Global Antimicrobial Resistance Surveillance System (GLASS)

Guide to preparing aggregated antimicrobial resistance data files

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Acronyms

AST	antimicrobial susceptibility testing
CAESAR	Central Asian and Eastern European Surveillance of Antimicrobial Resistance
CLSI	Clinical and Laboratory Standards Institute
CSV	comma-separated values
CV	coded value
EUCAST	European Committee on Antimicrobial Susceptibility Testing
GLASS	Global Antimicrobial Resistance Surveillance System
TSV	tab separated values
WHO	World Health Organization
WHONET	software for management and analysis of microbiology laboratory test results

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Introduction

This document has been developed for national GLASS focal points and national AMR surveillance data managers. It provides instructions and explanatory information on how to prepare aggregated national AMR data files for submitting the data to GLASS. Detailed information on the GLASS methodology and implementation roadmap is available in the *GLASS Manual for early implementation (1).* Detailed information on how to upload the aggregated data into the GLASS IT platform is available in the *GLASS Guide to uploading aggregated AMR data (2)*.

Aggregated data files specifications

GLASS has developed a secure database with web-interface which allows electronic submission of AMR data aggregated at a national level from the countries enrolled in GLASS. More information on this and other functions of the GLASS IT platform is available in separate documents *(2-4)*.

A simple text-based data file format has been chosen for GLASS data providers to submit AMR data to the GLASS IT platform in a standardized way.

GLASS data file format

The GLASS IT platform accepts tab-separated (tab-delimited) values files which are simple text files for storing data in a tabular structure. Each record in the database is one line of the text file. Each field value of a record is separated from the next by a tab stop character. This format is widely supported, so it is often used to move tabular data between different computer programs.

Files with both *.txt* and *.csv* extensions will be accepted in the IT platform, but *.txt* is preferable as it could be easily saved in a tab-delimited format in Microsoft Excel. The *.csv* extension is usually used for the comma-separated values (CSV) format, which often causes difficulties because of the need to escape commas – they are very common in text data. It is possible to create a tab-delimited *.csv* file, but note that *.csv* files saved in Microsoft Excel are comma-separated[1].

***NB*: GLASS IT platform accepts tab-delimited text files only (**.txt, *.csv*)**

Two files to submit to GLASS

Currently two types of data files are expected to be submitted to GLASS:

1. ***RIS* file** with susceptibility testing results. These are data (aggregated from all participating national surveillance sites submissions) on the number of resistant, intermediate, susceptible (and

[1] If you need to save a tab delimited *.csv* file, you can use other data management tools such as e.g. *CSVed* (http://csved.sjfrancke.nl/).

other interpretations of AST results defined below) isolates detected in GLASS priority specimens, stratified by gender, infection origin, and age.

2. ***Sample* file** with "sample statistics". These are the numbers of patients from whom specimens have been taken, stratified by the same variables as in the *RIS* file.

Both *RIS* and *Sample* files are generated from the same source database.

RIS file specifications

RIS file: overview

The *RIS* file variables are shown in the table below:

Variable ID	Variables in *RIS* file	Type of variable	Example
R1	**COUNTRY**	Coded value*	*AFG*
R2	**YEAR**	Coded value	*2015*
R3	**SPECIMEN**	Coded value	*BLOOD*
R4	**PATHOGEN**	Coded value	*ACISPP*
R5	**GENDER**	Coded value	*M*
R6	**ORIGIN**	Coded value	*HO*
R7	**AGEGROUP**	Coded value	*01<04*
R8	**ANTIBIOTIC**	Coded value	*AMK*
R9	**RESISTANT**	Integer (≥0)	*15*
R10	**INTERMEDIATE**	Integer (≥0)	*10*
R11	**NONSUSCEPTIBLE**	Integer (≥0)	*5*
R12	**SUSCEPTIBLE**	Integer (≥0)	*30*

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https://www.yunbaogao.cn/report/index/report?reportId=5_27153