

Why Lebanon needs to eliminate COVID-19? – A rationale

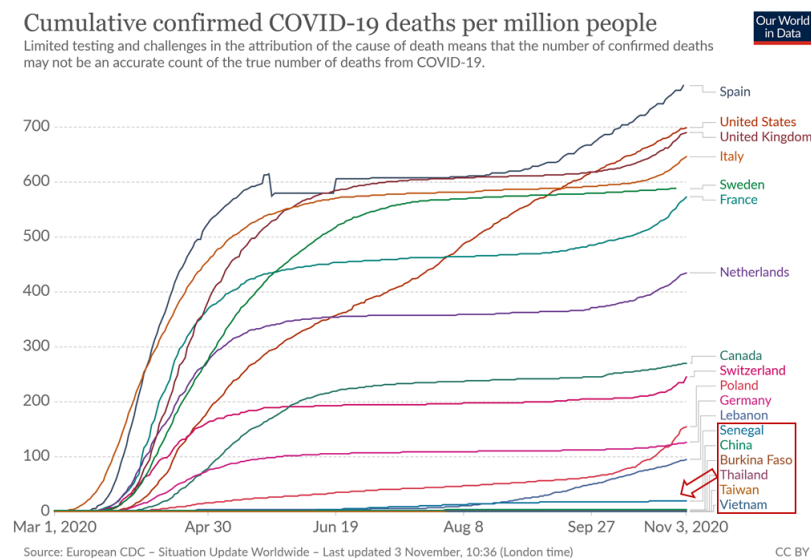
Introduction

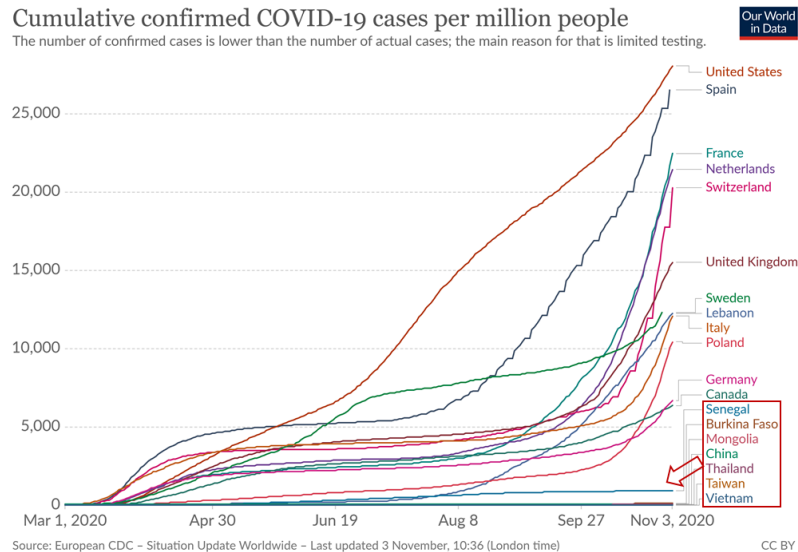
We need a national strategy to eliminate COVID-19 in Lebanon. **Elimination** means reaching **zero cases** within our borders. It is necessary because nothing else really works.

A **'middle-path' approach** to mitigate the outbreak while reopening society is bound to fail. The surges seen across numerous countries over the past few weeks reinforce this message. Healthcare is beginning to be overwhelmed in countries including Belgium, the Netherlands, Poland, Czech Republic, France, UK and Spain, with others following. COVID-19 has multiplicative potential, which means it can rapidly outpace weak measures in a non-linear manner, and also overwhelm healthcare capacity.

Another faster path with similar outcomes is of openly allowing transmission to reach **'herd immunity'** without a vaccine. This is not only unethical and non-compassionate, but is also not possible with COVID-19, resulting in a very high death toll and large burden of chronic conditions among survivors. No serious infectious disease outbreak has been stopped by reaching herd immunity. This concept became widely relevant after the discovery of vaccination. If that is not reason enough, COVID-19 has routinely overwhelmed healthcare systems with only a fraction of the population infected, as is the current case in Lebanon.

