Covid-19 - Importance of Testing - II

Click here for Part -I

Why in news?

A common concern across the world during this COVID-19 pandemic is the lack of enough testing by many countries.

Click here to know more on methods of testing

Why is lack of testing a big concern?

- The positivity rates, as seen now, underestimate the true infection.
- Because, what is reported are those that 'test' positive and negative.
- There are many others who might have mild symptoms but are not being tested.
- Similarly, the mortality rate is overstated because the denominator includes just those tested.
- Also, because collection is not perfect, there are some people with the infection who may have a negative RT-PCR test.

How all does testing help?

- Testing, in this context, is generally driven by the need for data.
- Data is key to make public health determinations.
- It also provides some guidance to individuals doubting on their immunity level.
- Enough 'testing as communities' is crucial to understand, with certainty, how many people are acutely infected.
- It also provides information on whether or not, and how many people, show symptoms.
- Since people without symptoms can spread the infection, it is important to have this insight.
- It does not mean everybody should be tested all the time.
- But having a big enough sample is important to have a reasonable degree of certainty that the numbers are correct.
- Knowing who is infected will give better information on -
    i. the R0 (rate of spread)
    ii. understanding the risk at present

iii. looking at infection as efforts are made to ease social restrictions

How does it help with the immunity factor?

- There is notable variation among countries in the nature of spread and the number of cases.
- Given this variation by location, having the data by geographic area is important.
- It is essential to know how many people have antibodies, and presumed immunity.
- This is important to determine when "*herd immunity*" exists and how far countries are from that goal.
- That number needs to be informed by the R0 and rate of transmission.
- This is because, greater number of people should be immune if the R0 is higher.
- However, despite this, in the case of COVID-19, a country could not ensure herd immunity until there is an effective vaccine.

Is lifting lockdown dependent on number of tests?

- Not the number per se, but the extent to which the number informs on the reduced risk of continuing spread of the virus is important.
- The number of tests per day would be determined by ascertaining statistically the number of people with active infection in a region.
- In areas where there is more social crowding, there is a greater risk of transmission of disease due to proximity to others.
- So, the number of people with active infection in such areas will have to be lowered.
- However, the requisite number of tests per day for a country like India cannot be the same.
- The numbers would be different in Mumbai, Delhi, and other large cities.
- It could probably be fewer in smaller areas, and those with less risk.

What is the concern with antibody test kits?

- There is a certain level of unreliability on the antibody test kits.
- Normally when a test method is brought to the market, there are strict evaluations that come first.
- But because of the emergency, there was a relaxation of those requirements.
- A reasonable amount of oversight in this regard is in the best interest of the public to protect all from dangerous tests, the same as for drugs and medical devices.
- Purchasers should make sure that their vendors have recognised good

manufacturing practices.

Source: Indian Express

Quick Fact

Herd immunity

- Herd immunity happens when so many people in a community become immune to an infectious disease that it stops the disease from spreading.
- This can happen in two ways:
    i. many people contract the disease and in time build up an immune response to it (natural immunity)
    ii. many people are vaccinated against the disease to achieve immunity
- But, it is hard to predict things in a pandemic.
- So, in the case of COVID-19, herd immunity without a vaccine is by definition not much a preventative measure.

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