PIDE
COVID-19 BLOG
No. 12

Why Pakistan's Indigenous Testing is not Materialising?

Novel Coronavirus Disease caused a national emergency for many countries. It has resulted in overburdening the healthcare sector, increased the vulnerability of the poor, and incurred heavy losses to the economy. Pakistan Institute of Development Economics (PIDE) through its COVID Response Team is trying to analyse the situation and provide necessary policy input. At the time of writing i.e. April 2, the total number of positive tests are 2,291 out of the total 16,777 tests performed in the country[i]. That means 13% of the total tests are positive. Out of a total population of 216,565,318, it means every 12,908th person was getting the test. This is extremely low. Studies[ii,iii] show that COVID-19 has a reproduction factor of 2-5 that means a single person can infect from 2 to 5 people. This means that there can be 4,582 patients of Coronavirus out there. This calculation is very crude and real calculation is much scarier but let us not get into that discussion for now.

Any disease can only be cured if the diagnostics system is available wide and far with an accuracy of more than 95%. The importance of widespread testing is already discussed in PIDE COVID-19 Bulletin No. 9. Without testing, partial or full lockdown would not help as it is the timely isolation of patients from the healthy is not made possible. Since the outbreak in Pakistan, on average 457 tests have been done every day. There are known delays in the process. First being the tests are expensive; second, the healthcare sector was not ready to react as Pakistan has not seen an epidemic of this type in the past; and third, test kits were not available in the country and had to be imported.

Government has categorised Corona patients into three groups. First, having flu, cough etc., second, those showing more symptoms and considered suspect patient, and third, confirmed patients. Due to lack of testing, for the first two stages the government advises self-isolation. For a country like Pakistan, it is impossible to self-isolate at home because majority of the country's population lives in small houses with 6-7 household members. That leads to the imminent danger of spreading the disease within the house. Various cases of patients from the same household from Punjab confirms this argument.

Aggressive testing can help contain the spread. How can that be done, the answer is to develop indigenous testing methods. Those will be much cheaper as compared to the imported ones that cost around Rs. 8,000 per test. The popular narrative makes us believe that Pakistan is a poor country having no expertise to do any such thing. But in the current Coronavirus outbreak, a local university has claimed to successfully test its indigenously made testing kits. These testing kits, however, have not been given a fair chance to be commercialised.

Logically so, such procedures undergo very strict scrutiny. Every method needs to be reliable. National Institute of Health (NIH) at Islamabad and Drug Regulatory Authority of Pakistan (DRAP) under the Ministry of National Health Services Regulations and Coordination are the two cardinal departments of the government which must approve any local product coming to the market. NIH provides the support by providing positive samples to the researchers and

DRAP ensures that the minimum requirements needed for licensing are fulfilled. The cumbersome procedures of DRAP delays the process by, at times, years. There are no minimal testing requirements set to deal with the type of emergency that we are facing right now.

When we look out of Pakistan, we see that countries are taking drastic steps. For instance, the Food and Drug Administration (FDA) in the US announced its Policy for Diagnostic Tests for Coronavirus Disease-2019 during the Public Health Emergency[iv]. A clause of Emergency Use Authorization (EUA) can jumpstart testing method with minimal testing required. The minimal testing defined is 10 samples only, with 5 positives and 5 negatives. If a test is successful in achieving more than 95% efficacy, then that test can be licensed.

This type of approach is not present in Pakistan. DRAP is sticking to its routine procedures which deters any local effort to materialise. In an emergency there can be three pathways for us to follow:

1. DRAP like the FDA in the USA reduces the minimum number of tests required, keeping the efficacy rate the same.
2. NIH provides samples to researchers where they can work on the possibility of developing a workable testing kit.
3. Coordination mechanism between the quarantine facilities and those researching on developing a kit can be formed so that the process can speed up.

In these times of emergency, neither organizational sanctity nor money-making should be the aim. Aggressive testing can assist us in getting the situation under control, and for that indigenous efforts need to be encouraged. It can help us reduce the cost and improve accessibility, both aiding more aggressive testing which is what we need.

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[i] PIDE. (2020). Pakistan Coronavirus Dashboard. Retrieved 2 April 2020, from http://www.pide.org.pk/corona

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[iii] Read, J. M., Bridgen, J. R., Cummings, D. A., Ho, A., & Jewell, C. P. (2020). Novel coronavirus 2019-nCoV: early estimation of epidemiological parameters and epidemic predictions. *MedRxiv*.

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