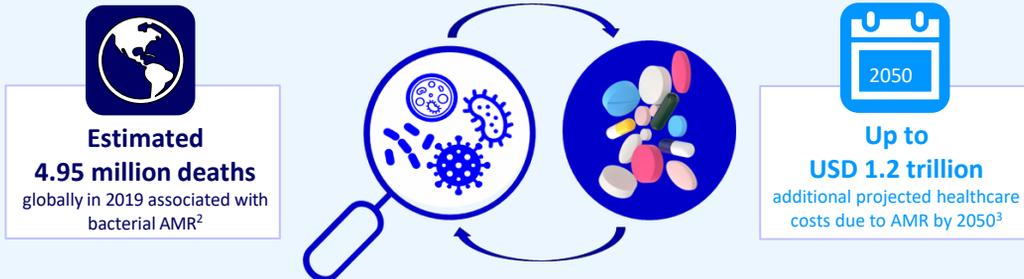


### The Burden of Antimicrobial Resistance (AMR)

- AMR occurs when **antimicrobial medicines** used to prevent or treat infectious diseases do not affect microbes<sup>1</sup>
- AMR, a global public health threat caused by **misuse** and **overuse** of antimicrobials, extends beyond **bacteria**, encompassing **viral**, **fungal**, and **parasitic** resistance<sup>1</sup>



### The Clinical and Environmental Impact of AMR

- AMR is a multifaceted challenge impacting the health of **humans, animals**, and **plants** and posing a risk to the **environment**<sup>1</sup>
- The **drug-resistant** pathogens turn treatable infections into **deadly threats** and endanger life-saving medical advancements like surgeries and chemotherapy<sup>1</sup>
- AMR is connected to **climate crisis** or global warming, which alters disease patterns and natural environments, likely increasing the spread of resistant microbes and escalating AMR infections<sup>4</sup>



**An integrated, cross-sector approach is warranted to combat AMR and its impact on economic, clinical, and environmental burden**

### Concept of One Health



#### Interconnected Ecosystems

A transformative concept that recognizes the interconnectedness between humans, animals, plants, and the environment within their **shared ecosystems** (like farms, hospitals, wastewater treatment plants, and natural environments), where the health of any of these ecosystems may affect the health of others<sup>5,6</sup>

#### Emergence and Dissemination of AMR

**Coordinated surveillance** systems should integrate data to track quantitative and qualitative elements involved in the emergence, prevalence, and dissemination of resistance within the **interconnected ecosystems** for better understanding of transmission dynamics and aiding in counteracting transmission<sup>5</sup>

#### Integrated Approaches to Prevent AMR

Aims for **targeted strategies** to prevent and control AMR including development of new antimicrobials to combat resistant microbes, reduction of AMR selection pressure, containment of AMR transmission, and restoration of antibiotic susceptibility to resistant organisms/sites<sup>5</sup>

**Unified global approaches based on One Health principles are essential to limit the AMR dissemination cycle, raise awareness about antimicrobial use, and promote policy, advocacy, and antimicrobial stewardship<sup>5,6</sup>**

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