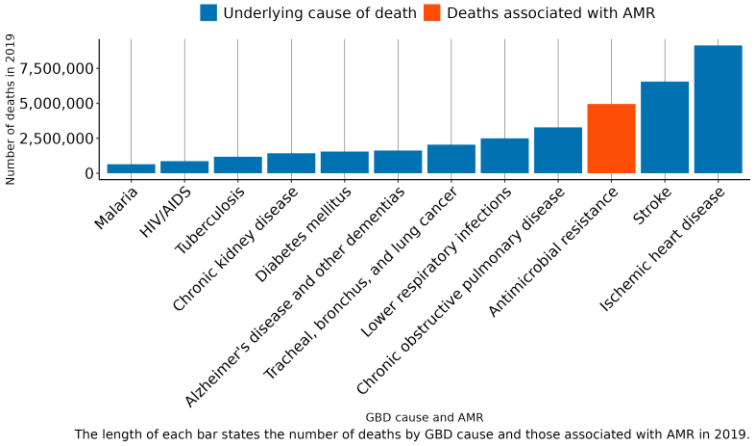
# The burden of antimicrobial resistance (AMR) in Georgia

## AMR represents a global challenge

- **4.95 million** people who died in 2019 suffered from drug-resistant infections.
- AMR directly caused **1.27 million** of those deaths.
- **1 in 5** of those deaths occurred among children under 5 years old.

Figure 1 Global number of deaths by GBD cause and those associated with AMR

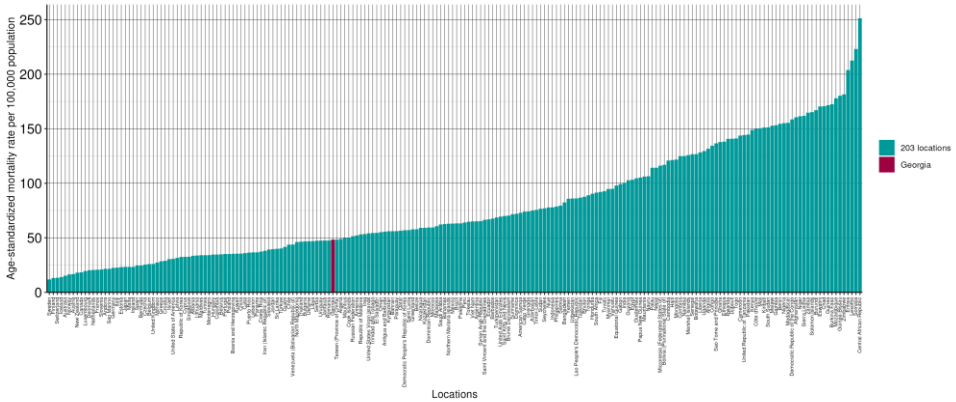


The length of each bar states the number of deaths by GBD cause and those associated with AMR in 2019.

## AMR burden in Georgia

- In **Georgia** in 2019, there were **758** deaths attributable to AMR and **2,800** deaths associated with AMR.
- **Georgia has the 72nd lowest** age-standardized mortality rate per 100,000 population associated with AMR across 204 countries.

Figure 2. Age-standardized mortality rate associated with AMR in 2019 for 204 locations

