Antimicrobial resistance (AMR) occurs when pathogens become resistant to the drugs that were used against them, making infections harder and more expensive to treat, increasing healthcare costs and undermining decades of progress in countless health programmes and modern medical procedures.

In a call to action against AMR, Member States adopted the Global Action Plan on AMR (GAP-AMR) in 2015, pledging to develop and implement AMR national action plans (NAP) based on the five objectives of the GAP. The Tripartite AMR Country Self-Assessment Survey (TrACSS) monitors the implementation of these AMR national action plans and is administered annually. It is currently in its fifth iteration, which saw the highest response rate so far with 163 of 194 (84%) of Member States participating in the survey. However, more than 90% of those countries noted that COVID-19 had had a negative impact on development and implementation of national plans to tackle AMR. Globally, the data from TrACSS indicates an urgent need to strengthen political commitment, to make more resources available, and to build awareness about AMR.

This report focuses on the country’s individual TrACSS responses to human health indicators and provides a 5-year overview of country TrACSS responses, and benchmarks country responses against regional and global levels on eight key AMR indicators.

Summary of AMR Governance in 2021

Country has developed NAP

Country is implementing their AMR NAP

Country has functional multisectoral working groups on AMR

Country has laws/regulations on prescription/sale of antimicrobials for human use

Country uses antimicrobial resistance/consumption data to amend national strategy and inform decision making in human health

Sectors involved in NAP development and implementation

- Human Health
- Animal Health
- Plant Health
- Food Production
- Food Safety
- Environmental Health
## Overview of country responses to 2017 - 2021 TrACSS Questionnaire

### AMR Governance and Coordination

<table>
<thead>
<tr>
<th>Objective</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>B</td>
<td>B</td>
<td>B</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>5.1</td>
<td>D</td>
<td>C</td>
<td>C</td>
<td>D</td>
<td>D</td>
</tr>
</tbody>
</table>

### GAP Objective 1 - Improve awareness and understanding of AMR

<table>
<thead>
<tr>
<th>Activity</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1</td>
<td>B</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>6.2</td>
<td>A</td>
<td>C</td>
<td>B</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>6.3</td>
<td>A</td>
<td>Ø</td>
<td>B</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>6.4</td>
<td>Ø</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
</tbody>
</table>

### GAP Objective 2 - Strengthen knowledge through surveillance and research

<table>
<thead>
<tr>
<th>Activity</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.1</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>7.2</td>
<td>C</td>
<td>A</td>
<td>B</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>7.3</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>7.4</td>
<td>B</td>
<td>B</td>
<td>B</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>7.5.a</td>
<td>B</td>
<td>C</td>
<td>B</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>7.5.c</td>
<td>B</td>
<td>B</td>
<td>B</td>
<td>A</td>
<td></td>
</tr>
</tbody>
</table>

### GAP Objective 3 - Reduce the incidence of infection

<table>
<thead>
<tr>
<th>Activity</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.1</td>
<td>A</td>
<td>B</td>
<td>B</td>
<td>B</td>
<td>A</td>
</tr>
<tr>
<td>8.2</td>
<td>A</td>
<td>B</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>8.3</td>
<td>A</td>
<td>B</td>
<td>A</td>
<td>A</td>
<td>A</td>
</tr>
</tbody>
</table>

*Response format changed in 2021*
Overview of country responses to 2017 - 2021 TrACSS Questionnaire

GAP Objective 4 - Optimize the use of antimicrobials

9.1 Optimizing antimicrobial use in human health

9.1.1 Adoption of “AWaRe” classification of antibiotics in the National Essential Medicines List

9.2 Optimizing antimicrobial use in animal health (terrestrial and aquatic)

9.3 Optimizing antimicrobial pesticide such as bactericides and fungicides use in plant production

Use of data and regulations to address AMR (Yes/No)

5.4.1 Country has laws on prescription and sale of antimicrobials, for human use

5.4.2 Country has laws on prescription and sale of antimicrobials for animal use

5.4.3 Country has laws that prohibits the use of antibiotics for growth promotion in the absence of risk analysis

5.4.4 Country has legislation on marketing of pesticides including antimicrobial pesticides, used in plant production

7.6.a Country uses relevant AM consumption and/or AMR data to amend national strategy in human health including WASH

7.6.b Country uses relevant AM consumption and/or AMR data to amend national strategy in animal health
Global, Regional and National Responses in 2021

TrACSS asks for a rating of national capacity and progress on a five-point scale (A to E), with the levels A-B representing limited capacity, and levels C-E representing nationwide implementation for most indicators. Countries should be aiming to reach levels C-E on all indicators.

**AMR Multisector Working Group**

**Awareness of AMR**

**Training and Education of AMR**

**National AMR Lab Network in human health**
Global, Regional and National Responses in 2021

TrACSS asks for a rating of national capacity and progress on a five-point scale (A to E), with the levels A-B representing limited capacity, and levels C-E representing nationwide implementation for most indicators. Countries should be aiming to reach levels C-E on all indicators.

AMR surveillance activities in human health

Monitoring antimicrobial consumption in human health

National implementation of IPC programmes

Adoption of AWaRe classification into national EML
Moving forward: Global messages for action

While a holistic and a people-centred approach is needed to ensure effective implementation of NAPs (human health sector) in countries, targeted efforts are also required in areas where global progress has been uneven over the past five years:

Implementing AMR NAP – majority of countries have developed AMR NAPs, but there is an urgent need expedite the prioritization, costing, funding, implementation, and monitoring of NAPs. AMR NAPs should also be linked to national health sector strategies and health security plans and budgets, and other development plans, including the United National Sustainable Development Cooperation Framework (UNSDCF).

Establishing functional multisector working groups – countries need to build capacity to ensure the effective functioning of AMR multisectoral coordination structures. These structures underpin AMR NAP prioritization, implementation, and monitoring, through periodic review of data, including from TrACSS.

Advancing awareness and education on AMR – systemic and formal inclusion of AMR in health workforce curricula is needed to enhance knowledge among key groups, as are targeted awareness campaigns for key stakeholders, including primary and secondary school students.

Establishing monitoring systems for Antimicrobial consumption – build and strengthen capacity for monitoring of antimicrobial consumption/use in countries. Almost half (45%) of countries report having either no plan or an unimplemented plan for monitoring antimicrobial consumption.

Enhance data quality and use - strengthen lab and diagnostic capacity, including quality assurance and uninterrupted supply of consumables that is essential for the collection of AMR surveillance data. This data can be used to revise treatment guidelines, strengthen IPC measures in healthcare facilities, and strengthen antimicrobial stewardship efforts.

Implementing national IPC programmes – strengthen country capacity for nationwide implementation of infection prevention and control (IPC) programmes developed based on WHO guidelines. Scaling up of water, sanitation, and hygiene (WASH) measures in healthcare facilities and routine immunization efforts are also integral parts of addressing AMR.