripartite Secretariat, hosted at WHO. References to sub-recommendations that fall outside of the WHO mandate are not included in the MR</p> <p>Although AMR-related work has been taking place at all three levels of the Organization prior to the adoption of the GAP, WHO established the AMR Division at HQ in 2019 to strengthen the global leadership for coordinating and implementing a comprehensive response across the three levels of the Organization. Regional offices have long been committed to this area, examples are the SEAR RD's Regional flagship for AMR, the AMR special program at AMRO, and the Framework for Accelerating Actions to Combat AMR in the Western Pacific Region. The AMR Division has coordinated a cross-cutting, multi-disciplinary approach across WHO to address AMR, and has been leading the Tripartite, now also including UNEP as the Quadripartite Alliance, through the Quadripartite Joint Secretariat (QJS) based at the AMR Division. The recent publication 'WHO Strategic Priorities on Antimicrobial Resistance: Preserving antimicrobials for today and tomorrow' describes the WHO response based on four strategic priority areas and is aligned with the Organization's core mandate and functions: 1. Stepping up leadership for the AMR response; 2. Driving public health impact in every country to address AMR; 3. Research and development for better access to quality AMR prevention and care; 4. Monitoring the AMR burden and global AMR response. The priority areas place public health at the centre and encompass essential elements of the AMR response at global, regional and country levels while generating the evidence base for coordinated actions. Progress at country level will be contingent upon stronger systems, collaboration across sectors and engagement with Health Systems Strengthening, including Primary Health Care, Universal Health Coverage, COVID-19 recovery and pandemic response initiatives as well as broader preparedness for future outbreaks, epidemics and pandemics. To further define the scale up of the AMR response, a comprehensive Global Strategy for Resistant Bacterial Infections in the Human Health Sector is being prepared and will include internal and external consultation with stakeholders (see key actions at recommendation 10).</p>	
Management Response Status	In Progress
Date	March 2022

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Recommendation 1: WHO Secretariat and Member States to determine how best to strengthen the current GAP AMR both in the short-term and in the medium- and longer term. Specifically:

In the short-term

- WHO Secretariat to provide guidance on how Member States might prioritize in low-resource settings, for example by identifying “best buys”.
- WHO Secretariat to provide more support and guidance on how raised political awareness of AMR might be translated into practical political commitment and provision of resources globally, regionally and nationally.
- WHO Secretariat to develop a detailed workplan as to what it will do to implement the GAP AMR. This should include some form of M&E framework including, for example, tangible milestones.
- WHO Secretariat to identify a sub-set of clear indicators and targets which will be used to monitor progress of the GAP AMR overall and which the WHO Secretariat will actively track and report progress against.
- WHO Secretariat to provide guidance on how research and innovation will be promoted through the GAP AMR. This might include an overarching AMR global research agenda and guidance to countries on how they might reflect research and innovation in their national action plans.

In the medium- and longer term

- Member States and the WHO Secretariat to determine when the GAP AMR should be revised and updated to fully reflect a One Health approach covering aspects of human health, animal health, plant health, food production, food safety and the environment, jointly owned by Tripartite organizations and UNEP. One option would be to revise and update the GAP more in line with the recently published priorities of the Global Leaders Group.

Management response	Accepted. Agree on the need for translation of high-level AMR political awareness into practical political commitment and provision of resources globally regionally and nationally. This is a key focus of WHO, the GLG, and our partners. WHO recognizes that funding for WHO and within countries is inadequate to support countries in implementing priority activities and sustainable national action plans on AMR and that robust estimates of the costs and benefits are lacking. To monitor the implementation of the GAP/National Action Plans (NAPs) the TRACCS survey has been developed and has been providing a yearly update on the progress of NAP implementation over the past 5 years, following the strategic objectives of the GAP. Annually a progress report is published, that is essential for sharing best practices and decision-making. To measure progress in biennium 2020-21, three key performance indicators for the specific AMR Output (1.3.5) and associated mid-term and end of biennium targets had been established. The indicators include: 1) Number of countries implementing government-approved multisectoral AMR national action plans that involve relevant sectors and have a monitoring framework; 2) Number of countries having an AMR surveillance system and providing data to WHO; and 3) Number of countries with national systems in place to monitor the consumption and use of antimicrobials in human health. The results can be monitored through the Output Scorecard portal.			
Status	In Progress			
Key actions	Responsible	Timeline	Status	Comments
Review needs and demands to revise and update GAP	AMR/GCP/QJS with Quadripartite senior management	Q4 2021	Implemented	The GAP is not timebound and much remains to be implemented. Countries are embarking on implementing their national action plans in line with the GAP. The transaction costs and potential for disruption of a refreshed GAP would be considerable for all concerned, particularly as any future GAP should be developed with the Quadripartite. Therefore, the Quadripartite senior management agreed that the GAP should remain the bedrock of the AMR response and that if any gaps are identified, these should be addressed through complimentary mechanisms. The Quadripartite will continue to monitor the need and evidence. See also STAG-AMR report

