

Economics of COVID-19: Challenges and the Way Forward for Health Policy *during* and *after* the Pandemic

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Summary

The emergence of novel coronavirus disease 2019 (COVID-19) pandemic provides unique challenges for health system. While on the one hand, the government has to struggle with the strategies for control of COVID-19, on the other hand, other routine health services also need to be managed. Second, the infrastructure needs to be augmented to meet the potential epidemic surge of cases. Third, economic welfare and household income need to be guaranteed. All of these have complicated the routine ways in which the governments have dealt with various trade-offs to determine the health and public policies. In this paper, we outline key economic principles for the government to consider for policymaking, during, and after the COVID-19 pandemic. The pandemic rightfully places long due attention of policymakers for investing in health sector. The policy entrepreneurs and public health community should not miss this once-in-a-lifetime “policy window” to raise the level of advocacy for appropriate investment in health sector.

Key words: Cost-effectiveness analysis, coronavirus disease 2019, health economics, health system, health technology assessment, priority setting, universal health coverage

INTRODUCTION

The novel coronavirus disease 2019 (COVID-19), which originated in Wuhan, China, was declared a global pandemic of international concern by the World Health Organization on March 11, 2020.^[1] COVID-19 pandemic is distinguishable from other diseases in the extent to which its externalities have affected the overall society, in terms of health and economic impact. As a result, it has brought out novel challenges for the policymakers in trying to align societal interests. In this paper, we use economic underpinnings to explain several of these challenges and suggest a way forward for health policy, *during*, and *after* the COVID-19 pandemic in India. First, we describe the challenges of COVID-19 pandemic in India. Some of these challenges to health sector include financing and provisioning of health services, developing strategies which maximize population health – attributable both due to COVID-19 and non-COVID-19 health conditions. Second, we describe the broader macroeconomic impact of influenza and SARS pandemics in the past and discuss its implications for the current COVID-19 pandemic. Third, we describe the criteria on which the priorities were being set and how the COVID-19 has

affected that process of priority setting. We finally conclude by stating four key lessons for building a resilient health system during and after the COVID-19 pandemic in India.

IMPACT OF CORONAVIRUS DISEASE 2019 ON HEALTH SECTOR

Financing and provisioning

India has been historically one of the lowest public spenders on healthcare, with 1.5% of gross-domestic product (GDP) being spent on health by the government.^[2] In terms of the aspirations of meeting universal health coverage (UHC), it has been shown that an investment of 3.8% (2.1%–6.8%) of

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GDP is required.^[3] Most of the developed countries which have somewhat universal coverage of health services spend an average of 8% of their GDP on health.^[4] The recent COVID-19 pandemic has exposed this historic perpetual underfunding of the health system in India – whether it is the availability of hospital beds, intensive care facilities, ventilators, personal protective equipment (PPE), or diagnostic facilities. The Government of India has proposed an injection of 15,000 crore rupees to the health system for meeting health system requirements.^[5] However, given the UHC aspirations, the need is manifold more.

Second, about 70% of outpatient and 58% of inpatient care needs are catered by private sector.^[6] In such a situation, wary of a surge of cases as seen in several other countries, many state governments in India have started looking out toward private sector for the provision of COVID-19 treatment. This has opened up debates around what should be the mechanism of purchasing care and how should the hospitals be paid. In terms of purchasing, three models could be considered. First, the entire private hospital is designated as COVID hospital. Second, the hospital continues with routine services, as well as provides isolation and treatment of COVID-19 patients on a case-by-case basis. Third, the government takes this unprecedented national emergency situation as a basis to nationalize all private hospitals. While the last option appears to be a much difficult political proposition, most state governments are taking the first two options. Either way, it has implications in designing the provider payment rates.

For hospitals which are taken over completely as COVID hospitals, the provider payment rate should be computed in two parts – the first part comprising a global monthly budget (at per-bed rate to account for size of hospital) to compensate for the opportunity cost of building and other capital items and the second part which is preferably a bundled case-based payment per COVID-19 patient treated. The latter payment should be differential by the level of care received, i.e., isolation alone, intensive care, and artificial ventilation. However, care should also be taken such that the bundled case-based payment does not include capital cost, which is included in the global budget.

The second model of purchasing of care, in which private hospitals provide mixed care, a bundled case-based payment – comprising the value of both the capital and recurrent resources – should be set as provider payment rate. Hospitals should be incentivized for the provision of COVID-19 care. One of the ways to incentivize is to compute the rates of payment based on a cost which is computed at lower levels of bed occupancy. Second, it should include the cost of heightened infection control protocols, suggestive of use during COVID-19 pandemic.

In terms of financing using voluntary private health insurance, where premium is actuarially determined, one of the essential prerequisites is that the probability of developing the disease in an individual should be independent of someone

else's probability of being diseased.^[7] However, the case of COVID-19 defies this essential precondition. As a result, the private insurance firms would either not include COVID-19 treatment in the benefit package, or else the premium will be set much higher than the individual personal benefit. This has two clear fallouts. First, the ones who purchase the insurance are likely to be high-risk individuals for developing disease, and hence, the overall prospects of insurance are likely to meet what Akerlof mentions in economic literature as “death spiral.”^[8] Second, it would lead to inequities in healthcare financing and outcomes since the poor and disadvantaged would be less likely to purchase insurance. This again points to an independent and strong role of the state in financing the COVID-19 care.

