

## 6. ICMR recommends Testing of Pooled Samples

**Prelims Syllabus:** Medicine and Pharmaceuticals

**Mains Syllabus:** GS-II Issues relating to development and management of Social Sector or Services relating to Health, Education, Human Resources.

### Why in News?

- Indian Council of Medical Research (ICMR) has recently issued an advisory for using pooled samples for testing of COVID-19 in order to increase the number of tests conducted by laboratories across the country.

### What is Pooled Testing?

- In a pooled testing algorithm, samples of multiple individuals are put together in a tube and screened through the PCR test.
- **If positive:** If the pooled test turns out to be positive the individual samples under are tested, which is referred to as **pool de-convolution**.
- **If negative:** If there's no positive result, all individual samples in the pool are regarded as negative.

### Recommendations of ICMR for Pooled Testing:

- **Maximum number for pooling:**
  - ✓ While more than two samples can be pooled together, the number should not exceed five samples to avoid sample dilution, which can lead to false negatives.
- **Ideal areas for its Use:**
  - ✓ This method can be used in areas where the prevalence of COVID-19 is low, which implies a positivity rate of less than two percent.
  - ✓ In areas with a positivity rate between two to five percent, sample pooling of PCR screening may be considered in a community survey of surveillance among asymptomatic individuals.
  - ✓ Pooling of samples is not recommended in areas or populations with positivity rates of over five per cent.
- **Non-inclusion of likely Positive Cases:**
  - ✓ Samples of individuals with known contact with confirmed cases or healthcare workers should not be included in the Pooled Samples.

### What are its Significance?

- **Substantial Cost Savings and Reduction in Requirement of Testing Kits:**

- 
- ✓ For example, if a pooled sample consists of the samples of five individuals and it tests negative, the cost of four testing kits is saved and more number of people are covered with fewer resources.
  - ✓ The “door to door” approach of collecting pooled samples requires around 56-93 percent fewer tests, in areas where the prevalence of the disease is low to moderate.
  - **Increment in overall People Screened:**
    - ✓ It is critical to increase the numbers of tests conducted by laboratories. And as the positivity rate in COVID-19 cases is still low. Hence, it may help to use the pooled samples for screening.
  - **Tracking down the Asymptomatic Cases:**
    - ✓ Pooled screening can also help in tracking down the asymptomatic cases (showing no symptoms) of the disease, thereby tracking community transmission.
  - **Containing Foreseeable Second Wave Outbreaks:**
    - ✓ In particular, the “door-to-door” pooled-sample approach can facilitate mass screening in early stages of COVID-19 outbreaks, especially in low- and middle-income settings, and in containing foreseeable second wave outbreaks worldwide