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Health and Economic Trade-Offs of COVID Policies in Sub-Saharan Africa (Univ. of Michigan, Makerere Univ., 12/17)

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Abstract

What is the Message? This article describes key changes in operations, communication, and security that are central to moving ahead effectively as we deal with COVID-19, including designation of specialty care facilities, creating emergency management plans, changing appointment policies, coordinating social distancing, managing hygiene protocols, and expanding testing.

What is the Evidence? The authors draw upon their recent experience at relevant medical centers.

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> "Part of the challenge here is that we've lost the nuance. Some people are saying this is a hoax, it's fake, it's not serious. Other people may be saying it's the worst thing in the world, a zombie apocalypse. It's neither. This is a terrible pandemic. It has killed 130,000 Americans. It has sickened many, many more. And we don't yet know what the long-term complications of some of the illness [are]. But it is true that 99% of people who get it will survive."
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> — Former CDC Director Dr. Thomas Frieden. [i]

Attempts to curb the pandemic can affect other health and economic targets

Government actions taken in response to the pandemic are often credited or blamed for their effect on the disease itself; less so for the other, more indirect, costs of these actions such as reduced attention to other illnesses. Part of that may be the lack of concrete numbers. Decision makers naturally gravitate toward hard numbers, and hard numbers are most readily available for those who contract COVID and those who die with it. Mortality and morbidity that result from actions taken to try to prevent the spread of the disease are more difficult to measure, much less attribute to specific government policies.

Nonetheless, a number of organizations have started documenting these costs and developing estimates of their magnitude and severity. For example, with respect to non-COVID health consequences, clinicians are expecting an increase in cancer deaths due to delays in diagnosis and treatment in western markets[ii] or due to constraints occasioned by suspension of public transport in Africa.[iii] For similar reasons, heart disease,[iv] mental health and other chronic diseases can also be expected to increase.[v]

The economic consequences of government actions taken to curb the effects of COVID have been even less clear. Some point to the significant economic consequences even in Sweden, where the government has employed a relatively light touch, as evidence that the economic

downturn is a result of consumer fear rather than government action. Others assert that, even if there are negative economic consequences from government actions, these surely pale in comparison to saving lives, implying that economic downturns don't cost lives

Data that speak to the economic consequences of fear are relatively scarce just because we only have a few months to observe. Existing studies show that the lockdown itself, and not just fear, is having an effect though some suggest the lockdown accounts for a small portion of the economic downturn,[vi] while others suggest lockdowns account for most of the decline.[vii]

Looking at Sweden's economy highlights another difficulty in isolating the effect of the lockdowns themselves. Preliminary estimates of Sweden's GDP in the second quarter suggest that Sweden did not fare well even relative to its neighbors, as it saw GDP drop 8.6% in the second quarter of 2020. Sweden did, however, fare better than most European countries and than G7 countries except Japan,[viii] the only G7 country that also adopted a relatively light touch.[ix]

The problem with these comparisons is that, like the disease itself, the economic consequences of COVID responses are not confined to political boundaries. Producers rely on export markets and consumers and producers rely on imports. Thus, the citizens of Sweden and any other country will suffer the consequences of actions taken by governments all over the world, especially close trading partners.

The link between the economy and mortality rates is clearer, although the health consequences of an economic downturn manifest themselves in other ways as well. Just as COVID may have long term health effects short of death that are not well understood yet, an economic downturn affects other aspects of health and quality of life. Nonetheless, since mortality garners substantial attention with respect to COVID, we use research on the relationship between economic downturns and mortality to estimate the potential effect of the economic downturn associated with COVID on mortality alone. In an effort to be concrete and tractable, we focus on the mortality rate of a specific group: children under the age of five in Uganda.

Health and economic impact in sub-Saharan Africa

Since the COVID-19 virus started in Wuhan, China at the end of 2019, it has been both a surprise

and a relief to see that the virus itself has killed relatively few people in sub-Sahara Africa. The economic effect has, however, been devastating.

In Uganda, the Ministry of Finance Planning and Economic Development released April 2020 trade statistics which revealed that exports had fallen by 34.3%. Imports declined by 38.5% over the same period. This decline is attributed partly to airport closures and travel restrictions more generally. As but one indication of the severe consequences implied by these figures, fully 42% of tax revenue for Uganda is collected through international trade.[x]

When households have enough income, they are able to make reasonable choices of nutritious foods and other essential goods and services for their household members but, when people do not have enough income, health suffers and mortality rates go up. Recent data from Uganda shows that outpatient visits, antenatal visits, live births in healthcare facilities, immunizations have all dropped and in many cases, dropped by more than 10% relative to the same period the year before. The number of children with low birth weight increased relative to the preceding year[xi]. Hence, the reduction in income has led to increased health risks. [xii]

We can quantify the effect of the COVID economic downturn on mortality by using previous estimates of the effect of sudden declines in GDP on mortality. The GDP growth rate in sub-Saharan Africa is expected to decrease by as much as 8%. A World Bank study predicted that GDP would decrease from 2.4% in 2019 to as low as -5.1% in 2020.[xiii] The IMF is expecting a decrease in GDP of 5.4% in 2020.[xiv] Given the pre-COVID expectations of a GDP increase, this implies a decrease of about 8%.