EXTERNALITY OF CORONAVIRUS DISEASE 2019 ON NON-COVID HEALTH CONDITIONS

The emergence of COVID-19 in India and other countries has led to the introduction of measures of physical distancing in the form of complete state-enforced lockdowns. The latter has imposed geographical barriers to access services for curative care, as well as supply-side restriction in provision of health services. Due to communicable nature of the disease, healthcare providers – both implicitly and explicitly – have reduced provision of care for non-COVID conditions, citing concerns for safety of healthcare providers as well as reducing community transmission in hospitals. The brunt of this negative externality has been maximal on the maternal and child health services, which had high levels of national coverage in recent times, and on the treatment of illnesses, which require a continuity of services – such as tuberculosis, dialysis for chronic kidney disease, or radiation therapy for cancer. This is likely to have significant health and economic consequences at population level. Immediate re-consideration of how the access to routine care is not disrupted needs attention.

MACROECONOMIC IMPACT: ECONOMIC WELFARE AND INCOME GUARANTEE

Another major impact of the COVID-19 pandemic has been at micro and macroeconomic level. It has impacted on the household income and its resultant consumption. In a country like India, where more than 90% of its working population is in the informal sector,^[9] the effects of lockdown on household income are likely to be even higher. de Walque *et al.* showed that the introduction of serological tests to ensure that individuals having antibodies return to work after a period of physical distancing would result about 2% increase in GDP in Philippines.^[10] Walmsley *et al.* found that a 4-month business closure during SARS will lead to a 21.6% decline of GDP and a 23.0% drop in employment.^[11] Similarly, McKibbin and Sidorenko reported that the “Hong Kong Flu” and “Spanish Flu” type pandemic will lead to a 2%–8% decline in global GDP.^[12] However, no such evidence exists for lower and middle-income country (LMIC) setting.

PRIORITY SETTING AND TRADE-OFFS FOR POLICY: ROUTINE VERSUS CORONAVIRUS DISEASE 2019

The COVID-19 pandemic also poses significant challenges for setting the priorities for health and public policy. A recent review cited that the criteria for priority setting in LMICs include assessments of cost-effectiveness, equity, feasibility, and political considerations.^[13] India recently set up the Health Technology Assessment Board (HTAB), which was entrusted with the task of supporting evidence-informed policymaking.^[14] The HTAB correctly outlined three criteria to provide recommendations for decisions on resource allocations – health maximization, equity in healthcare utilization, and reduction in out-of-pocket expenditures.

However, the emergence of COVID-19 has brought in fundamental shift in trade-offs for evidence-informed policymaking. First, in pre-COVID-19 era, the decisions on priority setting took place at the margin, i.e. what is the additional health benefits of additional spending of a given intervention as compared to a threshold for cost-effectiveness.^[15] Not much emphasis was placed on any externalities of a given intervention, on other health conditions and programs. However, COVID-19 interventions have significant externality on non-COVID health services. This implies that the assessments need to be more comprehensive and rigorous. Second, while most of the costs considered in health technology assessment were direct and indirect medical expenditures, COVID-19 interventions have significant nonhealth sector costs. As a result, the definition of a societal perspective to be used in analysis increases manifold.

Third, there are several important concerns on priority setting which may contradict with efficiency and equity principles. COVID-19 places the healthcare providers at a significantly higher risk of getting exposed. Hence, healthcare providers, while continuing to be at the helm of mitigation strategies, would also need to be protected from getting infected. As a result, there might be trade-offs in their protection, in terms of use of PPE, infection control strategies, chemo-prophylaxis, treatment, etc., which may not be justifiable based on simple efficiency arguments. Disproportionately higher resources justifiably need to be allocated on healthcare providers – which may contradict traditional equity principles.

CONCLUSION

COVID-19 pandemic has significant lessons to learn for health and public policy. First, it rightfully places long due attention of policymakers for making the right investments in health sector. The policy entrepreneurs and public health community at large should not miss this important once-in-a-lifetime policy window to raise the level of advocacy for appropriate investment in health sector. Second, key economic principles for purchasing care and setting provider payments should be followed to maximize population health, social protection, and provide UHC. Third, the COVID-19 pandemic gives an important lesson for setting up public provisioning systems

for healthcare and reducing the reliance on purchasing healthcare from private sector. This is even more important to understand, given the important public health function which is performed by the public sector. Finally, the management of COVID-19 pandemic, which has involved all the sectors of government, provides an opportunity to further advance the cause of health-in-all policies. Only time will tell how much the governments and public health community learn and take advantage of the COVID-19 to build a resilient public sector for provisioning of health services.

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Conflicts of interest

There are no conflicts of interest.

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