




PANDA

PANDEMICS - DATA & ANALYTICS

RESPONDING TO COVID-19: PUBLIC HEALTH OR PUBLIC HARM?

JUNE 2021

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A large crowd of people is shown at night, with a woman in the center looking forward. The scene is dimly lit, with a blue glow in the background and a yellow glow in the foreground. The woman in the center has her hands clasped and is looking directly at the camera. To her right, a person is holding a white cup with the letters 'ab' and 'ag' visible. The overall atmosphere is one of a public gathering or event.

“Public health: the science and art of promoting health, preventing disease, and prolonging life through the organized efforts of society.”

WORLD HEALTH ORGANIZATION¹

In 2020, when SARS-CoV-2² (the virus behind COVID-19, the disease) appeared on the global stage, decades of pandemic planning were disregarded and replaced with a new policy of ‘lockdown’. Following in China’s footsteps, many democratic governments restricted movement and shut down their societies. Wide-scale contact tracing, testing, and mask mandates were adopted, and the World Health Organization (WHO) endorsed these measures, acting against its own pandemic guidelines.³

It is now clear that society and public health are being damaged by the global response to COVID-19. Vulnerable and disadvantaged populations are most impacted, particularly in low-income countries – as is often the case in a crisis, those with the least resources are suffering the greatest harm. Governments and the media have fuelled a climate of fear and mistrust, and scientific discourse has been eroded by politics.

Given what is known about the epidemiology of SARS-CoV-2, (that is, the risk of serious illness and death with increasing age and comorbidities), PANDA asserts that there was *no need to abandon existing WHO guidelines*. These guidelines were produced through a meticulous, evidenced-based process, and the recommendations still apply today.

PANDA’s Protocol for Reopening Society⁴ is a way out of the damaging cycle of lockdowns. This involves returning to longstanding public health principles⁵ and adopting an approach of ‘focused protection’⁶ to safeguard the most vulnerable, as articulated by the Great Barrington Declaration.⁷

PANDA argues for an equitable approach to public health that protects the lives, opportunities, and wellbeing of *all* citizens – enabling populations to prioritise according to their own burdens.

This paper summarises the rationale for PANDA’s strategy for reopening society. Damage has been done on a vast scale; it is time to stop the disastrous policy of lockdowns and start undoing their harm.

Two critical aspects of PANDA’s argument for focused protection are that public health measures must be both *context-specific* and *voluntary* for citizens. PANDA’s stance on public health also places primacy upon human dignity and upholding fundamental rights of freedom, education, income, and health.

SECTION 1: LOCKDOWNS – ABANDONING PUBLIC HEALTH



“No state party shall, even in time of emergency threatening the life of the nation, derogate from the Covenant’s guarantees of the right to life; freedom from torture, cruel, inhuman or degrading treatment or punishment, and from medical or scientific experimentation without free consent...

...the right to recognition as a person before the law; and freedom of thought, conscience and religion. These rights are not derogable under any conditions even for the asserted purpose of preserving the life of the nation.”

THE SIRACUSA PRINCIPLES⁸

For decades, it has been acknowledged by the world’s premier health authorities that amid a pandemic, the functioning of society should be maintained, and human rights upheld.^{9 10 11} In recent years, nations have developed pandemic preparedness plans to maximise their ability to respond effectively to an emerging pandemic.^{12 13 14 15} Similarly, the World Health Organization pandemic guidelines provide an extensive evidence base to guide a global response to pandemic influenza.^{16 17} Like influenza, SARS-CoV-2 is a highly transmissible respiratory virus and therefore these plans are relevant when reviewing the response to COVID-19.¹⁸

Despite extensive knowledge about pandemic management, when faced with SARS-CoV-2 most countries abandoned existing pandemic plans and enforced widespread lockdowns or ‘stay-at-home’ orders. Civil liberties on a grand scale were suspended in the process. Examined in detail here, this type of policy response runs counter to the principles of public health and *raises serious legal and ethical questions* about the role of governments during a pandemic.

A public health approach to a pandemic

“Public health should achieve community health in a way that respects the rights of individuals in the community.”