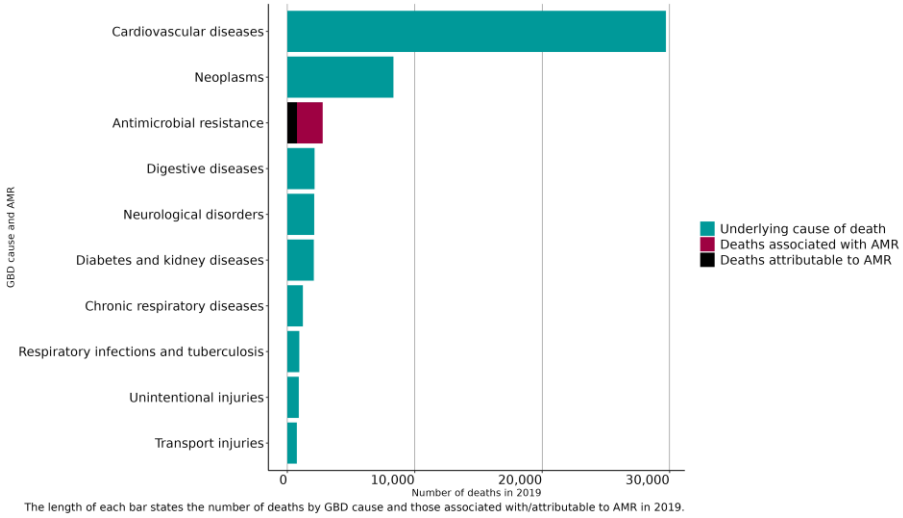


The length of each bar states the age-standardized mortality rate per 100,000 population associated with AMR in 2019.

- In the GBD region of **Central Asia**, **Georgia has the 1st lowest** age-standardized mortality across **9** countries.

- The number of AMR deaths in **Georgia** is higher than deaths from **digestive diseases, neurological disorders, diabetes and kidney diseases, chronic respiratory diseases, and respiratory infections and tuberculosis**.

Figure 3. Placing AMR in context with other causes of death in 2019, Georgia




- There are five pathogens to be aware of in **Georgia** (number of deaths associated with AMR in parentheses): ***Escherichia coli (542), Klebsiella pneumoniae (466), Staphylococcus aureus (319), Acinetobacter baumannii (287)*, and *Pseudomonas aeruginosa (263)***.
- These commonly caused **bloodstream infections, peritoneal and intra-abdominal infections, lower respiratory infections and all related infections in the thorax, urinary tract infections and pyelonephritis, and endocarditis and other cardiac infections**.
- According to the Tracking AMR Country Self-Assessment Survey (TrACSS)1], **"a National AMR action plan is being financed and monitored"** in **Georgia**. The next step is that the plan should be **"provided with financial resources in national budget"** in the short term, and this data should be used to ensure this progression.

1 World Health Organization (WHO). TrACSS 2021-2022 [Internet]. [cited 2023 Feb 16]. Available from: https://amrcountryprogress.org/download/AMR-self-assessment-survey-responses-2020-2021.xlsx

**Addendum: A summary of data sources for Georgia**

In total, 471 million individual records or isolates covering 7,585 study-location-years were used as input data to our estimation process to develop the most comprehensive set of AMR estimates to date. A subset of data pertinent to this country is shown below, and as our analyses depend on reliable data sources, there is a need to improve this in the future. Going forward, new strategies for data preparation, implementation of more usable data, and inclusion of new systematic literature reviews will result in an enhanced overall analysis. Specific policies that will improve AMR surveillance and link outcomes with resistance data will help us improve this research endeavor. If we expand the quantity and quality of data in this country (but also worldwide), we are confident that future iterations of these estimates (but also those of other research groups) will be able to assess the effect of AMR even more precisely and help tailor optimal approaches to ever-increasing threat of antibiotic resistance.

Table 1. Data inputs for Georgia by source type

| Source type | Sample size | Sample size units |
|---|---|---|
| Literature studies | 649 | Cases/isolates/susceptibility tests |
| Microbial or laboratory data with/without outcome | 56,973 | Isolates |
| Single drug resistance profile data | 333 | Antibiotic susceptibility test |

**More information**

*About GRAM:*

The purpose of the Global Research on AntiMicrobial resistance (GRAM) project is to **generate accurate and timely estimates of the magnitude and trends in antimicrobial resistance (AMR) burden** across the world, which can be used to inform treatment guidelines and agendas for decision-making and research, detect emerging problems and monitor trends to inform global strategies, as well as facilitate the assessment of interventions over time.

GRAM is the flagship project of the University of Oxford–IHME Strategic Partnership. GRAM was launched with support from the United Kingdom Department of Health and Social Care's Fleming Fund, the Wellcome Trust, and the Bill & Melinda Gates Foundation.

*All resources:*

For all resources on AMR analysis at IHME, visit https://www.healthdata.org/antimicrobial-resistance.

Further details are available on our FAQ page

*Data sources:*

To download the list of data input sources by country, and AMR results by region, visit the Global Health Data Exchange (GHDx).

*Contact us:*

- For inquiries about the analysis and questions from government officials, health departments, or research institutions: engage@healthdata.org
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