The only successful path is containment and working towards elimination. About 30 countries are currently succeeding in containing COVID-19 at zero or near-zero daily levels.¹ Their societies can live with the greatest near-normality than anywhere else, with minimal physical distancing and restrictions. Thailand, Vietnam, China, Taiwan and New Zealand are some of the better known success stories, but others are Senegal, Burkina Faso, Cambodia, Laos, Mongolia and more. We know some factors that are advantageous to countering COVID-19, such as having a collectivist culture, being an island, having low population density and strong leadership. However, successes are coming across all kinds of countries, as well as smaller regions, and many lessons are waiting to be learned from those succeeding in containing and eliminating COVID-19.





Why a 'ZeroCovid' strategy is especially needed in Lebanon?

If you can't get the people away from the virus, get the virus away from the people.

The virus largely relies on being transmitted from one human to another. The greater the connectivity between people the greater it will spread. Limiting connectivity (e.g. physical distancing) decreases its spread. However, human-to-human connectivity is also what defines our daily lives in society. We can only limit it to a certain extent, for a limited time. So how do we break this cycle to get back to a more normal daily life?

Three factors are necessary for the outbreak to continue in Lebanon:

1. People
2. Opportunity to infect
3. The virus (SARS-CoV-2)

We cannot remove the people out of the country. Limiting opportunities to infect by various measures is important, however the population's compliance is a critical factor in several of these. Understandably, for many people their compliance with measures will be even more limited considering the multiple ongoing crises Lebanon is facing. Even countries not facing such challenges are struggling with compliance, such as in the UK where only 18% of cases self-isolated.² Added to this is the central authorities' weak enforcement capacity. Although major efforts are needed on the compliance and enforcement fronts, we cannot over-rely on these to break the COVID-19 cycle.

Therefore, the only path left is to remove the virus. We do this by driving it down to zero, and protecting the country from importing it again, while rapidly detecting and containing occasional cases before they spark an outbreak. We had the opportunity to do this in the Spring, but missed it. And unlike in the Spring, we cannot lockdown for long, given the tremendous socioeconomic burden and the fact that the virus is now widely seeded in the population.

Knowing your population is one of the cardinal rules in public health. We know ours. And we understand the many barriers involved in trying to achieve high compliance across several measures. That is not a realistic route in Lebanon. Rather, we need to create as much buffer for lapses in compliance as possible. This means compliance remains important, but the level of virus in the country has to be zero/near-zero, so any low compliance does not result in an outbreak. **It requires a lot of effort from relatively few, rather than a lot of effort from everyone.**

It can be done, as countries with even less resources than Lebanon have demonstrated. They did not stumble upon this, but purposefully committed to achieving this. It cannot be done without a strategy.

A strategy is necessary

To be successful requires a strategy, something that Lebanon has failed to develop. This is despite early calls that core measures and a strategy are necessary to keep COVID-19 controlled in the longer-term.³ In this, Lebanon is not alone, as many countries around the world have responded with short-term reactive measures, lacking a strategy. However, the overlapping political-financial-economic crises make Lebanon particularly vulnerable.

Broadly, a **strategy** means having a clear overall or long-term goal(s). It provides a framework for making decisions or implementing measures, even within a context of uncertainty (abundant in COVID-19), and considers future impact of current actions. This is different from an action plan, which follows with the operational details after a strategy has already been set.

Importantly, a strategy does not only guide a country's outbreak approach, but also gives the population a sense of direction for the future, and allows people to imagine solutions to maintain and even improve their daily lives and work.

COVID-19 is not forgiving, and having inconsistent measures without a strategy is like stumbling in the dark, allowing the virus to lead and never catching up with it. Unlike other challenges humans face, with its multiplicative potential a few cases today can result in tens of thousands within a couple of weeks. Few threats have such potential.

A serious disease

COVID-19 is a **serious disease**; it is not similar to the flu nor to the four coronaviruses that regularly circulate causing about 15% of common colds among humans. Rather, it is closer to Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS), the two previous serious outbreaks caused by coronaviruses that fortunately never developed into a pandemic.

