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Editorial

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Countries in the WHO Eastern Mediterranean Region (EMR) are currently experiencing a resurgence of cholera. As of 31 December 2022, 8 of the 22 Member States in the region – Afghanistan, Islamic Republic of Iran, Iraq, Lebanon, Pakistan, Somalia, Syria, and Yemen –

were grappling with outbreaks of cholera and acute watery diarrhoea (AWD). More than 1 000 000 suspected AWD/cholera cases, more than 7500 laboratory-confirmed cases, and 375 cholera-associated deaths were reported across the region in 2022 (1).

Cholera is an acute diarrhoeal disease caused by infection of the intestine with the bacterium Vibrio cholerae, either type O1 or type O139 (2). It is transmitted by ingestion of water or food that is contaminated with infected faecal matter, and remains an ever-present risk in many countries (2). The risk factors for cholera are inadequate or poor water and sanitation infrastructure, the impact of climate change, natural disasters, and the effects of humanitarian emergencies which precipitate population movements, overcrowding, and inadequate access to healthcare services, clean water, sanitation and hygiene (WASH) facilities (3).

People infected with cholera may experience mild to severe watery diarrhoea, vomiting, with resultant dehydration. Almost 20% of persons infected with V. cholerae develop acute watery diarrhoea and approximately 20% of these will develop severe dehydration. The case fatality ratio (CFR) for untreated patients may be 30–50%. However, the clinical management of cholera patients is straightforward – primarily oral rehydration and antibiotics for severe cases – and, if provided rapidly and appropriately, the CFR should remain below 1% (4,5).

Oral cholera vaccines (OCV) have increasingly become a vital addition to the cholera prevention and control toolkit, helping to reduce the burden of disease and complementing primary interventions such as safe water provision and the improvement of sanitation services. Studies have shown OCV to be effective and to have a good safety profile, substantially reducing the burden of disease and greatly contributing to long-term cholera control (6). The vaccines are safe for use among individuals ≥ 1 year of age, including pregnant and non-pregnant women, and immunocompromised individuals (6). The recommendation for OCV administration is 2 liquid doses given orally 14 days apart, however, a recent shortage in the global vaccine stockpile has made WHO to temporarily limit all reactive OCV campaigns to a single dose until vaccine supplies stabilize (7).

Globally, the number of cholera outbreaks has increased significantly from an average of 20 per year in 2017–2021 to 29 in 2022. In addition to previously active outbreaks, 13 new outbreaks were reported by different countries in 2022, and 5 of these outbreaks were in the EMR. This surge in cholera outbreaks worldwide has resulted in a shortage of cholera diagnostic and treatment kits as well as OCV (8).

Afghanistan, Pakistan, Somalia, and Yemen are endemic for cholera, with cholera cases associated with sustained local transmission documented consistently over the past 3 years. Iraq reported its last cholera outbreak in 2017 (9). The recent cholera outbreaks in Syria and Lebanon are alarming as these two countries have not been endemic for cholera (10,11); they last experienced cholera outbreaks 2 and 3 decades ago, respectively (10,11). The conflicts in Syria and the economic and political crises in Lebanon have resulted in mass population movements and deterioration of the WASH infrastructure, and the sanitation and waste management systems (10).

The WHO risk assessments have noted that the re-emergence of cholera in Syria and Lebanon is alarming as it increases the risk of cholera outbreaks in other countries in the EMR (7). Therefore, neighbouring countries, such as Jordan and occupied Palestinian territory, are taking active steps to strengthen preparedness for potential cross-border spread.

Severe flooding in Pakistan, earthquakes and drought in Afghanistan, and severe drought in Somalia have significantly increased the number of cholera cases in these countries (12,13). Given the large population movements across its borders, the cholera outbreak in the Islamic Republic of Iran is attributed to importation from the neighbouring cholera-reporting countries.

The current outbreaks in the region are disproportionately affecting children. More than half of suspected cholera cases in Afghanistan (55%) and Somalia (65%) are children under 5 years of age, and the proportion of under-5 children among the suspected cholera cases in Lebanon and Yemen are 26% and 24% respectively (7). This unusually large proportion of children affected by cholera indicates the urgent need for further investigation and intervention. WHO is strengthening laboratory capacities to identify and manage other causes of acute diarrhoeal diseases, especially among under-5 children, enhancing under-5 immunization activities, and strengthening the identification and management of children who may be coaffected by cholera and acute malnutrition.

