

Summary report on the
**Meeting on scaling up
hospital antimicrobial
stewardship in the
Eastern Mediterranean
Region**

Cairo, Egypt
5–6 March 2024



**World Health
Organization**

Eastern Mediterranean Region

Summary report on the

**Meeting on scaling up hospital
antimicrobial stewardship in the
Eastern Mediterranean Region**

Cairo, Egypt
5–6 March 2024



**World Health
Organization**

Eastern Mediterranean Region

© World Health Organization 2024

Some rights reserved. This work is available under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO licence (CC BY-NC-SA 3.0 IGO; <https://creativecommons.org/licenses/by-nc-sa/3.0/igo>).

Under the terms of this licence, you may copy, redistribute and adapt the work for non-commercial purposes, provided the work is appropriately cited. In any use of this work, there should be no suggestion that WHO endorses any specific organization, products or services. The use of the WHO logo is not permitted. If you adapt the work, then you must license your work under the same or equivalent Creative Commons licence. If you create a translation of this work, you should add the following disclaimer along with the suggested citation: “This translation was not created by the World Health Organization (WHO). WHO is not responsible for the content or accuracy of this translation. The original English edition shall be the binding and authentic edition”.

Any mediation relating to disputes arising under the licence shall be conducted in accordance with the mediation rules of the World Intellectual Property Organization.

Suggested citation. Summary report on the meeting on scaling up hospital antimicrobial stewardship in the Eastern Mediterranean Region. Cairo: WHO Regional Office for the Eastern Mediterranean; 2024. Licence: CC BY-NC-SA 3.0 IGO.

Sales, rights and licensing. To purchase WHO publications, see <http://apps.who.int/bookorders>. To submit requests for commercial use and queries on rights and licensing, see <http://www.who.int/about/licensing>.

Third-party materials. If you wish to reuse material from this work that is attributed to a third party, such as tables, figures or images, it is your responsibility to determine whether permission is needed for that reuse and to obtain permission from the copyright holder. The risk of claims resulting from infringement of any third-party-owned component in the work rests solely with the user.

General disclaimers. The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by the World Health Organization to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the World Health Organization be liable for damages arising from its use.

Contents

1.	Introduction.....	1
2.	Summary of the discussions.....	2
3.	Recommendations.....	4
4.	Conclusion	6

1. Introduction

On 5 of March 2024, regional and international experts in hospital antimicrobial stewardship (AMS) implementation and WHO staff from selected country offices and the Regional Office for the Eastern Mediterranean met to develop a plan of action to support the scale up of hospital AMS efforts in the WHO Eastern Mediterranean Region.

The meeting's objectives were to:

- review progress in implementing hospital stewardship programmes in the Region;
- review the experience of other regions and countries in scaling up hospital stewardship in low- and middle-income countries;
- identify potential partners who can collaborate with WHO in the implementation of the framework and support countries in the scale-up of hospital stewardship;
- discuss how WHO can work with partners to facilitate their engagement and scale up in the Region; and
- discuss incentives and instruments to support scale-up (hospital accreditation/continuing professional development requirements).

Lower-middle income country settings were the targets for this meeting, as the risks of inaction are high, and there is some interest, capacity and infrastructure for AMS, although variable in type and intensity. The targeted countries included Egypt, the Islamic Republic of Iran, Iraq, Jordan, Lebanon, Morocco, Pakistan and Tunisia.

The focus of the meeting was on scaling up hospital AMS. Throughout this document, we use the term AMS for activities that address antibiotics, antivirals, antifungals and antiparasitic agents. However, the focus of stewardship efforts is often on antibiotics, which form the bulk of the antimicrobial agents used and misused.

Leading up to the meeting, an AMS consultant interviewed 35 experts and organizations. The results of the interviews were then summarized and shared with the attendees and discussed during the meeting. On 6 March 2024, a follow-up virtual meeting discussed the findings with WHO country offices, leading to broad agreement with the recommendations.

Dr Hala Amer, Regional Advisor for Antimicrobial Resistance (AMR)/Infection Prevention and Control (IPC), WHO Regional Office for the Eastern Mediterranean, opened the meeting by welcoming online and in-person attendees, and asked participants to identify approaches to scaling up hospital AMS in the Region. Dr Liz Tayler, Senior Technical Advisor for AMR at the Regional Office, highlighted the importance of contextualizing AMS efforts in the Region and working through the available systems.

2. Summary of the discussions

The interviews and in-person and online discussions highlighted the major enablers and barriers to scaling up hospital AMS, leading to the identification of six main areas for action:

- **AMS programme structure:** The varying human resource capacities, health system structures, governance arrangements and levels of political interest in the countries of the Region necessitates country-tailored AMS approaches, while maintaining core structures and systems. There are potential efficiencies associated with having a core package of interventions that is locally contextualized and integrated with IPC interventions. Better clarity on the roles and responsibilities of AMS team members at both national and institutional levels can lead to better accountability and improved governance.
- **Training and education:** The lack of availability of expertise requires an urgent scaling up of knowledge and capacity at pre-

service and in-service levels, as well as specialized AMS training for professionals to lead AMS programmes.