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Tripartite M&E Framework developed (inclusive of clear indicators and targets) to monitor progress of the GAP AMR	AMR/SPC/NPM with Tripartite members + UNEP	March 2022	Implemented.	To further support the monitoring of the GAP, a Tripartite M&E Framework has been developed along with recommended indicators and technical reference sheets. A public data portal is being established to publish available data for the human health indicators of the GAP M&E framework. Specific indicators – based on TrACSS (Tripartite Antimicrobial Resistance Self-assessment Survey) and the GAP M&E Framework - have been selected and are already being used to monitor progress of the AMR output (Output 1.3.5) of the GPW13, and to monitor the progress in GPW13 overall.
Develop UNSDCF guidance for country teams to raise high level political awareness and resources for AMR	AMR/GCP/QJS with Tripartite members + UNEP	Q4 2021	Implemented	The guidance for incorporating AMR into development cooperation and SDG frameworks, as requested by the UNSG is making the case for AMR as a development issue, and to incorporate AMR into national development priorities, which should facilitate access to domestic and development finance explanation as required. The guidance will be piloted in countries in 2022.
Develop economic and investment case for AMR, including sustainable financing approaches	AMR/GCP/QJS with Quadripartite members Regional offices	Q1 2023	In progress	The Quadripartite recognises this as a key priority and is key deliverable of the Quadripartite Workplan. WHO will work with key partners and stakeholders to make the investment case at global and national levels, defining the return for investment on antimicrobial resistance activities. At the same time, leveraging existing funding streams could lead to synergies and yield efficiencies. WHO will also explore opportunities to catalyse the availability of domestic financing for national action plan implementation activities that could have significant impact at country level.
Develop, pilot, and disseminate WHO Costing and Budgeting Tool for NAPs AMR	AMR/SPC/NPM with Regional Offices	Q4 2021	Implemented	To operationalize and accelerate implementation of national action plans on AMR, WHO has developed a costing and budgeting tool and accompanying user guide. The purpose is to support countries in costing prioritized activities of an operational plan linked to their AMR national action plan and identify existing funding and funding gaps to promote resource mobilization and sustainable implementation. Data from the costed operational plans can feed into the development of a global and national investment case. The target audience of the publication are national policy makers and designated costing coordinators for national action plans on AMR. <i>This action also responds to recommendation 6</i>
Develop a One Health research agenda to identify research priorities	AMR/GCP/IRC, QJS, Regional offices	Q4 2022	In progress	The development of the One Health research agenda is addressing the need for an overall research and innovation agenda that is covering implementation research. The agenda will provide guidance to Member States how to address research and innovation in their NAPs. <i>This action also responds to Recommendation 3.</i>
Develop Global Research Agenda for Antimicrobial Resistance in the Human Health Sector	AMR/SPC, UHL, Regional Offices, SCI	Q4 2022 – Q1 2023	In progress	The aim of the AMR Global Research Agenda in the Human health sector is to drive evidence generation to improve prevention, control, and response strategies to tackle AMR in the human health sector. It has the objectives to 1) Identify and prioritize research questions to build the evidence base on AMR burden, drivers new and improved interventions, and service delivery; 2) Catalyse investment and scientific interest among researchers, donors, and public health professionals towards generating evidence to address knowledge gaps for effective

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				implementation of global and national policies on AMR prevention and control; 3) Guide the translation of research into action and use evidence to inform policymaking. <i>This action also responds to Recommendation 3 and 9</i>
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Objective 1: Improve awareness and understanding of antimicrobial resistance through effective communication, education and training

Recommendation 2: WHO Secretariat and Member States to clarify understanding and scope of this objective. Specifically: <ul style="list-style-type: none"> • WHO Secretariat to develop a theory of change covering awareness and understanding of what, by whom and for what purpose. This should be based on available evidence. • WHO Secretariat to propose a clear indicator for the expected outcome of this objective including plans for how they will actively monitor this. 				
Management response	Accepted. Actions will include consideration of country contexts and strengthen collaboration within WHO with departments/units working on increasing public health awareness and use of new technologies for better dissemination and uptake of WHO guidance.			
Status	In progress			
Key actions	Responsible	Timeline	Status	Comments
Develop a strategy to enhance awareness and understanding of AMR including a theory of change, key audiences, messages	AMR/GCP/ASA, Regional Offices	Q4 2022	In progress	The Strategy paper on awareness will include a theory of change as well as describe the key target audiences, key messages, and methodologies of reaching them. A global consultation will be held to discuss key parameters. AFRO will be piloting AMR awareness interventions for documentation and sharing of best practices <i>This action also responds to Recommendation 1.</i>
Finalize and share a validated survey tool with member states to gauge the level of awareness about antibiotic resistance among various groups of healthcare workers.	AMR/SPC/NPM	Q4 2022	In progress	To collect baseline evidence on awareness of antibiotic resistance, a 23-item survey has been developed and validated in 6 countries. The protocol for administering the survey is currently being reviewed by the ERC.
Develop AMR module as part of the World Health Survey Plus.	AMR/SPC/NPM, GCP/ASA, DDI/DNA	Q1 2022	Implemented	A draft AMR module has been developed for use in the World Health Survey Plus that can be used by national authorities for conducting national household surveys in various health topics.

