

Celebrating 50 years of Essential Programme on Immunization: What's achieved and what's next for the Eastern Mediterranean Region

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The year 2024 marks a pivotal moment in global health: it is the 50th anniversary of the Expanded Programme on Immunization (EPI) (1,2). This extraordinary achievement is a testament to the power of collective action, scientific innovation and unwavering commitment to child health.

Since its inception in 1974, EPI has been a cornerstone of public health, saving millions of lives and preventing countless cases of vaccine-preventable diseases (VPDs). The programme has been instrumental in eradicating smallpox (3,4) globally and making substantial progress towards polio eradication, and elimination of measles and rubella in the Eastern Mediterranean Region (EMR) (2,5). Introduction of vaccines by EPI against hepatitis B, *Haemophilus influenzae* type b (Hib), pneumococcal disease, rotavirus, and human papillomavirus (HPV) has expanded the scope of control of vaccine-preventable diseases, leading to substantial improvements in child health.

The impact of EPI on healthcare in the EMR is undeniable; more than 25 million lives have been saved over the past 50 years, with measles vaccination alone accounting for 12.89 million lives saved (6). For each prevented death, on average, 58 years of life and 66 years of full health were gained (6). Notably, vaccination has contributed to 33% reduction in infant mortality in the EMR since 1974 (6). These achievements underscore the transformative power of immunization in improving public health outcomes. Immunization significantly contributes to several Sustainable Development Goals (SDGs) directly (SDG 3) and indirectly (SDGs 4, 5 and 10).

Beyond the lives saved, EPI has had a profound economic impact. By preventing disease, immunization programmes have saved hundreds of billions of US dollars in healthcare costs and contributed significantly to lifelong productivity. Healthy children are more likely to attend school, join the workforce and become productive members of society, fostering long-term economic growth and development (7).

EPI has played a pivotal role in strengthening primary health care systems, serving as a platform for delivering essential health services and building community trust in health providers.

Despite these remarkable achievements, certain challenges persist. The COVID-19 pandemic exposed vulnerabilities in immunization systems, underscoring the need for resilient and equitable immunization programmes. Global vaccination coverage, including in our region, regressed during the COVID-19 pandemic (8). Disruptions to routine immunisation services have resulted in large immunity gaps, threatening to reverse decades of progress achieved through EPI. Vaccine hesitancy, misinformation and disinformation pose additional risks to achieving high vaccination coverage (9). Conflicts and humanitarian crises leading to dysfunctional health systems and population displacement continue to impede progress in our region (10). Of particular concern is the increasing number of zero-dose children – those who have never received a single vaccine (11). These children represent the most vulnerable populations and are at heightened risk of vaccine-preventable diseases (12). Finding, reaching and protecting these children with complete vaccination is crucial to achieving Universal Health Coverage and preventing outbreaks.

The future of vaccination and EPI hold tremendous promise if these challenges can be overcome. New vaccines against numerous diseases, which may have substantial impact on reducing morbidity and mortality are already available or will be available soon. HPV vaccine (13) and typhoid conjugate vaccine (TCV) (14) are already available and rolled out in many low-income and middle-income countries; new vaccines against respiratory syncytial virus (RSV) have been approved for use in the USA and Europe (15); and the long-awaited vaccines against malaria are currently being deployed (16). Building an improved delivery system through which the benefits of these vaccines can reach individuals of all ages, everywhere, will be the uphill challenge for the near future.

To sustain the gains made and accelerate progress towards immunization goals, several key actions are imperative. Firstly, countries in the EMR must prioritize immunization in their national health agendas and allocate adequate resources for immunization programmes. Secondly, strengthening immunization

systems through the development of robust surveillance systems, effective vaccine logistics and supply chains, and well-trained healthcare workforce is crucial. Thirdly, fostering partnerships between governments, civil society organizations and the private sector is essential for achieving immunization goals. Fourthly, investing in research and development for new vaccines and innovative delivery strategies is vital to address emerging

challenges. Furthermore, integrating immunization services into primary health care is crucial for achieving Universal Health Coverage and ensuring long-term sustainability of immunization programmes.

By building upon the solid foundation laid by EPI, we can create a healthier and more resilient future for the people of the Eastern Mediterranean Region.

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