PUBLIC HEALTH LEADERSHIP SOCIETY¹⁹

WHO Pandemic Influenza Risk Management Guidance suggests that ‘advance planning and preparedness are critical to help mitigate the impact of a global pandemic.’²⁰ This document is one of several compiled by the WHO to assist member states to develop country-specific pandemic preparedness and response plans.²¹

Although preventing all pandemic-related deaths is impossible, public health policies should aim to minimise the *overall* harm from the pandemic, while also considering potential collateral damage from the response.^{22 23} This also includes considering non-pandemic related health needs and the risk of death from other causes.^{24 25} Governments must undertake cost-benefit analyses of interventions to ensure benefits outweigh potential risks.^{26 27} Ongoing evaluation of public health measures is essential to ensure that interventions are *lawful, necessary, effective, proportionate, and ethically justifiable*.^{28 29}

Another pandemic response objective should be to assess the nature of an infectious disease and the populations most at risk of harm.³⁰ To ensure the response is appropriate and effective, the unique needs of a community, its resources, and demographics must also be considered.^{31 32} Therefore, WHO pandemic guidelines are clear that community participation is critically important, and public trust must be built and maintained.^{33 34 35} Governments and leaders must educate citizens about the *real risks from a disease*. This should include specific vulnerabilities and the evidence underlying these, and advice about how citizens can take sensible steps to protect themselves, their families, and communities.^{36 37 38}

Even though public health policies focus on the wellbeing of *communities*, fundamental human rights should not be overlooked during a pandemic.^{39 40 41} The ethical principles of respect for persons (the inherent rights, dignity and autonomy of the individual), non-maleficence (doing no harm) and justice (fairness) are important.⁴² Decision makers should ensure that public health measures do not disproportionately impact certain groups or individuals – particularly those who are already physically, socially, or economically vulnerable.^{43 44}

Historically, the most successful public health strategies have been those that rely on voluntary public cooperation, *not coercion*.⁴⁵ A landmark 2006 paper on disease mitigation suggests a useful overriding principle for responding to a pandemic:

“Experience has shown that communities faced with epidemics or other adverse events respond best and with the least anxiety when the normal social functioning of the community is least disrupted. Strong political and public health leadership to provide reassurance and to ensure that needed medical care services are provided are critical elements. If either is seen to be less than optimal, a manageable epidemic could move toward catastrophe.”⁴⁶

Public health measures are more likely to succeed through a process of active engagement and collaboration between governments and citizens.^{47 48} An informed and empowered public will *voluntarily* take protective action during a pandemic.⁴⁹ Rather ironically, this was also recognised by Ferguson et al in their March 2020 paper – ‘Report 9’ –

that was instrumental in triggering the first lockdown in the United Kingdom. They stated: ‘it is highly likely that there would be significant spontaneous changes in population behaviour even in the absence of government-mandated interventions.’⁵⁰

There is a world of difference between voluntary and mandatory interventions.

Maximising the *freedom of civil society* to function normally is ultimately key to supporting health systems amid a crisis.^{51 52 53}

However, in 2020, many governments took the opposite approach, and societies across the world were shut down.

The new policy of ‘lockdown’

“However, we emphasise that is (sic) not at all certain that suppression will succeed long term; no public health intervention with such disruptive effects on society has been previously attempted for such a long duration of time. How populations and societies will respond remains unclear.”

FERGUSON ET AL, 2020⁵⁴

Existing pandemic guidelines recommend various non-pharmaceutical interventions (NPIs) designed to slow the rate of transmission of a virus and reduce the risk of healthcare systems being overwhelmed.^{55 56}

However, the term ‘lockdown’, was new to pandemic management in 2020.^{57 58} This strategy, which aims to suppress transmission of SARS-CoV-2, is based on the response of the Chinese government to SARS-CoV-2 in Wuhan^{59 60} and was promoted by the WHO,^{61 62 63} though it was *contrary* to WHO guidelines.⁶⁴

The widespread shutting down of whole societies to suppress a respiratory virus has *little scientific foundation* and does not form part of pandemic plans in democratic countries. Lockdowns are an experimental exercise *never attempted before* – as recognised by Ferguson et al, quoted above.

In fact, previous research explicitly cautioned against such drastic measures because the negative consequences outweigh any theoretical benefit.⁶⁵

Collateral damage

“... these measures can impose significant burdens on individual rights (e.g. autonomy, privacy, and liberty) and economic and social welfare (e.g. trade, tourism, and business).”