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Objective 2: Strengthen the knowledge and evidence base through surveillance and research

Recommendation 3: WHO Secretariat and Member States to maintain support to GLASS and to supplement with methods to collect accurate, representative, comparable AMR data nationally, regionally and globally. Specifically: <ul style="list-style-type: none"> • WHO Secretariat and Member States to further expand enrolment in GLASS particularly among those Member States who have reported through TrACSS that they have a national AMR Surveillance system but are not yet enrolled in GLASS. • WHO Secretariat to propose ways in which prevalence surveys can be conducted to supplement availability of representative, comparable AMR data nationally, regionally and globally. • WHO Secretariat and Member States to identify ways in which use of surveillance data national can be increased and enhanced. • WHO Secretariat to identify ways in which research and innovation, beyond product research and development, can be encouraged and promoted through the GAP, perhaps under this objective. 				
Management response	Accepted. A broad consultation to inform GLASS further development was held in April 2021 with the participation of representatives from 88 countries, and key stakeholders advised on the next steps for the development of GLASS (3rd Technical Meeting and Consultation); improving the representativeness, quality and use of data, enhancing laboratory capacities, including laboratory quality management systems, assessing the burden of AMR, expanding AMR and AMC surveillance, and facilitating AMR surveillance linkages across human, animal, and environmental sectors. Annual TrACSS data will be reviewed to identify countries that have not yet enrolled in GLASS, and to provide technical assistance to facilitate their enrolment. HQ and ROs will continue to raise awareness and advocate for countries to enrol and provide quality data to GLASS.			
Status	In Progress			
Key actions	Responsible	Timeline	Status	Comments
Develop generic protocols to conduct AMR prevalence surveys	AMR/SPC/SEL, Regional Offices	Q3 2022	In progress	The development of the generic protocols to conduct AMR prevalence surveys started in July 2021 and the pilot implementation of the protocol will start in 2022 in 3 countries. The protocol will be finalized and proposed to countries where the ability to obtain quality representative data is not expected in the near future to: i) inform the SDG AMR indicators, and ii) as a means to complement and identify gaps in data obtained through routine surveillance for its improvement.
Develop guidance on the use of AMR/AMU surveillance data	AMR/SPC/SEL, Regional Offices	Q4 2022	In progress	The development of guidance on the use of AMR/AMU surveillance data has started and is to be concluded in the first part of 2022. Workshops will be held in 2022 with countries that are at early stages of development of their national surveillance systems to discuss the translation of data into policy. In addition, a WHO Academy course on AMR/AMU surveillance is being developed and contains a special module for policy makers on the use of evidence generated through surveillance for informing interventions.

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Develop and strengthen regional AMR/AMC surveillance networks to support national surveillance systems and enhance GLASS participation.	Regional Offices, AMR/SPC/SEL	2022-23 (continuous)	In progress	Regional surveillance networks exist (like CAESAR (EURO) and ReLAVRA (AMRO)) or are being developed to ensure the implementation of global standards, while addressing to regional specificities. Network activities ensure opportunities to learn from countries with a similar context, provide capacity-building tailored to existing levels of capacity and twinning arrangements. Collectively, regional networks will promote and strengthen GLASS participation.
Develop innovative approaches for establishment of surveillance platforms upon which research initiatives can be built to address key knowledge gaps such as AMR mortality, AMU profile, costs, risk factors, etc.	AMR/SPC/SEL	Q4 2023	In progress	Nationally representative surveys are being developed as a platform for enhancing surveillance of AMR. This involves development of a framework and a roadmap to systematically and strategically scale-up periodic surveys, providing a platform for global quality-assured surveillance of AMR offering an opportunity for linkage and integration with other activities (e.g., environmental surveillance), and a channel for delivery of more detailed studies meeting setting-specific research needs (e.g., AMR attributable mortality, molecular epidemiology, other). This approach will be piloted in 2022-2023 in at least one country.

Objective 3: Reduce the incidence of infection through effective sanitation, hygiene, and infection prevention measures

Recommendation 4: WHO Secretariat and Member States to identify ways in which effective sanitation, hygiene and infection prevention measures can be promoted in ways which reduce AMR. Specifically: <ul style="list-style-type: none"> • WHO Secretariat and Member States to explore ways in which effective infection prevention and control can be reflected in national AMR action plans. • WHO Secretariat to review how parts of the Secretariat working on AMR and those working on IPC can work more effectively together. • WHO Secretariat to review whether gains made on IPC related to COVID-19 responses are sustained and their effect on antimicrobial use and AMR. • WHO Secretariat to develop plans to more effectively include AMR in any future plans to strengthen IPC in the light of a specific disease outbreak. 				
Management response	Accepted. The need for effective Infection prevention and control programmes are in most cases included in national AMR action plans. Moreover, effective implementation of infection prevention and control (IPC) measures in healthcare facilities is a “best buy” for addressing AMR. However, 2021 TrACSS data suggests that only 35% of countries have national IPC programmes in place based on WHO IPC core components, that are being implemented nationwide, and regularly evaluated. 54% of the countries have developed national IPC programmes or plans, but they are not being implemented, or implemented only in selected health facilities. Most of the countries need support for nationwide implementation of their national IPC programmes.			
Status	In Progress			
Key actions	Responsible	Timeline	Status	Comments
Development of Global IPC Strategy	UHL/IHS with AMR/AMA	2022-23	In progress	During the WHO EB150 , Member States fully recognized the gaps in IPC programmes, which have been highlighted by the pandemic, creating a unique opportunity to respond

