The burden of antimicrobial resistance (AMR) in El Salvador

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
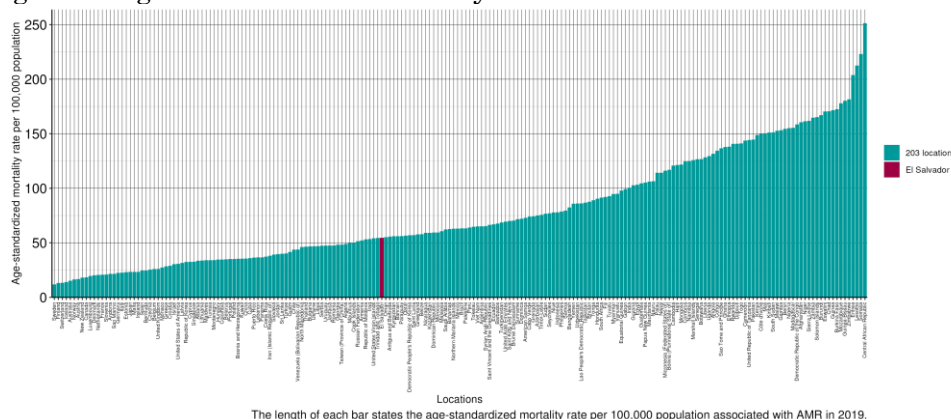

The length of each bar states the number of deaths by GBD cause and those associated with AMR in 2019.

AMR burden in El Salvador

- In **El Salvador** in 2019, there were **857** deaths attributable to AMR and **3,400** deaths associated with AMR.

- **El Salvador has the 83rd 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
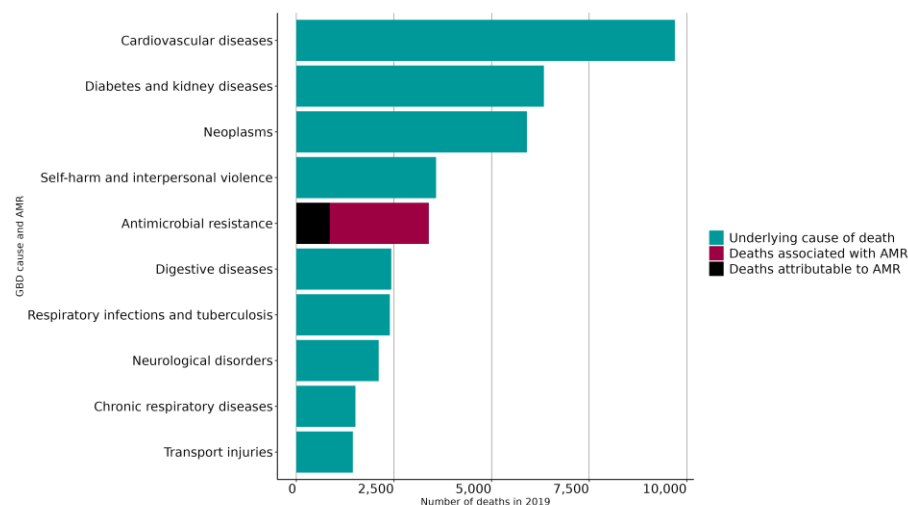

The length of each bar states the age-standardized mortality rate per 100,000 population associated with AMR in 2019.

- In the GBD region of **Central Latin America**, **El Salvador has the 5th highest** age-standardized mortality across **9** countries.

- The number of AMR deaths in **El Salvador** is higher than deaths from **digestive diseases, respiratory infections and tuberculosis, neurological disorders, chronic respiratory diseases, and transport injuries**.

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

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

- There are five pathogens to be aware of in **El Salvador** (number of deaths associated with AMR in parentheses): ***Escherichia coli (707), Staphylococcus aureus (668), Klebsiella pneumoniae (518), Pseudomonas aeruginosa (319),**** and *Streptococcus pneumoniae (312)*.

- These commonly caused **lower respiratory infections and all related infections in the thorax, peritoneal and intra-abdominal infections, bloodstream infections, and lower respiratory infections and all related infections in the thorax**.

- According to the Tracking AMR Country Self-Assessment Survey (TrACSS)1], **"a National AMR action plan has been approved and implemented"** in **El Salvador**. The next step is that the plan should be **"financed and monitored"** in the short term, and this data should be used to ensure this progression.

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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 El Salvador

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 El Salvador by source type

Source type	Sample size	Sample size units
Microbial or laboratory data with/without outcome	3,274	Isolates
Single drug resistance profile data	72,291	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:

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