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Hindsight is 2020? Lessons in Global Health Governance One Year into the Pandemic

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Abstract

Fourteen months into the SARS-CoV-2 pandemic, we identify key lessons in the global and national responses to the pandemic. The World Health Organization has played a pivotal technical, normative and coordinating role, but has been constrained by its lack of authority over sovereign member states. Many governments also mistakenly attempted to manage COVID-19 like influenza, resulting in repeated lockdowns, high excess morbidity and mortality, and poor economic recovery. Despite the incredible speed and approval of effective and safe vaccines, the emergence of new SARS-CoV-2 variants means that all countries will rely on a globally coordinated public health effort to defeat this pandemic for several years.

Introduction

It has now been just over one year since the first two cases of coronavirus disease 2019 (COVID-19) were confirmed in two Chinese nationals staying at a hotel in York, England on 31st January 2020¹. On 26th January 2021, the death toll from COVID-19 in the United Kingdom had surpassed 100,000 and there were reportedly over 30,000 daily cases of the disease, with an estimated 1 in 10 of people going on to experience the enduring effects of “long COVID”². The global death toll has just reached 2.1 million³.

However, around the world, a varied picture has emerged³⁻⁵. Countries like China, Taiwan, New Zealand and Australia have managed to eliminate or get close to elimination of their epidemics caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) relatively well³⁻⁵. Others such as Hong Kong, South Korea, Singapore, Finland and Norway have managed to control it at low levels³. Sadly, both the US and the UK are still battling high numbers of daily cases, tens of thousands of deaths and an exhausted health workforce and overstretched health services^{3,6,7}.

As the virus proliferated across the globe, it also revealed critical vulnerabilities in our global and national health governance systems that have resulted in these inadequate outbreak responses^{8,9}. In this paper, we explore what we now know about the virus, identify key lessons learned about WHO and national governance and how this has impacted pandemic preparedness and response.

What do we know scientifically?

Since January 2020, a massive surge of research into COVID-19 has enabled the scientific and medical community to better understand how to manage and ultimately eliminate the virus through pharmaceutical and public health interventions¹⁰. Some of the key findings a year on are that transmission occurs through droplets and aerosols spread through breathing, coughing, speaking and sneezing¹¹. Stopping the spread of COVID-19 requires people to avoid mixing through restrictions on social and economic life^{12,13}.

We have learned that COVID-19 causes more severe symptoms and death in those that are older¹⁴, who have underlying health issues (such as cardiovascular diseases and obesity) or are immunocompromised (such as malignancies and diabetes mellitus)¹⁵. We have learned that certain genetic markers can identify those more susceptible to respiratory failure¹⁶.

We also have been learning about the long-term effects of COVID-19, so called “long COVID”, and the morbidity attached to having this virus¹⁷. Even after the recovery from acute illness caused by COVID-19, some patients continue to experience symptoms such as dyspnea and fatigue for weeks or months¹⁷. Also, the emergence of hyperinflammatory symptoms in children (multisystem inflammatory syndrome, or MIS-C) was reported to coincide with regional COVID-19 epidemics¹⁸.

We have learned that immunity lasts at least 8 months¹⁹. We also have three licensed vaccines in the UK, which are already being rolled out and are effective at reducing severe COVID-19; although we don't know how long immunity will last or whether they stop people being infectious²⁰. We have learned that the virus can mutate into various strains that can be more transmissible, more severe in health outcomes and possibly evade our natural or vaccine-induced immunity to the original SARS-CoV-2, requiring governments to plan for a cat and mouse game between vaccines and variants²¹.

Role of WHO

This pandemic has highlighted the interdependence of countries like never before, and most importantly the need for a globally coordinated governance response²². As countries attempted to respond to the COVID-19 outbreaks, the World Health Organization (WHO) was thrust into the spotlight as many countries looked to it for leadership and guidance²³. In the process, it has faced inevitable criticism from various stakeholders. This criticism has unveiled – not for the first time – some misinterpretation of WHO's mandate, its authority – or lack of – over its Member States, and a number of organisational and legal instrument constraints that have impacted pandemic preparedness and response^{8,24–26}. WHO has three key roles in addressing health emergencies: coordination, normative and technical steering²⁷.