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				now by strengthening IPC programmes. To save lives, save money and to restore communities' trust in health care.
Advocate for the inclusion of AMR and IPC in the emergency preparedness response measures	AMR, WPE, WRE, UHL	2022- 2023	Implemented	COVID-19 demonstrated first-hand the need for stronger systems to prevent, diagnose and manage infections and exposed the large gaps in IPC programmes that also greatly impacts AMR. Therefore, it is important to ensure that AMR and IPC are included the emergency preparedness and response measures to tackle future health emergencies. Both IPC and AMR interventions and country capacities are included in the Health Systems for Health Security Framework document. In addition, costs of AMR and IPC interventions are being included in the development of the Pandemic Preparedness Costing report that will be submitted to the WHA.
Reinforce, refine and maintain WHO-wide AMR-IPC coordination mechanism(s) for AMR and IPC scale up	AMR, UHL, WPE, WRE and Regional Offices	2022-2023	In progress	Coordination mechanisms within WHO, across all levels, need to be strengthened to scale up technical cooperation, to interlink and align IPC activities in support of AMR NAPs (see also key actions under recommendation 11). To include AMR, UHL, and Health Emergency Programme departments/ units actively working on aspects of IPC, including those dealing with emergencies.
Align TrACSS and other survey instruments to monitor progress of IPC guideline implementation	AMR, UHL, Regional Offices	2021	Implemented	The country capacity levels to monitor progress in the development and implementation of national IPC guidelines has now been aligned between the AMR TrACSS survey, and the revised IPC indicator used by the IHR/JEE.

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Objective 4: Optimize the use of antimicrobial medicines in human and animal health

Recommendation 5: WHO Secretariat and Member States to consider how progress under this objective can be expanded and monitored more effectively. Specifically: <ul style="list-style-type: none"> • WHO Secretariat to propose how this objective could include plant health, food production, food safety and the environment in the short-term. • WHO Secretariat to continue with plans to track effectively antimicrobial consumption and use, particularly in the human health sector. • WHO Secretariat to clarify the importance of appropriate clinical management of people with infections as a key part of optimal use of antimicrobials. This could take the form of guidance, including a focus on the importance of good laboratory services. 				
Management response	Accepted. WHO has the responsibility for supporting the implementation of the AMR GAP in the human health sector. Responsibility for action in the plant and animal health sectors lies with the other Quadripartite Partners. Together, WHO and Quadripartite collaboration are promoting scale up of action at global, regional and national levels. The AMR MPTF is supporting a collaborative programme on addressing AMR in the environment, and WHO and the Quadripartite have been actively engaged in the report on AMR in the environment which will be discussed with Member States at the United Nations Environment Assembly in Feb 2022. WHO supports the work of Codex Alimentarius on the Code of Practice on AMR and guidance on integrated surveillance to strengthen the regulatory framework around food safety. Review of 5 year trends from TrACSS suggest that while around 90% of the countries have regulations on the prescription and use of antimicrobials, a much smaller number of countries have established national monitoring system to track consumption and use. More technical assistance is urgently needed to scale up the development of AMC/AMU monitoring systems in countries.			
Status	In Progress			
Key actions	Responsible	Timeline	Status	Comments
Implement WHO policy guidance on integrated antimicrobial stewardship activities	AMR/GCP/ASA Regional Offices	Q4 2022	In progress	Member States requested WHO policy guidance on how to facilitate the implementation of national AMS activities in an integrated and programmatic approach. The guidance will provide a set of evidence-based recommendations to drive integrated AMS activities, national coordination, and monitoring of the interventions.
One Health Legislative Assessment Tool for AMR developed by the Quadripartite, and piloted through the AMR MPTF	AMR/GCP/QJS	Q3 2022	In progress	To optimize the production and use for antimicrobials along the whole lifecycle from research and development to disposal including plant health, animal health, food production, food safety and the environment. Guidance will be developed and piloted through the AMR MPTF
Tripartite collaboration strengthened, with UNEP joining as a Member.	AMR/GCP/QJS, Regional Offices	Q1 2022	Implemented	In January 2022, UNEP officially joined the now Quadripartite Joint Secretariat (QJS) on AMR and appointed a dedicated liaison officer. The Quadripartite Strategic Framework and workplan has been developed collaboratively by all four organisations at HQ level, with input from the regions. Collaboration is ongoing.

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Refine/update GLASS methodology for tracking Antimicrobial consumption and use in the human health sector	AMR/SPC/SEL, Regional Offices	2020	Implemented	GLASS began annual data calls on antimicrobial consumption (AMC) at national level in 2020 and the participation of countries in providing AMC data is rapidly expanding, especially where regional AMC surveillance networks exist. WHO GLASS is refining the methodology to also obtain AMC data at hospital level. In addition, point prevalence surveys on antimicrobial use (AMU) have been conducted in several countries in order improve the understanding of AMU practices and inform antimicrobial stewardship.
Develop a Handbook for treatment of bacterial infections	AMR/GCP/IRC	Q1 2022	Implemented	The handbook is a major contribution to maximize the benefits of existing antimicrobial agents. https://www.who.int/publications/m/item/the-who-essential-medicines-list-antibiotic-book-improving-antibiotic-awareness