Mortality estimates vary between 0.3-1.3% of infected persons, sharply rising with some factors such as increasing age, presence of chronic disease and low healthcare access. This makes it at least ten times worse than seasonal influenza. Mortality would also considerably increase when a healthcare system is overwhelmed. However, mortality may not be the greatest burden we face from COVID-19.

We now know that COVID-19 is a complex multi-system disease, capable of damaging various organs and body systems. **Chronic damage** to the heart, lungs, kidneys, brain and other organs has already been documented. In addition, between 10-20% of survivors continue to suffer long-term conditions in what has been termed '**Long-COVID**', including symptoms such as prolonged fatigue, difficulty concentrating, breathlessness, muscle aches, skin rashes and palpitations.^{4,5} We continue to learn more of the chronic and long-term effects, however there is no doubt that COVID will result in a major increase in chronic diseases. Knowing this, **it is not enough to survive infection, rather, we should prevent it.**

It is relevant to highlight that **all nation-states are obligated** by the Universal Declaration of Human Rights and associated treaties to first and foremost protect the right to life, including the right to the highest attainable standard for their populations.⁶ In terms of COVID-19, this includes both prevention and treatment. As such, triage that occurs in hospitals (North Italy) or in nursing homes (Sweden) represents a breach of these obligations.

Why so much confusion?

COVID-19 concerns all people and all backgrounds, but at core it is a health threat. Many health professionals are more familiar in thinking at the individual level, rather than the **population level**. Some approaches work for individuals, but do not scale up or are not sufficiently effective at population level. The **complexity** presented by COVID-19 is a further challenge. Specialists in certain fields usually have deep knowledge of a narrow or focused area, but may be more limited in appreciating other fields and the connections between them. This is why a **multi-disciplinary knowledge** is important to counter the outbreak, as is the ability to combine this with **experienced decision-making under uncertainty**.

Two examples are instructive. In the early days of the outbreak in Lebanon, the Ministry of Public Health issued regulations that all positive cases be isolated in hospitals, regardless of severity. However, some clinicians from major hospitals disagreed that mild cases do not require hospitalization and may be sent home to self-isolate. From an individual and medical perspective, this would have been adequate, however from a population health perspective it allows greater room for transmission to others. The isolation policy was over-turned after only 3 weeks. Fortunately, other measures were subsequently taken.

The second example is of schools reopening. Recently in Lebanon, some policymakers and pediatricians have publicly stated that reopening schools poses little to no risk for children. This is misleading and unwise particularly in the midst of an outbreak with high case levels. Though less deadly among children than adults, children remain at risk for serious disease and death.⁷ Many children survivors also suffer from Long-Covid, and we do not yet understand the long-term impact of infection. More importantly, this ignores the role of schools in spreading the virus to teachers, parents, grandparents and other community members. Studies have estimated that reopening schools can increase COVID-19 cases between 24% to 100%.^{8,9} School closures are not a permanent measure, rather they are needed for only a few weeks if an effective strategy was in place, and would reopen once COVID-19 was contained again.

The big picture

Perhaps the most important reason to eliminate COVID-19 is the **unknown**. This disease presents several uncertainties. As such, countries should apply the precautionary principle, avoiding risk of ruin at the systemic and collective level in the face of this novel threat.¹⁰ Far more will be known about COVID-19 in the future than all of what is known today. This includes the nature and extent of long-term harm caused by COVID-19 among children and adults, which may be of even greater consequence than ongoing fatalities.

Trade-offs in health are often considered using the cost-effectiveness of different interventions, but not for deciding whether to eliminate a disease when we have the ability to do so. Importantly, a trade-off implies you understand the cost and benefit involved on both sides, which we clearly do not regarding COVID-19. In addition, countries that have successfully managed to suppress the disease while also saving their economies did not have to do any trade-off between lives and livelihoods.¹¹

COVID-19 will not be the virus that kills our species. But it is a **painful trial** for a future one that may. Therefore, countries that develop systems to succeed against COVID-19 are also investing in protecting their populations from even more dangerous threats in the future.

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