- Mentorship: There is a need for mentorship programmes and the identification and empowerment of AMS centres of excellence.
- The available AMS tools need to be disseminated and additional operational tools need to be developed.
- Networking between AMS experts and implementers is beneficial. However, the absence of a sustainable platform for networking and engagement in support of AMS is a barrier.
- Quality assurance mechanisms: The implementation of activities to scale up AMS can be supported through patient safety and quality assurance mechanisms, including accreditation, regulation, or a combination of both. AMS standards can be either embedded into the available broader accreditation standards, or there could be standalone AMS accreditation in those countries that lag behind in hospital accreditation processes. This requires further guidance and support at national level through engagement with established entities in the Region or globally.

Other AMS facilitators include:

- having clearly defined national and hospital medication formularies as well as guidelines for antimicrobial use or infectious disease treatment;
- ensuring access to diagnostics and the optimal use of the available diagnostics;
- having AMR and AMS research capacity in some academic and clinical settings;
- availability of electronic data sources, such as those for procurement, prescribing and dispensing; and
- having national AMR surveillance potential and capacities.

3. Recommendations

To Member States

1. Promote the inclusion of AMR and AMS as domains of expertise in pre-service and in-service education to support the development of an AMS specialist cadre.
2. Encourage the roll out of AMS through developing a network of centres of excellence on a hub and spoke model to support the provision of training on AMS and management of infectious diseases, including multidrug resistant infections.
3. Refine quality assurance mechanisms such as accreditation standards to include actions to address AMS in health facilities; use these to monitor and improve performance.
4. Identify and empower networks that could support AMS networking and mentorship opportunities, such as professional societies focused on infectious diseases and related fields, primary health care, surgery, internal medicine, paediatrics and cancer.
5. Use the Essential Medicines List and AWaRe classification to inform the procurement and distribution of antibiotics and improve the appropriateness of use, including through national guidelines.

To WHO

System and structure:

6. Develop a set of models for AMS programme structures, with clear terms of reference, considering different scenarios of available human resources (availability of infectious diseases physicians, pharmacists, clinical pharmacists, or clinical microbiologists) and complexity of the clinical mix (secondary, tertiary or specialist hospitals).
7. Develop systems and processes to support the establishment of AMS centres of excellence in countries, including assessment tools

and facilitating engagement with global and regional entities, and support implementation in priority countries.

8. Develop quality assurance requirements for hospitals (accreditation, regulation, or other means), to support the integration of AMS/IPC efforts into overall patient safety initiatives.
9. Embed targeted AMS standards into other programmes, such as the timing of surgical prophylaxis for anaesthesiology.

Training and capacity-building:

10. Support a network of academic institutions that can refine curricula to ensure AMR is covered in the pre-service medical, pharmacy and nursing curricula.
11. Identify and facilitate access to continuous professional development training/in-service courses, including short modules that can be used as pre-licensing certifications for prescribers and pharmacists.
12. Support the development of a core regional AMS course for those leading stewardship activities that can be adapted to different country contexts.
13. Develop an expert mentor list for each country, possibly through the “AMR TEAMS” or other platforms.
14. Support twinning opportunities and peer-to-peer learning within and between countries.

Operational tools:

15. Promote available AMS tools for implementation, monitoring, education and other activities, by mapping and publishing them on a single platform.
16. Develop templates for hospital administrators in both high-resource hospitals and low-resource hospitals, to plan, execute and monitor AMS programmes.

17. Support partnerships to develop electronic tools for AMS interventions, consumption reporting and optimizing diagnostic use.
18. Incorporate AMS into support for digital health in countries.

Networking:


19. Promote use of the WHO community of practice website and evaluate engagement with it and the need for its adjustment or supplementation with alternative platforms.
20. Identify existing partners who have the potential to promote AMS-related networking.

Regional research efforts:

21. Identify regional research priorities based on the WHO AMR research priorities list.
22. Design tools for simple studies in behavioural science to support AMS and IPC practices in the Region.

4. Conclusion

Dr Yvan Hutin, Director of the Department of Communicable Diseases at the WHO Regional Office for the Eastern Mediterranean, in his concluding remarks emphasized the need for collaboration, training, advocacy and using pre-existing resources from other fields in AMS interventions. The meeting concluded with a clear set of actions for WHO to support the scale up of hospital AMS in the Region.



World Health Organization
Regional Office for the Eastern Mediterranean
Monazamet El Seha El Alamia Street,
Extension of Abdel Razak El Sanhoury Street
P.O. Box 7608, Nasr City
Cairo 11371, Egypt
www.emro.who.int