As the United Nations' only organization focused on health, it has a mandate to be “the directing and coordinating authority in international health work²⁷. During the COVID-19 outbreak, it has convened the 73rd World Health Assembly, and adopted a resolution to bring the world together to fight the pandemic and called for equitable access to all essential health products, such as vaccines, tests and treatments through the Access to COVID-19 Tools (ACT) Accelerator²⁸. It has also enabled WHO to assemble the COVAX

Facility as the vaccine pillar of the ACT Accelerator with other global actors, a mechanism designed to ensure timely access to a diverse set of vaccines for at least 20% of countries' populations and the COVID-19 technology access pool (C-Tap), a platform to share patent-protected trial data on emerging treatments²⁹. There has been some success: to date, two billion doses of approved and pipeline vaccines have been pledged by wealthy nations, the European Union Commission, The Bill and Melinda Gates Foundation among others³⁰. However, as of January 2021, while vaccine roll-out is fully underway in many wealthy nations like the UK and the US, no COVID-19 vaccines have been administered in the continent of Africa and in other low and middle income countries (LMICs)³¹. This highlights the limited accountability of COVAX participants and perhaps inefficient incentives for wealthy nations, which have secured in some cases more doses than required to protect their populations³²⁻³⁴. Furthermore, by January 2021 C-Tap had attracted zero contributions, nine months after its launch³³.

Through the International Health Regulations (IHR) (2005), WHO also has a “central and historic responsibility” to manage the “global regime for the control of the international spread of disease³⁵”. In its normative role, it has the “power to shape or influence global rules and norms and monitor compliance”³⁶. It has arguably fulfilled a large part of this role by providing State-endorsed guidance and by setting norms and standards on outbreak preparedness and response, which include making use of measures such as border controls, finding cases, prioritising testing, contact tracing, isolating carriers of the virus and their contacts among other interventions³⁵. Critically, this guidance ensured that China reported the presence of a novel pathogen on 30th December 2019, and enabled WHO to declare a Public Health Emergency of International Concern (PHEIC) – the highest level of alert – one month later on 30th January 2020, and notably 111 days before the UN Security Council adopted a resolution stating that the COVID-19 pandemic threatened international peace and security^{29,37}. Four days later, it published a global strategy to tackle the pandemic, much of which remains valid today²⁹.

Moreover, within its technical capacity, it was able to send an international team on mission to China in February 2020 to collect key data on how the virus was spreading, the emerging disease profile and to understand lessons learned from policy responses in China up until that point³⁸. Invaluable knowledge that was shared with the rest of the world in the same month. Furthermore, through its technical role, WHO has provided daily press briefings on a variety of scientific and policy topics including up-to-date epidemiology data, the nature of SARS-CoV-2 transmission and appropriate non-pharmaceutical intervention guidance, since a Public Health Emergency of International Concern (PHEIC) was declared by the WHO³⁹.

However, there was some criticism that the PHEIC should have been called earlier and that WHO's diplomatic but perhaps opaque approach in working with China to investigate the source of the outbreak and rapidly share information demonstrated a lack of authority over Member States⁸. This was further publicised as a result of the Trump administration's threat to withdraw from WHO⁴⁰. However, the IHR only affords WHO normative power, a “soft” power that relies on Member States' cooperation and cannot be legally enforced³⁶. Throughout the pandemic WHO has struggled with country cooperation, namely because it does not have an official operational role in outbreak response⁴¹. This is also demonstrated in the failure of notable countries such as the UK and the US to implement some of WHO's key public health guidance, such as ‘testing, testing, testing’, the provision of personal protective equipment and the importance of ramping up hospital capacity⁴².

Furthermore, although WHO's technical capabilities during the pandemic are mostly to be lauded, it was slow to offer some key recommendations. Namely, on the potential risk of airborne transmission of SARS-CoV-2 under special circumstances (enclosed spaces, prolonged exposure, and inadequate ventilation⁴³), the important role that masks⁴⁴ have in preventing transmission and use of border controls. History has shown us that the risk of doing nothing while waiting for the perfect data outweighs the risk of acting quickly with imperfect data. As Dr Mike Ryan, the executive director of the WHO's emergencies Programme said, it is pertinent that everybody acts fast during an infectious disease outbreak and that we do not wait for "perfect data"⁴⁵. Other technical areas where it fell short is in that its preparedness metrics⁴⁶ seemingly did not account for variations in country leadership and political will, which have clearly had a big impact on the way countries have responded to the pandemic. Also, that it did not sufficiently focus on policies to minimise the impact that outbreaks have on increasing social, racial and health inequalities³⁵. One major factor that has an impact on all of these coordination, normative and technical shortcomings is the limited funding available to WHO to operate optimally⁴⁷. Critically, it has been suggested that the health and economic fallout of this unprecedented pandemic may spur new opportunities for more stable funding that might result in transformational change⁴⁸.

