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The first line of prevention: water, sanitation and vaccination

News context: 2026-11-17 | **Publication:** 17 November 2026
Mains: GS-II: Health; GS-III: Water and sanitation
Prelims: concepts and statement-based practice



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Why in the News

The final stage of polio eradication and the approaching UN Water Conference in December 2026 have renewed discussion of safe water and public health. Vaccines protect against particular diseases, while safe water, sanitation and hygiene reduce conditions that enable transmission. They complement one another; neither replaces the other.

Why is water health infrastructure?

WASH means water, sanitation and hygiene. Its health effects extend beyond drinking water. Safe management of faecal waste, handwashing facilities and cleanliness in health facilities help interrupt infection pathways.

WHO's 2026-2035 strategy links unsafe WASH to at least 1.4 million preventable deaths annually. This is not a claim that all diseases spread only through water. It makes safe services a matter of prevention as well as treatment.

The example of polio

According to WHO, poliovirus spreads mainly through the faecal-oral route; contaminated water or food can also act as a vehicle. The virus can multiply in the intestine and affect the nervous system, causing paralysis. There is no cure for polio, but vaccination can prevent it.

Safe water must therefore not be presented as a substitute for vaccines. Vaccination protects susceptible people; sanitation reduces opportunities for transmission. Surveillance helps identify the virus and gaps in programme delivery.

The policy challenge: from construction to dependable services

Functionality: Building a tap, toilet or treatment plant is different from providing a consistently safe service.

Maintenance: Water-quality testing, trained staff, repairs and operating funds are necessary.

Equitable access: If difficult locations and disadvantaged settlements remain unserved, averages can conceal local vulnerabilities.

Coordination: Health departments, water utilities and local governments need connected plans.

The Water Conference context

The current UN event page schedules the 2026 Water Conference for 8-10 December 2026 in Abu Dhabi, co-hosted by the UAE and Senegal. Its focus is SDG 6: availability and sustainable management of water and sanitation for all. Attention should extend beyond new announcements to service quality and accountability.

The way forward

Water investment should be assessed through safety, continuity and health protection, not merely kilometres of pipes. WASH belongs within health policy, alongside strong immunisation and disease surveillance. Safe water helps prevent many infections; it cannot credibly be claimed to eliminate every disease worldwide on its own.

Prelims Practice Questions

Question 1. Consider the following statements about polio and WASH:

Statement 1: Poliovirus can spread mainly through the faecal-oral route.

Statement 2: Safe water makes polio vaccination unnecessary.

Statement 3: WASH includes sanitation and hygiene.

Which of the statements given above are correct?

(a) 1 and 2 only

(b) 1 and 3 only

(c) 2 and 3 only

(d) 1, 2 and 3

▼ **Answer and Explanation**

Correct answer: (b)

Statement 1 is correct. WHO identifies this as the principal route.

Statement 2 is incorrect. Safe water does not replace vaccination.

Statement 3 is correct. WASH means Water, Sanitation and Hygiene.

Mains Practice Question

Why should safe water and sanitation be treated as public health infrastructure? Explain with reference to polio. (150 words) (10 marks)

Answer Outline

Introduction: Describe transmission

Main Body: explain complementary roles of vaccines and WASH; discuss continuity, maintenance and surveillance

Conclusion: propose coordination between local government and health departments.

Frequently Asked Questions (FAQ)

Safe water and sanitation reduce opportunities for infection. They complement vaccination and surveillance against polio.

What does WASH mean?

Water, sanitation and hygiene.

Can clean water replace the polio vaccine?

No. They have different, complementary roles.

Who co-hosts the 2026 Water Conference?

The United Arab Emirates and Senegal. The current event page gives 8-10 December in Abu Dhabi.

Sources

- www.who.int
- www.who.int
- sdgs.un.org