



## Cholera

**For Prelims:** Cholera, World Health Organization (WHO), *Vibrio cholerae*, Oral Cholera Vaccines (OCV), Acute Diarrheal Illness.

**For Mains:** Cholera, its causes and related Initiatives, Issues Relating to Development and Management of Social Sector/Services relating to Health.

[Source: TH](#)

### Why in News?

According to the [World Health Organization \(WHO\)'s](#) weekly Epidemiological Record, the World reported more than twice as many cholera cases in 2022 as it did in 2021.

- This escalation presents a substantial challenge to the WHO ambitious goal set in 2017 to **reduce global cholera deaths by 90% by 2030**.

### What is Cholera?

- **About:**
  - Cholera, a water-borne disease primarily caused by **the bacteria *Vibrio cholerae* strains O1 and O139**, poses a significant public health challenge worldwide.
    - Strain O1 is the predominant cause of outbreaks, with O139 occurrences being rare and mostly confined to Asia.
  - It is an acute diarrheal illness caused by infection of the intestine.
  - The infection is often mild or without symptoms, but sometimes can be severe.
- **Symptoms:**
  - Profuse watery diarrhoea, Vomiting, Leg cramps
- **Transmission:**
  - A person may get cholera by drinking water or eating food **contaminated with the cholera bacterium**.
  - The disease can spread rapidly in areas with inadequate treatment of sewage and drinking water.
- **Vaccine:**
  - Currently there are three WHO pre-qualified Oral Cholera Vaccines (OCV), Dukoral, Shanchol, and Euvichol-Plus. All three vaccines require two doses for full protection.

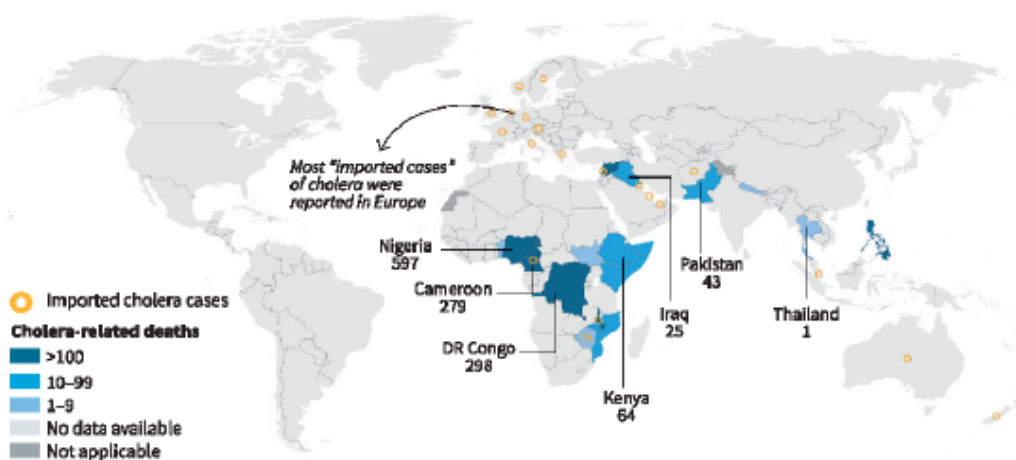
### What are Factors Driving the Escalation of Cholera Cases?

- **Decline in Covid Pandemic Restrictions:**
  - The decline in [Covid-19 pandemic](#) restrictions played a crucial role in allowing the spread of cholera. Limited investments in providing adequate care to vulnerable populations, **effects of climate change**, and escalating conflicts further exacerbated the situation.
- **Insufficient Access to Sanitation:**

- The symbiotic relationship between cholera transmission and insufficient access to clean water and sanitation facilities is a critical factor.
- Notably, *Vibrio cholerae* bacteria tend to **thrive in warmer waters with lower salinity**, conditions intensified by climate change-induced floods, **heatwaves**, intense **monsoonal rains**, storms, and prolonged warm periods.
- **Vibrio Pathogens and Microplastics:**
  - According to research from the University of Florida in June 2023, *Vibrio* **pathogens possess a unique capability to adhere to microplastics**, potentially adapting to this environment, even in the open ocean.
  - This interaction between *Vibrio* bacteria and microplastics signifies an additional dimension to cholera transmission dynamics, necessitating further investigation and policy considerations.
- **Climate Change and Cholera Transmission:**
  - A study published in 2021 in *The Lancet Planetary Health* emphasizes how climate change intensifies cholera concerns.
  - It predicted a potential increase of 38,000 km in coastline conducive to *Vibrio* bacteria development by 2100, compared to the 1850-2014 average.

## What are the Geographical Distribution and Cholera Trends?

- The majority of cholera cases persistently **emanate from Africa and Asia, with Europe sporadically reporting "imported cases."**
- In Africa, the 2022 cholera cases were more dispersed compared to 2021, with no single country reporting more than 25% of all cases and 30% of all deaths.
  - However, this apparent improvement is overshadowed by the doubling of case and death numbers in countries apart from **Nigeria, which experienced a massive cholera outbreak in 2021.**
- A similar **pattern of increased cases was observed in Asia**, notably in countries like Lebanon, Syria, and Afghanistan.



## What are the Initiatives to Curb Cholera?

- **A global strategy on cholera control, Ending Cholera:** A global roadmap to 2030, with a target to reduce cholera deaths by 90% was launched in 2017.
- **Global Task Force for Cholera Control (GTFCC):** WHO revitalized the Global Task Force for Cholera Control (GTFCC) to strengthen WHO's work in eradicating cholera.
  - The purpose of the GTFCC is to support increased implementation of evidence-based strategies to control cholera.

## What can be the Response Measures to Tackle Cholera?

- To address the growing cholera burden globally, **adaptations in the recommended oral cholera vaccine regimen** have been made.
- While awaiting the fruition of larger-scale manufacturing investments, the management of the emergency stockpile for the oral cholera vaccine has modified the vaccination regime, reducing it from two doses to a single dose.
  - This strategic adjustment aims to enhance the efficiency and reach of cholera vaccinations.

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