

PERSPECTIVE

Testing and Lockdown; how much & to what extent? - An epidemiological dilemma

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Citation

Zaman FA, Kundapur R. Testing and Lockdown; how much & to what extent: An epidemiological dilemma. Indian J Comm Health. 2020;32(2-Special Issue):228-230.

Source of Funding: Nil **Conflict of Interest:** None declared

Article Cycle

Received: 07/04/2020; **Revision:** 16/04/2020; **Accepted:** 16/04/2020; **Published:** 20/04/2020

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Abstract

Testing and lockdown is the strategy planned to work on reducing the COVID-19 death. there are different views of community transmission and testing strategy. The views of lockdown also have various idea and scenarios which is thought for Pandemic like COVID-19.

Keywords

Lock Down; Testing Strategy; COVID-19; Community Transmission

Introduction

Testing: How much and why

Regarding the testing strategy adopted by Govt of India, there are broadly two conflicting views.

First view

The last guideline which was issued by ICMR dated 9th April 2020 regarding testing strategy for COVID 19 had five independent inclusion criteria

Criteria 1 given by ICMR - ban on entry from International destinations (except those who are evacuated). Except criteria 4 (hospitalized patients with Severe Acute Respiratory Illness, Influenza like Illness & severe Pneumonia), no other criteria will reveal information or data about Community transmission of the disease.

In the absence of a testing strategy which is more inclusive, we are likely to have almost the same trend

of cases even in the long run which might not give us the correct burden of the disease. As and when, the testing criteria becomes more inclusive, there might be more yield of cases as is evident from the daily increase of cases after 30th March after the minor revision of criteria on 28th March and again after 10th April after the revision of 9th April. If there is no more revision in the testing criteria, we might notice an increased number of hospital admissions with respiratory distress (provided we monitor this cohort of patients) which ultimately may turn up as COVID 19 Positive. Can we afford to wait till patients land up in hospitals to be tested and declared to be COVID 19 positive. In the absence of a testing strategy which includes OPD patients (true representatives of the community), do we at least have a mechanism to monitor the trend of patients admitted in hospitals with respiratory distress or attending OPDs with Fever & cough/breathlessness. If India cannot afford to open up testing for OPD patients with Fever & cough/breathlessness due to lack of resources, then

at least we should monitor the attendance of such patients in OPD so that any unusual increase can be noticed, clusters identified and action taken (include them for testing & isolate them if found positive)

Otherwise since about 85 % of the cases show mild symptoms, we may never come to know that they were actually COVID 19 positive and suddenly we will start having more and more admission with Respiratory distress & OPDs flooded with patients with Fever & Chest symptoms and we are going to have a mismatch between the total corona cases and death due to Corona.

We need data but priority of data for academic purpose is less and is required more for containment. We urgently need to identify our cases in the community so that we isolate them and treat them. Most of them will need only isolation without any intensive care and right now as per reports, India has created lakhs of beds for isolation including in train coaches. When the stage is ready as per preparedness is concerned, why not go for a more inclusive testing criteria to identify- isolate and try to break the transmission, if not in total but at least partial.

Second View

50% of the cases are asymptomatic. 85% have mild symptoms & only 15% may need critical care, Is it wise to extend our testing beyond what is being done now?

When easy primary prevention of distancing and hand washing is there, why don't we push that rather than spending so much on testing which has got doubtful sensitivity.

Without an approach of graded scaling up of screening, we could just land up being resource consuming too early.

In India, is it possible to break the chain of transmission? Can people remember whom they met when they went out to get their essentials last? What meaningful contact tracing can we achieve with the 'test, test, test' strategy.

Lock down — How to go about after 40 days — Continue or withdraw

Our decision about lock down after 3rd May will have to be based on several factors and also on the prevailing scenario of COVID 19 in India at that time.

Scenerio-1 (When full-scale community transmission is established in India with ever-increasing number of infected cases & deaths)

If it so happens that full-scale community transmission is established in India with ever-increasing number of infected cases & deaths, then we may need to extend the lockdown by another 4 weeks. But this decision has to be carefully balanced between the perceived threat due to Corona pandemic in India & it's direct effect on economic determinant of health. It should not happen that extended lock down leads to increased morbidity due to malnutrition, psychiatric illness etc and increased maternal & infant mortality contributed by indirect factors related to transportation, hospital accessibility etc. It is required to arrange food and supply chain (including for migrant labourers) and deploying police at all possible check points.

If we have to ensure both - the public participation and efficient system to ensure compliance we have to keep some public or private transport running with strict control to keep mobilizing supplies and essential manpower including health care workers and cleaners.

The Government has to keep communicating with transparency and walk the talk. Extending without preparations and without explanation is bound to erode confidence of public.

Scenerio-2 (When transmission becomes stable and epidemic curve has flattened with about 150-200 cases per day in India with identified areas of hot spots)

In this situation, selective lockdown of states with rising cases (Wuhan Model) or selected lockdown of cities with hot spots (US or Vietnam Model), lock down for elderly and persons with comorbid conditions (Germany and Japan Model) can be adopted. The withdrawal of lockdown has also to be gradual, based on hot spots identified so far, feasibility of approach.

However, Educational institutions religious institutions, gatherings and functions should remain closed all over the country till a period when the

transmission becomes evidently low. In addition, state borders should remain sealed to restrict movements of people from one state to another for at least another 14 days or till epidemic curve starts to fall, whichever is earlier. After that, there should be limited number of domestic flights and trains. Complete ban on International flights should continue until the pandemic is over globally. Then restriction on International travel may be relaxed as per individual country's epidemic status. Social distancing measures like imposition of Section 144 and minimum staff at offices etc should continue until the transmission becomes low.

Scenerio-3 (When transmission becomes low and the epidemic curve has started to fall)

In this situation, Pan India lock down may be withdrawn but with rigorous monitoring of the situation. Practical strategy may be identifying and isolating hot spots and deploying more resources and manpower there. Gradual lifting of lockdown in other areas where transmission is low and scattered. At the same time, all other steps will have to be added and continued such as chemo prophylaxis, no mass gathering, social distancing, imposing section 144, sticking to hygiene and infection control and most importantly continue strengthening Disease Surveillance system.

Interstate movements may be allowed but advisories may be issued to avoid unnecessary travel within the country. Advisories should be issued for elderly and persons with comorbid conditions regarding restricted movements. Restriction on International travel may be relaxed as per individual country's epidemic status till pandemic is over. However, educational institutions should remain closed all over the country till epidemic curve is proven to be very low till May 15th. Issues related to remigration have to be addressed.

We should also learn from our previous mistakes as what happened on 22nd March at 5 pm in the midst of Janata Curfew. Once lockdown is released, we should expect greater gatherings & festive mood as people were locked for 40 days. Strict protocol & advisories should be issued regarding the same. Sec 144 should continue for some days. Graded approach towards opening lockdown will have greater adaptability than sudden opening even in

scenario 3 or any hypothetical scenario 4 when daily incidence becomes zero. Community participation is the crux, we need to talk to the community and make them understand the importance of maintaining social distancing even in the best of scenario and convince them how to live with CORONA

Social distancing and lock down will only slow down the epidemic. In the long run everyone will get infected but cases will come on staggered manner so our health system will be able to cope up. Meanwhile our system will also be strengthened.

Now we are having one national strategy. Infection will remain longer in few states and strategies can become state specific, few state will have major restrictions with no interstate transit and remaining states will be eased out.

No single measure for containment of an epidemic ever works. Complete lockdown will be successful only if it's clubbed with testing, effective isolation with contact tracing of the cases and effective quarantine.

Authors Contribution

All authors have contributed equally.

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