Objective 5: Develop the economic case for sustainable investment that takes account of the needs of all countries, and increase investment in new medicines, diagnostic tools, vaccines, and other interventions

Recommendation 6: WHO Secretariat to explain how the economic case for investment in AMR responses will be made and used to advocate for the resources needed including globally, regionally and nationally. Specifically: <ul style="list-style-type: none"> • WHO Secretariat with others, including the Tripartite organizations, UNEP and others who have worked in this field, e.g. the World Bank and OECD to develop a clear economic case for investment in responses to AMR. This will include clear, credible data on the disease burden posed by AMR globally, regionally and in different countries. • WHO Secretariat to develop clear plans and guidance as to how the economic case (above) can be used to advocate for sustained political commitment to and greater financial resources for AMR responses. • WHO Member States to consider ways in which the increased financial resources needed to respond to AMR can be made available, not least through more Member States providing funds to the MPTF. 	
Management response	Accepted. This is a high priority that is flagged in the Quadripartite Strategic Framework and the Workplan for Quadripartite organisations. More work needs to be done to build the evidence base for such models across sectors, both in cost estimates as well as disease burden. The details of this work will be developed in 2022, in parallel with the work of the Global Leaders Group on AMR financing. The AMR MPTF provides catalytic funding to support Quadripartite work on AMR, and the Quadripartite will continue to actively mobilise funds to support this work at global and country level. WHO and the Quadripartite agree that sourcing sustainable financing, and leveraging domestic and development finance to scale up AMR related action is critical. This is part of the results matrix of the AMR MPTF, and a key workstream for the Global Leaders Group. This topic is also under consideration as part of the ongoing discussions about the financing of AMR and Pandemic preparedness.
Status	In Progress

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Key actions	Responsible	Timeline	Status	Comments
Convene a Quadripartite task force (including key organisations and development banks) on the economic and political leadership for AMR.	AMR/GCP/QJS, GLG	2022-23	In progress	Under the auspices of the Global Leaders Group, use the convening power of the Quadripartite and Global Leaders group to convene the expertise in Development Banks, other organisations such as the OECD and academia to agree and take forward priority actions to build the economic and political cases for action at global and at country levels.
Develop economic and investment case for AMR, including sustainable financing approaches (key deliverables of the Quadripartite Workplan).	GCP/QJS, Regional Offices	Q1 2023	In progress	See details under recommendation 1
Demonstration countries to use UNSDCF guidance to raise high level political awareness and resources for AMR	AMR/GCP/QJS with Quadripartite members	Q4 2021	Implemented	See details under recommendation 1

Recommendation 7: Member States and the WHO Secretariat to sustain and expand progress made on research and development for products. Specifically: <ul style="list-style-type: none"> Member States to identify ways in which they can finance product research and development in ways which are delinked from cost and volume of sales. Member States, the WHO Secretariat and others to continue efforts to maximize the benefits of existing antimicrobial agents. WHO Secretariat to continue efforts to expand research and development efforts to also include diagnostics and vaccines. 				
Management response	Partially Accepted - with respect to the recommendation for WHO Secretariat to continue efforts to expand research and development efforts to also include diagnostics and vaccines. Unlike antibiotics, bacteria do not develop resistance against vaccines and diagnostics, thus the R&D needs are different as no constant replenishment is needed. In particular for reserve antibiotics public support of R&D efforts is needed as the market does not provide a sufficient financial incentive while this is not established for vaccines and diagnostics for bacterial infections. For the above reasons, most efforts of member states and international organizations has focused on fostering the development of new antibacterial treatments. WHO continues to work and strengthen collaboration with partners to improve access to antimicrobials.			
Status	In Progress			
Key actions	Responsible	Timeline	Status	Comments
Annual reviews of:	GCP/IRC, MHP		In progress	Part of WHO's continued effort to expand research and development efforts, including for vaccines
- The preclinical and clinical antibacterial pipeline		Q2 2021		
- The pipeline of vaccines for bacterial infections		Q2 2022		

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- The preclinical and clinical antifungal pipeline		Q3 2022		
Provide guidance for the development of pull incentives	GCP/IRC	Q1 2022	Implemented	WHO to provide guidance to political processes such as G7 and G20 on the development and implementation of pull incentives to foster research and development
Assess the need for additional target product profiles (TPPS)	GCP/IRC	Q4 2023	Not started	Assessing the need for additional TPPS beyond those already developed by WHO for missing antibacterial treatments and diagnostics
Update the WHO Bacterial Priority Pathogen List (BPPL)	GCP/IRC	Q2 2023	In progress	The update of the BPPL will provide guidance to member states and researchers on R&D needs, including treatments, diagnostics, and vaccines
Develop the first WHO List of fungal pathogens of public health importance	GCP/IRC	Q3 2022	In progress	The first WHO List of fungal pathogens of public health importance will provide important guidance to Member States and researchers on research and development gaps for fungal treatments and diagnostics

Coordination with international and national partners

Recommendation 8: The WHO Secretariat and other Tripartite organizations to identify ways in which coordination can be enhanced and the contribution of other actors recognized and maximized. Specifically:

