



ANTIMICROBIAL RESISTANCE AND DIABETES

The WHO Eastern Mediterranean Region has the highest diabetes prevalence globally, with more than 14% of the population aged 18 years and above affected, meaning:

70 million

people currently living with diabetes

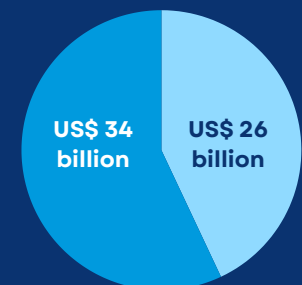
135 million

expected increase in numbers by 2045

DIABETES COSTS IN THE REGION

Estimated at US\$ 60 billion

■ DIRECT COST
■ INDIRECT COST



DIABETES CAUSES PREMATURE DEATH AND INCREASES THE RISK OF:

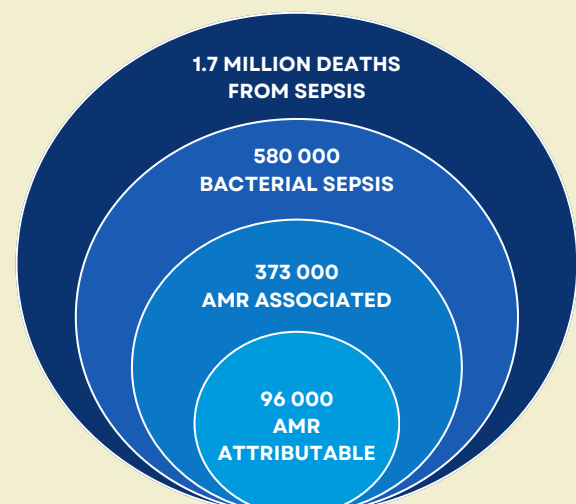


Uncontrolled hyperglycaemia compromises immunity, increasing susceptibility to antibiotic-resistant skin, urinary tract, respiratory and diabetic foot infections due to weakened immunity and circulation. Infections with resistant bacteria complicate treatment and increase mortality.

DRUG RESISTANCE IS INCREASING IN THE WHO EASTERN MEDITERRANEAN REGION

In 2021, there were **1.7 million deaths** from sepsis in the Eastern Mediterranean Region. Of these **373 000 were associated with bacterial antimicrobial resistance (AMR)**.

The Eastern Mediterranean Region consumes more antibiotics than any other WHO region. In 2018, the Eastern Mediterranean Region consumed antibiotics at a higher rate per capita (21.8 defined daily doses per 1000 inhabitants per day) than the global average (14.3) and than any other WHO region. Consumption is greatest in high-income countries, while middle-income countries reported the greatest increase in consumption between 2000 and 2018.



Burden of sepsis and bacterial AMR in the Eastern Mediterranean Region, 2021

Source: Based on data from: GBD 2021 Antimicrobial Resistance Collaborators. Global burden of bacterial antimicrobial resistance 1990–2021: a systematic analysis with forecasts to 2050. Lancet. 2024 Sep 28;404(10459):1199–226.

ADDRESSING AMR TO REDUCE THE BURDEN OF DIABETES

The frequent use of antibiotics among diabetes patients can contribute to resistant strains, making subsequent infections harder to manage, resulting in prolonged hospital stays with expensive antibiotic treatment and increased suffering, morbidity and mortality. Antibiotic overuse in early childhood can disrupt the gut microbiome, leading to obesity, diabetes and heart disease.

IMPROVING INFECTION PREVENTION CONTROL MEASURES AND ANTIBIOTIC USE AMONG DIABETES PATIENTS



Effective glycaemic control, adherence to treatment plans, surveillance of antibiotic-resistant infections, regular foot inspections, proper foot hygiene and diligent management of diabetic foot ulcers can reduce infection risk. Medical advice should be sought whenever needed.



Antibiotic selection should consider susceptibility testing, patient factors and infection severity. Antibiotic therapy duration should reflect infection severity and patient response and be limited to treating infections rather than used until the wound is completely healed.



Immunization against influenza and pneumococcus, appropriate skin and dental care, including daily skin moisturization, careful handling of minor injuries, regular dental check-ups and good oral hygiene practices, are essential and highly recommended.

DIABETES AND AMR PROGRAMMES WORKING CLOSELY FOR BETTER OUTCOMES

- ▶ **Education on the link between diabetes and AMR**, promoting diabetes prevention, healthy lifestyles and responsible antibiotic use.
- ▶ **Developing comprehensive, integrated guidelines** for prevention, diagnosis, treatment and management of diabetes and AMR.
- ▶ **Enhanced and shared surveillance** of infections in diabetic patients to identify AMR patterns and inform prevention strategies.
- ▶ **Integrating diabetes and AMR care into a single comprehensive care model** for better patient outcomes and resource use.
- ▶ **Implementing joint training for health care providers** on managing diabetes, preventing AMR, and appropriate antibiotic prescribing.
- ▶ **Partnering with community organizations** to promote healthy lifestyles and raise awareness of AMR, especially among diabetic patients.
- ▶ **Advocating for policies** supporting diabetes prevention and management, AMR control and increased access to care and investment in AMR research.

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