Emerging antimicrobial resistance reporting

Guide for emerging AMR event sharing

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World Health Organization

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Executive group

Martina Escher, Sergey Eremin, Carmem Pessoa da Silva

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INTRODUCTION

The Emerging Antimicrobial Resistance Reporting (EAR) component within Global Antimicrobial Resistance Surveillance System (GLASS) was developed at the request of Member States to support detection, early warning and risk assessment capacities of national antimicrobial resistance (AMR) surveillance programmes. GLASS-EAR provides an IT module which is embedded in the GLASS IT platform and provides a space where experts can share information regarding emerging AMR events (as defined in the GLASS-EAR framework[1]) to assess their importance, facilitate early information sharing, and stimulate epidemiological and microbiological discussion for coordinated actions.

Launched in 2018, the GLASS-EAR IT module is open to those in charge of national AMR surveillance systems and constituencies that might discover new types of AMR in bacteria and fungi with potential relevance to public health. The GLASS-EAR community is constituted by all Member States, regardless their GLASS enrolment status, WHO Collaborating Centres, AMR surveillance networks and research institutions producing quality AMR data, and WHO IHR focal points. The GLASS-EAR component of GLASS implements a workflow process for notifying a diverse range of stakeholders on a timely basis, and in compliance with agreements such as the International Health Regulations (IHR)[2].

GLASS-EAR provides a tool for a standardized, transparent, timely and secure reporting and reactive information sharing through:

- Defined criteria (see the GLASS-EAR framework[1]) to select emerging AMR event in bacteria or fungi population to be reported to GLASS-EAR;
- A standardized collection form for good information quality;
- Defined roles for GLASS-EAR members and workflow for information sharing;
- Implementation of the GLASS-EAR IT module, a web-based communication platform supporting the rapid and reactive exchange of technical information related to emerging AMR events according to the workflow and GLASS-EAR members' roles;
- Ensured confidentiality: emerging AMR events reported within the GLASS-EAR community are considered by definition confidential information to be shared only among EAR-GLASS team and GLASS-EAR-users from the concerned country. However, the level of confidentiality can be changed at any time as needed to facilitate data sharing;
- Ensured data security: WHO has a formal and comprehensive policy for securely managing all databases and information sources hosted by the Organization. This policy includes information security, technical and physical data security, data access and retention procedures, and confidentiality agreements. As international civil servants, all WHO staff are required to adhere to the policy and its procedures (detailed under Staff Regulations), including full respect of Article 45 of the IHR[2].

This manual targets GLASS-EAR users at country level and aims at providing an overview of the GLASS-EAR process and an explanation on how to use the GLASS-EAR IT module.

[1] Emerging antimicrobial resistance reporting framework. Geneva: World Health Organization; 2018.

[2] International Health Regulations (2005). Third edition. Geneva: World Health Organization; 2016 (http://www.who.int/ihr/publications/9789241580496/en/).

GLASS-EAR REPORTING PROCESS: AN OVERVIEW

ROLES OF GLASS-EAR-MEMBERS

Members from the EAR community can be classified in three groups according to their role:

- **EAR-GLASS**: responsible WHO officers;
- **GLASS-EAR Users**: GLASS-EAR members actively reporting information on emerging AMR events;
- **GLASS-EAR Readers**: GLASS-EAR members that are not in the position to provide information on emerging AMR events but who needs to be informed

GLASS-EAR members can be linked to one or more countries, according to their responsibilities.

SELECTION OF EMERGING AMR EVENTS TO REPORT TO GLASS

When an emerging AMR event is identified at a national or supranational level, it should be reported within two weeks from the event confirmation through the GLASS-EAR IT module. Additional information can always be added at a later stage, when it becomes available.

GLASS-EAR users are expected to report to events[3] related to the following:

- Pan-drug resistant (PDR) phenotypes and information on the responsible genes;
- Pre-defined critical resistance phenotypes and information on the responsible genes;
- Extensively drug-resistant (XDR) phenotypes which were not previously detected in a country and information on the responsible genes;
- Novel (not previously reported globally) genetic determinants of resistance;

The detailed explanations and definitions of emerging AMR events are available from the GLASS-EAR framework.

GLASS-EAR DATA AND THE DATA ENTRY FORM

The GLASS-EAR form (Annex 1) contains a set of both open and closed-ended questions, some of which are automatically filled in by the system. It allows for uploading of documents to be shared about the event and includes a space for comments and updates. The form is organized in four sections:

1) **Reporting details:** the details of the person reporting the event (i.e. reporter, institution, e-mail), the