WORLD HEALTH ORGANIZATION⁶⁶

A major challenge in understanding the impact of lockdowns is the complex interplay between individuals, society, the broader environment, and SARS-CoV-2. Throughout the response to this virus, there has been a heavy reliance on computer modelling. This can be

informative but it must also be supported by, and adapted to, *robust empirical data*.^{67 68} Any modelling must be understood in the context of human behaviour, immunology, and epidemiological influences.⁶⁹

A growing body of empirical evidence is highlighting the damage that lockdowns are causing.^{70 71 72 73} The most vulnerable and disadvantaged members of society are suffering the greatest harm.^{74 75 76}

Economies are being devastated and citizens plunged into unemployment,^{77 78 79} causing dramatic increases in poverty, particularly in low-income countries.^{80 81 82} Children and young people, who are *at little risk* from COVID-19,⁸³ are being unfairly impacted by these measures.^{84 85 86}

A generation is being damaged by long-term school and university closures.^{87 88} Research also suggests that mental health and wellbeing is sharply declining,^{89 90} vital health care for conditions such as cardiovascular disease and cancer is not being provided;^{91 92 93 94} family violence is increasing;^{95 96} and outcomes are worsening for chronic diseases.^{97 98} Evidence is also emerging of a wave of non-COVID excess deaths, including in working-age individuals, due to the impact of lockdown policies.^{99 100 101 102}

In addition to widespread concerns about lockdown harms, research suggests that mandatory lockdowns provide *little benefit* in reducing the spread of SARS-CoV-2 compared with less restrictive measures.¹⁰³ No empirical evidence has emerged to show that lockdowns *have reduced overall mortality* from COVID-19. Data show no overall correlation between lockdown stringency and reduction in mortality.^{104 105 106 107} Papers claiming to demonstrate lockdown efficacy – such as the June 2020 paper by Flaxman et al¹⁰⁸ – have been widely critiqued, and the conclusions drawn about the benefits of lockdowns are significantly overstated.^{109 110 111 112 113 114}

It is noteworthy that Sweden, which did not enforce a mandatory lockdown and adhered more closely to its existing pandemic guidelines,¹¹⁵ has *not* experienced the catastrophic numbers of deaths predicted by computer modelling.^{116 117 118} To date, it has had *fewer deaths per million* than the United Kingdom, which has seen repeated cycles of lockdown for more than a year.¹¹⁹ Death rates in other locations that did *not* enforce mandatory lockdowns or abandoned them – such as Belarus and Florida – are in keeping with global trends.¹²⁰ Florida, which lifted most restrictions in September 2020¹²¹ and has a high population of elderly residents,¹²² has a *lower* death rate than many of the large American states that imposed strict lockdowns.¹²³ Texas followed in Florida's footsteps and lifted lockdown restrictions in early March 2021.¹²⁴ At the time of writing, cases and deaths in Texas have continued a downward trend.¹²⁵

In essence, if lockdowns worked to prevent deaths, this would be reflected in the data. It is not. But rather than a case of simply doing nothing, the opposite of locking down a society is to follow public health principles and *protect the vulnerable*.

In fact, lockdowns may cause more harm than good – research suggests that they may increase exposure and according to leading epidemiologist John Ioannidis, they are probably ‘*pro-contagion*’.^{126 127} Lockdowns could result in a *longer and more lethal pandemic* by increasing the risk to vulnerable populations through policies that reduce transmission in the young and healthy.¹²⁸ This can delay the build-up of herd immunity and shift the burden of disease onto populations with a much higher risk of mortality.^{129 130 131} This risk of a larger epidemic due to a delay in herd immunity was also noted by Ferguson et al.¹³²

There are also many unanswered questions about the impact of such large-scale meddling with nature on viral mutations and natural herd immunity. What impact do inactivity, reduced sun exposure (inducing vitamin D deficiency), and increased stress, have upon the immune system? Could this result in an increased vulnerability to disease and more severe pandemics in the years ahead? Many critical questions should be analysed.

Ethics and human rights in the time of lockdown

“...the impact of the COVID-19 pandemic has disproportionately affected those in vulnerable situations and those already suffering from poor health and has exacerbated their vulnerability and exposure to socioeconomic drivers, leading to increases in morbidity and mortality, as well as economic damage at the individual and community levels.”

WORLD HEALTH ORGANIZATION RESOLUTION¹³³

In addition to the distinct lack of a widely accepted scientific basis, the ethical considerations of mandatory lockdown policies are significant. Unfortunately, despite the extensive literature available, these impacts have received little attention from governments or the WHO.

One example is a 2008 WHO ethics paper that highlights the socioeconomic and psychological risks of *prolonged social separation* caused by social distancing policies such as lockdowns. It also draws attention to the significant impact on individual rights, claiming that restrictions on personal liberties most affect those with the fewest resources.¹³⁴ As discussed here in this paper, this is precisely what has occurred during the response to COVID-19; lockdowns have disproportionately affected people on low or unstable incomes.

