

Centre mulling to start environmental surveillance of SARS-CoV-2 virus in wastewater

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After World Health Organization (WHO) recommended environmental surveillance of SARS-CoV-2 virus causing covid-19 in wastewater following presence of non-infecting viral fragments in wastewater in some countries including Pakistan, India too is considering to adopt the new surveillance tool to monitor the Virus.



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New Delhi: After [World Health Organization](#) (WHO) recommended environmental surveillance of SARS-CoV-2 virus causing covid-19 in wastewater following presence of non-infecting viral fragments in wastewater in some countries including Pakistan, India too is considering to adopt the new surveillance tool to monitor the Virus.

The WHO has said environmental surveillance though not widely adopted so far could potentially be used to detect unrecognized transmission of SARS-CoV-2, as a way to determine whether covid-19 has truly been contained in an area or not. Environmental surveillance by testing of wastewater for evidence of pathogens has a long history of use in public health, particularly for poliovirus and more recently antimicrobial resistance (AMR). In the context of the ongoing covid-19 pandemic,

it is being used for the detection of SARS-CoV-2 shed into wastewater from the upper gastrointestinal and upper respiratory system and via faeces.

The Central Pollution Control Board (CPCB) under ministry of environment has already issued revised guidelines for disposal of human waste including fecal waste generating from the covid dedicated hospitals and quarantine centres that the waste should be properly treated before disposal.

The WHO in its latest scientific brief titled-- Status of environmental surveillance for SARS-CoV-2 virus—stated that detection of non-infective RNA fragments of SARS-CoV-2 in untreated wastewater and or sludge has been reported in a number of settings, such as Milan, Italy; Murcia, Spain; Brisbane, Australia; multiple locations in the Netherlands; New Haven, Connecticut and eastern Massachusetts, United States of America; Paris, France; and existing poliovirus surveillance sites across Pakistan.

“As the WHO has recommended environmental surveillance of the coronavirus, we very much endorse it. We will discuss this issue in our next meeting. This is an important public health issue. However, India is a very large country and monitoring wastewater will be a challenging issue, a beginning can certainly be made," said Dr T K Joshi, board member CPCB.

In June, Indian Institute of Technology-Gandhinagar (IIT) found non-infectious genes of the coronavirus in wastewater samples collected from untreated sewage in an outlet in Ahmedabad. Researchers has indicated a need to introduce wastewater-based surveillance across the country to detect, monitor and control the spread of Covid-19 and identify potential hotspots before clinical diagnosis. In April, IIT-Gn associated with a global consortium of 51 premier universities and research institutes for undertaking surveillance of sewage water to help determine and quantify excretion of the Sars-Cov-2 virus. The aim was to build an early warning system for Covid-19.

The WHO also said that at present, there is not yet sufficient evidence to recommend environmental surveillance as a standard approach for covid-19 surveillance. “If there is no concrete evidence of fecal oral transmission of the SARS-CoV-2, it may not hold true for tomorrow," said Joshi.

Environmental surveillance also, the WHO said in the scientific brief, has the potential to detect SARS-CoV-2 shedding from animal sources, such as animal

production facilities and wet markets; potentially supporting identification of any animal reservoirs.

As the environmental surveillance for SARS-CoV-2 is a rapidly evolving field, the WHO said that research should also be undertaken to understand of the association between faecal excretion (including quantitative information on viral shedding across all infection stages), period of infectiousness, and clinical spectrum of disease; and correlation with detection through environmental surveillance.