- WHO Secretariat, FAO and OIE to identify organizations, such as UNEP and other multilateral agencies, and sectors, such as civil society and the private sector that are making important contributions to AMR and to identify ways in which their contributions can be maximized and recognized, e.g. in progress reports.
- WHO Secretariat to cooperate with FAO, OIE and UNEP to develop guidance on the One Health approach. While this could include a working definition of One Health, it needs to focus mostly on the practical implications of what the One Health approach does (and does not) mean for AMR approaches globally, regionally and nationally.
- WHO Secretariat, FAO and OIE to work with UNEP to expand the current Tripartite arrangement to a Quadripartite.
- The Tripartite Joint Secretariat and Global Leaders Group to develop a framework to monitor and report on progress towards the Global Leaders Group's six priorities, key performance indicators and 2021 deliverables. This might include more detailed descriptions of the key performance indicators and how these will be measured, when particular deliverables might be expected in 2021 and how these plans fit with other monitoring and reporting efforts, e.g. for the GAP AMR, SDGs and GPW13.
- The Tripartite organizations to follow up with the UN Secretary General to determine the response to the proposal submitted six months ago. The Tripartite Joint Secretariat to explain to stakeholders the nature of the platform once a response has been received and to explain how this panel will fit with other AMR structures.
- The Tripartite Joint Secretariat to update stakeholders on the status of the proposed partnership platform following the planned meeting with Member States on 30 September 2021 to discuss the draft terms of reference.
- The WHO Secretariat, OIE, FAO and UNEP to identify ways in which work with other multilaterals, including UN agencies, can be more effectively coordinated. This could involve the establishment of an inter-agency task force.

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<ul style="list-style-type: none"> The WHO Secretariat, OIE, FAO and UNEP to produce guidance as to how coordination on AMR between development partners at country level might work. This should include relationships with national AMR multisectoral coordination mechanisms and links to existing structures including the UN country team and Resident Coordinator. 				
Management response	Accepted. UNEP has been a partner in the development of the Tripartite strategic framework and workplan. UNEP will officially join the AMR Country Self-Assessment Survey (TrACSS) from 2022 and have provided valuable inputs on questions relating to AMR and the environment. A definition of One health AMR is set out in the Joint Quadripartite Strategic Framework and will be refined further by the One health high level expert panel (OHLEP) and the Quadripartite. A key action to enhance coordination on the delivery of technical assistance to countries pertaining to human health aspects of AMR is the AMR Technical Assistance Mechanism (AMR TEAM) to be launched in 2022.			
Status	In Progress			
Key actions	Responsible	Timeline	Status	Comments
Establish a One Health Partnership platform for AMR to facilitate engagement of CSO academia and multilateral organisations	AMR/GCP/ASA	Q2 2022	In progress	FAO, OIE, UNEP and WHO expect to launch the Partnership Platform in the second quarter of 2022 once terms of reference are revised to incorporate public consultation held in late 2021.
Develop GLG monitoring framework with refined SMART KPIs	AMR/GCP/QJS, GLG	Q4 2021	Implemented	https://www.amrleaders.org/resources/m/item/priorities-of-the-amr-glg-Jan-2022
Develop guidance for incorporating AMR into UNSDCF	AMR/GCP/QJS,	Q4 2021	Implemented	See key action under recommendation 1: https://www.who.int/publications/i/item/9789240036024
Create AMR Technical Assistance Mechanism to enhance coordination and collaboration on the delivery of technical assistance to countries on the human health aspects of AMR	AMR/SPC/NPM, Regional Offices	Q4 2022	In progress	The STAG-AMR has endorsed the creation of a “AMR Technical Assistance Mechanism – TEAM.” An initial survey has been conducted to gauge interest among civil society partners, academic and research institutions, development agencies and WHO collaborating centres, and other inter-governmental organizations and donor agencies. Over 90% of the respondents are keen to be included in a coordination platform managed by WHO in order to share information, coordinate activities at the country level, share tools, and share technical expertise.

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Equity and inclusion

Recommendation 9: Member States and the WHO Secretariat to identify ways in which equity and inclusion can be better reflected in AMR programmes and responses. Specifically: <ul style="list-style-type: none"> WHO Secretariat to produce guidance as to how equity and inclusion can be better reflected in AMR responses globally and regionally in a similar way to the guidance produced for national AMR action plans. 				
Management response	Accepted. The development of the Global Research Agenda for Antimicrobial Resistance in the Human Health Sector that was provided as a key action under recommendation 1 , will include the identification and inclusion of how equity can be better reflected in AMR programmes and responses. The development of the Research agenda includes the review and endorsement of relevant research questions ranked by criteria using the CHNRI method. The 5 main criteria are Answerability, Effectiveness, Deliverability and Acceptability, Potential impact on disease burden and Effect on equity.			
Status	In Progress			
Key actions	Responsible	Timeline	Status	Comments
Global Research Agenda for Antimicrobial Resistance in the Human Health Sector	AMR/SPC, Regional Offices	2022-23	In progress	See additional details under recommendation 1
Develop series of Technical Briefs for countries on how to incorporate critical aspects of gender, social inclusion and equity in the development and implementation of their AMR NAPs.	AMR/SPC/NPM, DGO/GER, Regional Offices	2022-23	In progress	The technical briefs will be based on evidence reviews and focus on incorporating gender, social inclusion and equity in 1) laws, regulations and policy; 2) data and monitoring; 3) awareness and norms; and 4) resources.
Develop AMR people centred framework	AMR/NPM UHL, Regional Offices, STAG-AMR	Q1-Q2 2022	In progress	See details under recommendation 10
AMR Attributable Mortality protocol will include variables to assess inequities in the AMR burden.	AMR/SPC/SEL, Regional Offices	2022-2023	In progress	Factors that may contribute to racial and ethnic inequality in antibiotic resistance – related morbidity and mortality such as barriers to accessing medical care, differences in prescribed antibiotic use. Socioeconomic status, gender, etc. should be considered first in the assessment of the burden and later on, in the development of monitoring and containment strategies.

