

# Unsafe food and water cause most of the disease outbreaks in India

## HEALTH WISE



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Infections are common in a country where 1.3 billion people live in close proximity and safe water and sanitation challenges persist, with outbreaks of food-borne illnesses and diarrhoea peaking during the monsoons, when flood waters bring faecal contaminants and infecting agents such as bacteria, viruses, protozoa and parasitic worms (helminths) into homes and the food chain.

Unsafe food and water are the biggest cause of preventable infection in India. Acute diarrhoeal disease and food poison-

ing have together consistently accounted for a third of the laboratory-confirmed disease outbreaks since 2015, according to data reported by states and union territories to the Integrated Disease Surveillance Programme (IDSP). Though acute encephalitis syndrome, Nipah and Zika grab headlines, acute diarrhoeal diseases, food poisoning, chickenpox, measles and dengue are the leading recorded outbreaks of infectious diseases in 2019, according to IDSP, which maintains a decentralised database for epidemic-prone diseases across the country. These five diseases have accounted for roughly half the outbreaks this year.

IDSP routinely monitors outbreaks and disease trends through laboratory-based disease surveillance of patients at

hospitals and the verification of unusual health events in print, electronic, and social media. Over the past 18 months, this has helped detect and contain Zika and Nipah outbreaks in India even when they occurred in regions where they had never struck populations before. While Zika was detected in Rajasthan and Madhya Pradesh through routine surveillance in hospitals in 2018, the Nipah outbreak in Kerala in 2018 and 2019 was identified through a combination of surveillance and media reports.

But the IDSP data reflects a small fraction of the real numbers because the cases that don't cause acute disease or hospitalisation are rarely reported. With about 55% of India's population seeking treatment outside the public



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sector — 51.4% in the private sector and 3.4% at home — the majority of cases treated at home and in private clinics do not make it to government surveillance records unless the

outbreak becomes large enough to warrant community surveillance, where teams go door-to-door to identify symptoms and track unreported cases.

The absence of toilets and

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sewerage treatment facilities add to contamination, as does not using soap for hand-washing, which had made diarrhoea the third-biggest cause of premature deaths across ages in

India in 2016, after heart and lung diseases, according to data from the Global Burden of Disease. It is among the top five causes of under-5 death in India, killing around one in 10 of the 962,830 children who die before their fifth birthday every year.

Basic hygiene helps prevent disease. According to the World Health Organisation, covering the nose and mouth while coughing or sneezing, maintaining arm's length distance from people in public places, washing raw food and utensils in clean water, and frequently hand-washing with soap and water, especially before and after handling food, not using the toilet or handling things used by an infected person, are behaviours that prevent most infections.

A comparison of hand-wash-

ing with water, hand-washing with soap and not hand-washing at all after touching door handles and railings in public spaces found faecal bacteria remained after no hand-washing in 44% people. It went down to 23% after hand-washing with water, and to 8% after using soap and water, according to a global study published in International Journal of Environmental Research and Public Health some years ago.

Along with good hygiene and sanitation, a strong primary health care services, with adequate staff, equipment and medicines to avoid delay in treatment, is essential to prevent outbreaks.

After all, disease surveillance is as good as the public health response to contain and treat the infection.