Using estimates from a study of the effect of the 2008 financial crisis on infant mortality, an 8% decrease in GDP per capita could result in almost 150,000 more infant deaths.[xv] Estimates from other studies on infants[xvi] and children under 5 are roughly consistent with this, suggesting an 8% decline in GDP could lead to hundreds of thousands more deaths of children under 5.[xvii]

Note that the decline in GDP estimated by the World Bank and IMF was for the overall economy. This will understate the effect on GDP per capita if population is growing, as it is, in sub-Sahara Africa. Thus, the impact of COVID on the economies in many countries in the region is such that hundreds of thousands of children could die. Indeed, that seems likely.

We need to pay attention to trade-offs

Decision makers in governments around the world are faced with difficult decisions. Already, more than one million people have contracted COVID and died. The true number may be higher if some have died with COVID even though the disease was not diagnosed or, instead, may be lower if some people had COVID but died due to some other disease.

The uncertainty surrounding that estimate is much less than the uncertainty about the number we have tried to estimate: the increase in deaths due to the economic consequences of COVID and actions taken to prevent it. It would be preferable to wait until the data on both COVID mortality and the economic effects were more reliable, but since decisions are being made in real time, we will have to make do with what we have in real time. It would be a serious mistake to dismiss either the costs or the benefits just because of the uncertainty.

Consider three points regarding the numbers we presented above.

First, we have looked only at the economic effect on the number of deaths of children under five in sub-Sahara Africa. We do not consider the effect of delayed diagnosis and treatment of other diseases either in Africa or other countries. We do not discuss the effect on the over-five year child population in sub-Sahara Africa and we do not discuss the effect of poverty in other countries. All of these populations will also be affected.

Second, government actions to stop COVID will not bring COVID related deaths to zero and are not solely responsible for the decrease in economic activity resulting from the pandemic. Even in the absence of government actions, there would be negative economic consequences from COVID. Many are fearful and would choose to stay home and engage in the economy less, even if governments allowed it. We discussed this earlier but have made no attempt to isolate the effect of government actions and separate them from the "natural" effects on the economy.

However, we have evidence that at least some of the economic consequences are a result of government policy – and some studies suggest policy is the cause of most of the economic downturn. Similarly, even when governments take relatively drastic actions they do not necessarily reduce mortality dramatically or permanently. The state of Michigan in the U.S., for instance, has a population that is very similar to Sweden's, and its governor issued a shelter in place order for 2 months, closing many businesses, limiting the services offered by hospitals,

and other limitations. Yet, despite the stricter measures, the number of deaths related to COVID are about 45% more in Michigan than in Sweden.

Third, the estimates for an increase in mortality rates in sub-Sahara Africa are extremely conservative because they are one-year estimates and many of the newly-impoverished individuals are likely to remain in poverty for many years to come. Thus, the number of deaths due to the economic downturn will be much higher than the estimates presented above. To give some idea of the long-term effect, we can return to the 2008 financial crisis. The World Bank estimated that 70 million people who would not otherwise have been in poverty would remain in poverty into 2020 as a result of the 2008 financial crisis.[xviii]

Looking forward

Globally, about 60 million people die in the world every year. At the current pace, more than 1.5 million will contract COVID and die. Oxfam posted a briefing stating that as many as 12,000 hunger deaths per day could be related to COVID.[xix] Remarkably, their "Actions Needed" did not mention anything about the deleterious effect on mortality of government actions designed to limit the effect of COVID.

But we know anecdotally that the actions governments take to limit COVID deaths have caused people to die.[xx] We know that hundreds of thousands of children under the age of 5 are likely to die as a result of the economic consequences of COVID. While fear may be driving some of the economic downturn, government policy is also affecting it and to the extent that it is, governments need to keep these consequences in mind the same way they consider the effect of the disease itself.

During this horrible pandemic our actions, whatever they are, have costs and consequences. It is therefore important that when developing government policies, we identify and evaluate these as best we can. Let us be done with saying that the tradeoff is between lives saved and the economy as if helping the economy does not also save lives.

Governments have an array of options available to them, and each contains its own set of costs and benefits. Requiring masks to be worn in public appears to pose few costs, while providing significant benefits by slowing the spread of the virus. By contrast, forcing businesses to stop

offering services does pose a cost, and has economic consequences that extend beyond the borders of the governing authority. Stopping elective surgeries in areas that are not experiencing significant outbreaks is different from stopping elective surgeries in areas that are facing a shortage of hospital beds due to COVID. The decisions governments face right now are difficult, but let's be clear: it is not a question of saving lives or not saving lives. Rather, it is a question of trying to protect the lives of people from one malady (COVID) as opposed to another (the consequences of serious economic decline and increased poverty). As Dr Frieden suggests in the quote at the beginning of this article, it requires a more nuanced approach.

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