World Health Organization
Eastern Mediterranean Region

HOW IMMUNIZATION STRENGTHENS THE FIGHT AGAINST ANTIMICROBIAL RESISTANCE

Vaccines contribute to the battle against antimicrobial resistance (AMR) by preventing infections and thereby reducing antimicrobial use and the incidence of disease from resistant pathogens. By preventing infection transmission, vaccines extend population protection by also reducing the risk of infection among the unvaccinated (herd immunity). A first comprehensive study found that

VACCINES COULD AVERT HALF A MILLION DEATHS ASSOCIATED WITH AMR GLOBALLY PER YEAR.

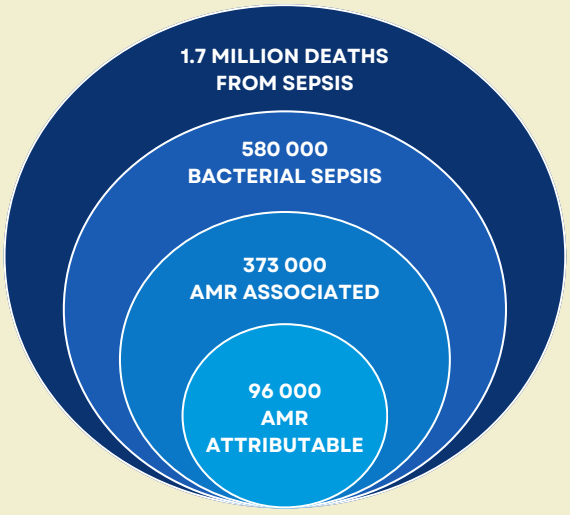
ESTIMATED VACCINE-AVERTED AMR HEALTH BURDEN GLOBALLY

- Vaccines against 24 pathogens could reduce the number of antibiotics needed by 22% globally every year.
- Vaccination for *Haemophilus influenzae* type B (Hib), a bacteria causing pneumonia and meningitis, and typhoid could avert up to 106 000 of the deaths associated with AMR each year.
- An additional 543 000 deaths associated with AMR could be averted annually when new vaccines for tuberculosis (TB) and *Klebsiella pneumoniae* are developed and rolled out globally.

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 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.

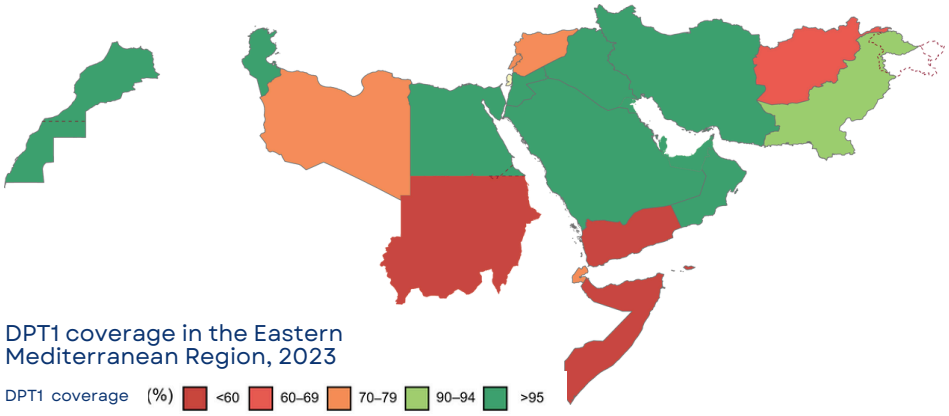


Burden of sepsis and bacterial AMR in the Eastern Mediterranean Region, 2021

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.

COVERAGE OF KEY VACCINES IN THE REGION

In 2023, four of 21 countries (equivalent to 27% of the Region's annual birth cohort) had DPT1 coverage below 70% while 13 (62%) countries had coverage of 90% or higher.

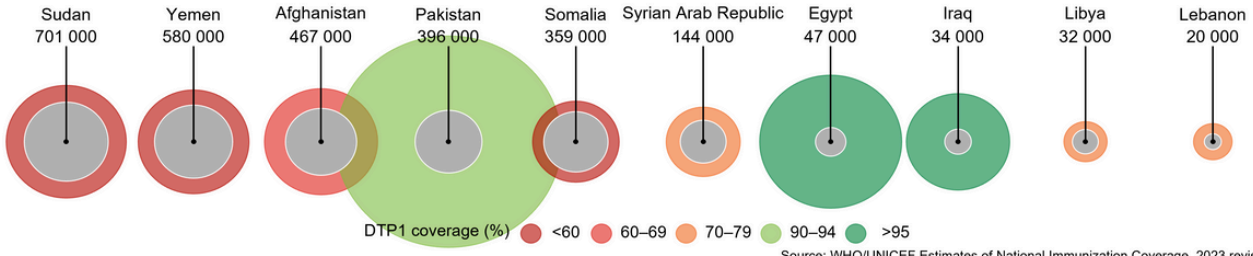


DPT1 coverage in the Eastern Mediterranean Region, 2023

CHALLENGES IN EXPANDING IMMUNIZATION COVERAGE IN THE REGION

Chronic conflict, insecurity, socioeconomic challenges and workforce shortages have overwhelmed fragile health systems and their capacity to deliver basic services, particularly in fragile, conflict-affected and vulnerable settings. The Region had 2 850 000 zero dose children in 2023, and 10 countries are home to 98% of them.

Top 10 countries with the most zero dose children, Eastern Mediterranean Region, WHO/UNICEF estimates of national immunization coverage, 2023



Source: WHO/UNICEF Estimates of National Immunization Coverage, 2023 revision
Note: The inner grey bubble reflects number of zero-dose children while the outer bubble reflects target population size

MEASURES TO INCREASE VACCINATION COVERAGE IN THE REGION

- The Big Catch Up is an intervention to reach children missed since the COVID-19 pandemic. Immunization policies have been revised to allow unvaccinated children under five years to receive their missing doses to ensure protection.
- Targeted capacity-building efforts are being made and technical support offered in addition to advocacy with partners to mobilize the required vaccines.
- Self-financing countries have also taken action to reach the unvaccinated.

The value of vaccines in preventing AMR needs to be systematically considered in the decision-making process during the scale-up of existing vaccines and the development of new vaccines. Increased vaccination coverage and introduction of new vaccines should also be explicitly incorporated in national action plans on AMR and national immunisation strategies.

WHO-EM/CSR/783/E

SCAN THE QR CODE:
TO ACCESS KEY RESOURCES

ANTIMICROBIAL RESISTANCE RESOURCES