National Governance: Best Practice

By the end of March 2020, almost all countries around the world had introduced nation-wide public health measures aimed at containing the spread of SARS-CoV-2⁴⁹. However, the measures used and subsequently the health and economic outcome of the response varied drastically⁵⁰. This variation in response seems to reflect past experience in managing infectious disease outbreaks, societal values, long-term investment in healthcare and critically the political will of the government in power.

Overall Strategic differences

In Europe and the US, a combination of mitigation and suppression strategies have largely been used at various points in time. This is despite WHO advising countries to follow the model of elimination from February, 2020⁵¹. The UK's initial strategy was based largely on a response to pandemic flu, and government communications made several mentions of mild flu and cold-like symptoms as a result of COVID-19 for the majority of the population⁵². Elimination of the virus was touted as an impossible notion; that the best course of action was to shield the vulnerable as the virus made its way through the population to avoid overwhelming its health services and in an attempt to achieve so-called 'herd immunity'⁵³. While the successful use of measures such as social distancing and home isolation in China were noted by government advisors, it was perceived as postponing the inevitable⁵⁴. This over-reliance on the flu model painted an inaccurate picture of how COVID-19 is transmitted: as COVID-19 is more contagious than the flu, it leads to super-spreading events in crowded places. This evolved into a suppression strategy, where targeted health interventions have been used to reduce COVID-19 cases to "acceptable" levels for example by implementing mass testing, lockdowns and the use of masks in indoor public spaces⁵⁵. In contrast, in New Zealand, Taiwan, Vietnam, South Korea, Australia and China, effort was taken to try to rapidly exclude community transmission of the virus using an elimination strategy. As Jacinda Arden, the prime minister of New Zealand recently said, even if elimination is not achieved, the approach "will result in a reduction of lives lost in the process"⁵⁶. As the world has witnessed a close return to normalcy - at least within national

borders - in countries that sought an elimination approach, there appears to be greater enthusiasm to pursue this approach among academics and politicians⁴. In contrast, those who didn't have succumbed to repeat national lockdowns throughout the year, high mortality rates, long-term health consequences in survivors - up to 10% in the UK - in-direct health impacts, long-term economic loss, and an increase in social and health inequalities⁵⁷.

One factor that has impacted the strategies employed by governments is the relatively low Case Fatality Rate (CFR) of COVID-19 at 2%⁵⁸. The CFRs of severe acute respiratory syndrome (SARS) and Middle East respiratory syndrome (MERS), are much higher than that of COVID-19 at 9-10% and 36%, respectively⁵⁸. Based on past experiences, most countries would have adopted an elimination strategy if the CFR for COVID-19 was higher, because it would have been impossible to let SARS-CoV-2 spread within communities⁵¹. However, CFR is a deceptive metric because the underlying SARS-CoV-2 virus spreads more easily among people, leading to more cases. Hospitalisation rates are a better measure of COVID-19 prevalence because it also reveals the level of community spread, but also gives insight into hospital capacity⁵⁹.

Public health measures

We also now know that effective use of test, trace and isolate (TTI) programmes, where infected people and their contacts are rapidly identified and provided financial support to isolate during the incubation period of the virus along with border controls and now an efficient and equitable roll-out of emerging vaccines are key to controlling this virus.

In East Asian and Pacific countries, TTI, the use of strict border measures and good voluntary public health guidance was central to their elimination strategies, allowing them to rapidly manage local flare-ups. It also resulted in relatively few lockdowns⁵⁰. In Hong Kong, uptake of testing was encouraged by paying people to get tested. Germany also had a relatively lower CFR compared to its European counterparts like Italy and the UK, in part because of its early and broad testing strategy⁵.

The development of new vaccines has provided governments with an additional tool to protect its population. Governments in high-income countries, in particular, have embarked on mass efforts to roll-out the vaccine, starting with their most vulnerable groups. By mid-January 2021, Israel had administered the first dose of the vaccine to over 25% of its population, and 75% of those over the age of 60 years by mid-January. There are early indications that this is having a positive impact with a reduction from 30% to 7% in the number of critically ill patients in this age bracket two weeks post-vaccination⁶⁰. However, questions on the protection provided until the second dose is administered remains. Additionally, inequitable access, both globally and nationally are an issue; in Israel cities of a lower socio-economic status had administered fewer vaccinations than their wealthier counterparts⁶¹. What is clear is that a fast roll-out is essential to stopping community transmission, ultimately reducing the likely emergence of new variants of the SARS-CoV-2 virus.