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Health Systems

Recommendation 10: Member States and the WHO Secretariat to identify ways in which the importance of an approach based on understanding of health systems can be incorporated more effectively into AMR responses. Specifically: <ul style="list-style-type: none"> WHO Secretariat to produce guidance on laboratory strengthening as part of responses to AMR recognizing the importance of laboratories in delivery of clinical services and surveillance. WHO Secretariat to produce guidance on how AMR responses might fit with a broader health systems approach, for example, using existing systems where possible. WHO Secretariat to work with OIE, FAO and UNEP to provide guidance on what a health systems approach looks like in a One Health context, i.e. how can a health systems approach consider not only human health but also animal health, plant health, food production, food safety and the environment. 				
Management response	Accepted. The AMR Division and AMR teams at regional offices are closely engaged with the UHC/PHC, and health resilience teams to better integrate AMR interventions within the systems strengthening approaches.			
Status	In Progress			
Key actions	Responsible	Timeline	Status	Comments
Development of a Global Strategy on Resistant Bacterial Infections in the Human Health Sector.	AMR/AMA, Regional Offices	2022-2024	In progress	The overall purpose of the Global Strategy is to inform and guide the health system response at country, regional and global level. Objectives: i) Integration of the AMR response within the health system framework, to ensure that interventions and programs are sustainable, through inclusion in existing and future national health plans and related budgets; ii) Ensure implementation and monitoring of National Action Plan on AMR through costing, budgeting and operational planning at country level; iii) Reaching the Global Impact targets as defined in the Global Strategy, including the AMR specific SDG targets by 2030.
Develop AMR people centred framework	AMR/NPM, UHL, Regional Offices	Q1-Q2 2022	In progress	There is a need for a programmatic approach to mitigating AMR that will ensure sustainability, promote equity, and facilitate stronger oversight and management. The AMR people centred framework that puts the patient at the centre is under development to facilitate and support countries with this approach. It identifies challenges, and intervention areas to overcome them, at community, primary health care, health-care facility levels across a pathway: 1) prevention of AMR, 2) access to essential health services, 3) diagnosis and 4) access to appropriate treatment. This key action is a recommendation of the STAG-AMR . The framework also will underpin the development of guidance for AMR NAP 2.0 for human health sector, including defining a “package” of key interventions based on country capacity. It will include gender, equity, disability considerations in the development, implementation, and monitoring of NAP 2.0.

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Identification of demonstration countries for integration of AMR interventions into PHC and Health Systems	AMR/SPC/NPM, UHC, PHC, NAP cross-cutting working group	2022-23	In progress	Demonstration countries are being identified for integrating AMR interventions into operational and strategic levers of the PHC operational framework, and to support enhancement of resilient health systems and emergency preparedness. Specific AMR interventions are also being identified to align with the seven policy recommendations proposed by the <i>health systems for health resilience teams</i> to be piloted in demonstration countries. This work is being coordinated through the NAP cross-cutting working group (see key action at recommendation 11).
Demonstrate the impact of country office strengthening to accelerate the AMR response in countries	AMR/AMA, AMR/SPC/NPM, Regional Offices, Country offices	Q4 2022	In progress	In 7 demonstration countries – in AFRO, EMRO, SEARO - senior technical staff are being recruited to provide guidance and support to the national authorities in expediting their AMR response by building on health systems strengthening efforts.
Develop WHO Global AMR Laboratory Network to support countries establishing and strengthening access to robust national microbiology laboratories for AMR surveillance and clinical management.	AMR/SPC, Regional Offices	2022-2025	Not initiated	Limited access to quality assured microbiological laboratory services will affect both individual patient care and reliable surveillance data. WHO is planning to develop a Global AMR Laboratory Network which function is to strengthen quality and access to microbiology laboratory services, sharing good laboratory practices, and diagnostic stewardship. This key action is a recommendation of the STAG-AMR See also key actions under recommendation 3.

WHO internal structures and systems

Recommendation 11: Member States and the WHO Secretariat to review WHO internal structures and systems to ensure they are able to support effectively AMR responses. Specifically: <ul style="list-style-type: none"> • WHO Secretariat to identify ways in which effective coordination can be achieved on AMR across organizations, WHO levels, divisions, departments, teams, and groups. • Member States and the WHO Secretariat to cooperate with OIE, FAO and UNEP to better understand the level of resourcing needed to ensure optimal staffing levels across responses to AMR. • WHO Secretariat to identify ways in which AMR responses can be more effectively linked to overall organizational priorities, for example, the health SDGs. 	
Management response	Accepted. The AMR Division has initiated several structures to support Organization-wide effective AMR response, in addition to the formal ODT/TEN structure for Output 1.3.5 on AMR (see key actions). Through quarterly newsletters the division is sharing updates on progress by countries, and activities taking place at all three levels of the organization with the support of our partners and our donors.
Status	In Progress