In 2017, The Global Task Force on Cholera Control (GTFCC) launched the ‘Ending Cholera Road Map’ — a strategy that aims to reduce global cholera deaths by 90% and eliminate the disease in at least 20 countries by 2030 (14). The roadmap lists 9 EMR countries of Afghanistan, Djibouti, Islamic Republic of Iran, Iraq, Pakistan, Somalia, Sudan, Syria, and Yemen as having populations living in cholera hotspots. Response strategies must focus on improving access to clean water and appropriate sanitation along with hygiene, raising public awareness by engaging communities, and strengthening surveillance systems to early-detect and support timely and coordinated response, including quality clinical care (15). Progress is being made in the EMR to achieve the objectives of the strategy. WHO is supporting the

ministries of health to strengthen their prevention and response strategies in the areas of coordination, risk assessment and response planning, epidemiological analysis to identify cholera hotspots, outbreak surveillance, laboratory confirmation, clinical case management, improving infection prevention and control (IPC) measures in health facilities, engaging with communities, deployment of oral cholera vaccines, and working closely with UNICEF and other partners to enhance WASH measures. WHO is also supporting countries in the region to develop national cholera plans and multisectoral advocacy for long-term prevention and control (7,16).

WHO is working closely with the 8 ministries of health in the affected countries to provide the needed technical guidance on surveillance and case detection, clinical management, IPC, enhancing laboratory testing capacities, promoting awareness among the populations, and continuing to monitor water quality in high-risk areas. Capacities for clinical management of cholera were lost in non-endemic countries due to decades of not experiencing cholera outbreaks, and this has had an impact on the outcome of patients. WHO has, therefore, recommended the need to conduct refresher training for primary care physicians in the region. WHO supported the deployment of OCV in Lebanon, Pakistan, Somalia, and Syria in 2022 and is closely working with other partners in a multisectoral approach to improve WASH and related interventions. WHO continues to advocate at global, regional and country levels and to engage and mobilize donors to invest in water and sanitation infrastructure in local communities. WHO's cholera response in the EMR will contribute to the overall regional strategic priority of addressing health emergencies and the strategic objective of strengthening capacities to prevent and control epidemics and pandemics.

Key WHO recommendations for prevention and control of cholera in the EMR

Despite the challenges in eliminating cholera in the endemic EMR Member States, it is important to enhance cholera response to minimize the risk of future rebounds and spikes (17). It is critical for governments to advocate for and coordinate a multisectoral cholera prevention and control approach. Long-term investment by Member States and donors is essential to rebuild and improve WASH infrastructure. Cholera outbreaks have wider societal implications beyond the health sector and an impact on economies, trade, and tourism. It is therefore vital to prevent the recently affected countries, like Lebanon and Syria, from becoming endemic for cholera.

Effective implementation of the proposed WHO EMR cholera strategic framework, which emphasises real-time surveillance, outbreak detection and response, timely access to appropriate case management and cholera vaccines, enhancing WASH, and strengthening risk communication and community engagement, will significantly reduce cholera morbidity and mortality in countries.

In spite of these strategies, some challenges remain, including protracted conflict and emergencies, political instability, deteriorating economic situation, and climate change coupled with recurrent natural disasters (17). Many countries in the region have weak and underfunded health systems, with weak institutional capacities compounded with high turnover among skilled staff, especially in endemic cholera countries. Political interference, lack of transparency by governments, and non-adherence to the IHR-2005 obligations of reporting cholera and sharing data are areas that need urgent attention. National response measures are still not holistically robust, with insufficient implementation of multi-sectoral response (4).

Timely uptake of OCV as part of a comprehensive toolkit would significantly reduce case burden during outbreaks and prevent future occurrences at hotspots, noting that cholera vaccination is most important for short- to medium-term prevention and control while longer-term interventions for water and sanitation infrastructure systems are being established. Considering the increasing geographic spread of cholera and the global shortage of vaccines and other control tools, countries should invest more in WASH, surveillance, risk communication, and community engagement (8,10,15). Responding to cholera outbreaks is important, but greater investment in cholera prevention and preparedness, including WASH and health infrastructure, remains critical as we strive to ensure Health for All by All (8).

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