Social inequalities

The disproportionate impact that this pandemic has had on vulnerable populations and ethnic minority groups around the world must also not be overlooked⁶². This is typically a result of riskier work and living conditions, limited access to protective wear - and in some countries treatments - and the limited availability of financial protection to ensure that key public health measures such as isolation and distancing can be implemented⁶². Governments

have learned - often as a result of a public outcry - that identifying these vulnerable groups quickly, and implementing tailored interventions to reduce the risk of infection in these groups is critical. For example, in Hong Kong people were paid to encourage testing and in the UK mass testing was eventually introduced into care homes to try to identify and isolate cases quickly^{63,64}.

Other key lessons are that elimination is achievable if swift political commitment is made early on in an outbreak, and by accepting short-term stringent public health measures, viral community transmission is reduced, fewer covid-19 cases are detected and economic loss is minimal⁴. At the global level, however, we should also recognise that not every country is able to implement the same public health measures. Countries like Japan could not legally enforce strict containment measures because of its infringement on human rights⁶⁵. Furthermore, political disorder and the aggressive use of force by the police in Nigeria intensified when strict public health interventions were enforced to limit protests⁶⁶.

Leadership and communication

Clear and evidence-based communication during an outbreak is critical to build trust with the public and to ensure adherence to public health measures and successful containment. Most importantly, understanding a government's definition of a successful outcome and the strategy employed to achieve this needs to be well-defined⁶⁷. Some leaders seem to have got the balance right, for example, in New Zealand, South Korea, Taiwan and Senegal while others have struggled, for example, in the US and the UK. As the pandemic has unfolded, knowledge about the virus, how to manage it and the interventions available to us have rapidly evolved. Some governments have been good at communicating uncertainty and necessary changes in strategy when better options have become clear. For instance, in New Zealand, after the PHEIC was declared by WHO, the government communicated that an elimination strategy was being adopted⁶⁸.

In the US and the UK, it has at times been unclear what success would look like, how this is measured, and what approach is being adopted: exclusion, elimination, suppression or containment of the virus⁴. In the US, the Trump administration regularly ignored scientific evidence and the Federal government "abandoned disease control to the states⁶⁹", resulting in a massive failure in handling COVID-19. In the British context, sometimes questions about changes were often met with protestations of having "world-beating" approaches, a symptom of British exceptionalism that underestimated the virus in the first place⁷⁰. Moreover, some government ministers in the UK recently announced that NHS hospitals were full because the public was not adhering to public health measures⁷¹. Shifting responsibility to individuals alone through such disparaging messaging can lead to a lack of compliance to government rules.

Economy v. Health

Throughout the pandemic a false dichotomous argument pitting public health and economic success has emerged⁷². In fact, one common argument against stringent public health measures like lockdown was the potential damage it inflicted on the national economy. It is incorrect that a loss of economic growth and job losses are a primary consequence of social-distancing measures rather than the virus itself⁷²." Not taking strict public health measures to prevent the national economy during the pandemic is a short-sighted policy; in the long run, a brief closure and temporal subsidisation has proven to be more cost-beneficial than opening the economy during the pandemic. Although, New Zealand experienced an

annual contraction in real gross domestic product (GDP) of 6.1%, this is much lower than other comparable countries and in Taiwan a net GDP of 0% was sustained⁷³. Furthermore, economists argue that the estimated economic cost of the pandemic in the United States is 16 trillion USD⁷⁴. Effective public health measures, if implemented, can reduce these financial costs significantly. Contrary to the false—yet common—dichotomy, protecting the health of the people is equivalent to protect the wealth of the people. Similar analyses have shown that this was also the case in the 1918 influenza pandemic⁷⁵.

Conclusion:

Looking ahead to year two of the pandemic, our collective progress will be dependent on a coordinated global effort to leave no one behind. Although the mass vaccination roll-out will dominate COVID-19 policy this year, the emergence of new SARS-CoV-2 variants that may escape the body's neutralizing antibody response and continued inequitable access to vaccines indicates that the COVID-19 pandemic will continue. This may well turn out to be the year of variants and vaccines. However, now we are armed with knowing what works, what doesn't and the range of interventions needed to keep numbers low. Let's fix our fragmented global health system and follow the elimination playbook together: because if we've learned anything this past year, it's that globally, we are only as strong as our weakest link.

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