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Key actions	Responsible	Timeline	Status	Comments
Set up of two cross-cutting workstreams for NAP implementation and One Health at HQ	AMR/SPC/NPM AMR/GCP/TJS	Q4 2021	Implemented	To ensure inter and intra programmatic work the AMR Division has set up two cross-cutting workstreams: 1) A Cross-cutting working group on AMR NAP country support (bi-weekly), and 2) a Quadripartite cross-cutting working group (every 2 months), that also includes our external partners (FAO, OIE and UNEP). The workstreams ensure exchange of information between teams, provides updates and input, finds opportunities for synergies, integration, coordination between different teams in providing technical assistance to countries, and ensuring that all technical teams are involved (and accountable). Similar cross-cutting structures and working groups are in place at most of the Regional Offices.
Maintain and expand WHO cross-organizational AMR Working Groups at Regional Offices	Regional Offices	2022-23	Ongoing	Maintain and expand the AMR Working Groups at the Regional Offices to ensure GAP implementation and Regional AMR strategies, through communications, accountability and reporting among Departments and at all levels, and monitor, review, evaluate and report actions to the countries, the Secretariat, and HQ.
Create AMR Technical Assistance Mechanism to enhance coordination and collaboration on the delivery of technical assistance to countries on the human health aspects of AMR	AMR/SPC/NPM, Regional Offices	Q4 2022	In progress	For more details see key action under recommendation 8
Annual data collection for the AMR related SDG indicators 3.d.2 and 3.b.3	AMR/SPC/SEL EM	2021	Implemented	Two critical indicators were added to the SDG indicator framework in 2019, based on GPW 13 indicators SDG indicator 3.d.2 Percentage of bloodstream infections due to selected AMR organisms, collected through GLASS. The essential medicines department is also collecting another relevant set of data for monitoring AMR - SDG indicator 3.b.3: Proportion of health facilities that have a core set of relevant essential medicines (including antibiotics) available and affordable on a sustainable basis.

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COVID-19

Recommendation 12: The WHO Secretariat to conduct a review of lessons learned relating to AMR responses as a result of the COVID-19 pandemic. Specifically, this should include: <ul style="list-style-type: none"> • Understanding the disruptions and adaptations that took place in AMR responses because of COVID-19. • The opportunities that were created for AMR responses by the COVID-19 pandemic and responses to it and the extent to which these were or were not maximized. • Better understanding of the effects of COVID-19 on antibiotic use and levels of AMR. • Understanding how AMR responses can use increased public understanding of pandemics, the need for effective medical countermeasures and the links between human health, animal health and the environment to promote better understanding of and commitment to AMR responses. • Lessons learned for product research and development 				
Management response	Accepted. Data collected from 163 member States in 2021 through the annual TrACSS survey reveals that 93% of the countries noted that the COVID19 pandemic had greatly impacted the development and implementation of their AMR NAPS. In addition, 82% of the countries noted that COVID-19 had impacted the governance and administration of AMR work, including reduced government engagement and funding. Lastly, 79% of the countries responded that COVID-19 had impact on various operational aspects of AMR NAP implementation- surveillance, awareness, data collection, capacity building etc. This emphasizes the critical importance of integrating AMR within the health security agenda, and emergency preparedness and response measures, and strengthening diagnostics capacity (including across the entire supply chain) for AMR surveillance, Antimicrobial stewardship policies and practices, and IPC and WASH in healthcare facilities. The significant gap in financial resources at all levels remains a key challenge in addressing these issues at country level. The need for effective medical countermeasures and R&D is addressed in recommendation 7. Related key actions of AMR responses can also be found under recommendation 5.			
Status	In Progress			
Key actions	Responsible	Timeline	Status	Comments
Publication on the Impact of the COVID-19 pandemic on the surveillance, prevention and control of antimicrobial resistance	WHO CCs	2021	Implemented	Impact of the COVID-19 pandemic on the surveillance, prevention and control of antimicrobial resistance a global survey
Incorporation of questions related to the COVID19 impact on NAP implementation and governance in the annual TrACSS survey.	AMR/SPC/NPM, Regional Offices	2021	Implemented	The impact of the COVID19 pandemic on the implementation of AMR NAPs is monitored through TrACSS. In 2021, 93% of the 163 countries that responded to the survey noted that COVID19 impacted AMR NAP implementation, 82% noted that governance and funding of AMR was impacted, and 79% noted that specific technical activities were impacted. Regional offices are following up. (Access the database on countries' national action plan implementation status.

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Generation of evidence on the prevalence and impact of co-infections and AMR among hospitalised COVID-19 cases	Health Emergencies Programme, AMR	Q4 2022	In progress	WHO AMR is coordinating and evidence synthesis on the prevalence and impact of bacterial coinfections in hospitalised COVID-19 patients. This work is complemented by the collection of retrospective and prospective clinical data from anonymized patients admitted to hospitals for COVID-19 around the globe, including in LMICs. This data collection, coordinated by WHO AMR in collaborating with the WHE, aims to assess the prevalence co-infections and AMR in patients hospitalised with COVID-19, and practices related to antibiotics use or overuse.
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