From a public health perspective, this is vitally important. It is widely known that non-medical factors influence the long-term health of individuals and communities – commonly known as the social determinants of health (SDOH).¹³⁵ Billions are spent every year, globally, on programs to address the SDOH and reduce health inequality.^{136 137} The SDOH are an *obvious* warning about the potential long-term harms of lockdown policies – yet they have been

largely ignored by policy makers. This is a clear contravention of public health ethics.¹³⁸

It cannot be claimed that governments were *unaware* of the potential impact of lockdowns. Even Ferguson et al acknowledged that their recommended lockdown strategy carried significant socioeconomic risks:

“Suppression, while successful to date in China and South Korea, carries with it enormous social and economic costs which may themselves have significant impact on health and well-being in the short and longer-term.”¹³⁹

Despite this, after the release of the Ferguson paper, a UK nationwide lockdown was enforced. It seems pertinent to ask why governments ventured into lockdowns when the potential negative repercussions were so obvious?

Although public health is always a balance between collective and individual rights, international human rights law clearly states that any restrictions placed on the rights of citizens during an emergency must be *necessary, proportionate, lawful and non-discriminatory*.

In addition, the *least* restrictive means possible should be used.¹⁴⁰

Vital cost-benefit analyses were *not done* by governments when implementing lockdowns, and global citizens are now paying the price for this negligence. PANDA believes it is highly unlikely that any cost-benefit analysis will weigh in favour of lockdowns. Lockdowns are an ill-considered policy that negligently disregarded established protocols. Moreover, lockdown policies have deemed participation in many aspects of civil society a *non-essential activity* – including family, religious and community life.

People across the world have been denied the ability to work and earn a living, denied access to vital health care, denied opportunity to see and care for loved ones, denied freedom of movement and trade, denied cultural and social participation, and millions of children have been denied education.

If lockdowns do not prevent deaths, they are a *futile public health exercise*. Given the widespread suspension of civil liberties, and the obvious harms that are occurring, what do lockdowns mean for fundamental human rights?

Are governments and the WHO meeting their ethical and legal obligations under international law?

SECTION 2: NON-PHARMACEUTICAL INTERVENTIONS (NPIS) – SCIENCE OR POLITICS?



“The evidence base on the effectiveness of NPIs in community settings is limited, and the overall quality of evidence was very low for most interventions.”

WORLD HEALTH ORGANIZATION¹⁴¹

In addition to lockdowns, various NPIs such as handwashing, respiratory etiquette, facemasks, contact tracing, testing, quarantine (including of healthy individuals) and border closures, have also been widely deployed in response to COVID-19. Although the evidence base regarding the efficacy of NPIs in community settings is weak, used in combination, *theoretically* these measures may slow community transmission during a pandemic. In theory, this allows time to increase healthcare capacity and reduces the risk of health services being overwhelmed.¹⁴²

Many NPIs have, however, been enforced through legal mandates¹⁴³¹⁴⁴¹⁴⁵ and their use is *inconsistent* with WHO’s ‘Non-pharmaceutical public health measures for mitigating the risk and impact of epidemic and pandemic influenza guidance.’ Some NPIs in use now were not recommended at all.¹⁴⁶ Once again, this flies in the face of long-established public health principles and raises *serious ethical questions* about the appropriateness of these measures.

Over the past year, the world has also seen science politicised, suppressed,¹⁴⁷¹⁴⁸¹⁴⁹¹⁵⁰ and corrupted by competing interests, leading to erroneous policy decisions in the response to COVID-19.¹⁵¹¹⁵²

In July 2020, BBC Newsnight presented evidence that the WHO changed its advice on facemasks due to ‘*political lobbying*’.¹⁵³¹⁵⁴ Two papers published in major academic journals regarding potential treatment for COVID-19,¹⁵⁵¹⁵⁶ were subsequently found to have been based on *fraudulent data* and retracted. The WHO, as well as several governments, changed policy based on the results of these studies.¹⁵⁷¹⁵⁸ It has also been suggested that the global influence of the Chinese Communist Party helped to walk the world into lockdowns, against all prior evidence-based recommendations.¹⁵⁹

Proper investigation is needed into why established science has not been followed and who is benefitting from the response to the pandemic.

‘Maskerades’

There is no clearer example of the politicisation of science than the changing narrative around face masks, where there has not been a change in the empirical evidence.

Early in the pandemic, governments and the WHO recommended *against* the widespread use of face masks by healthy individuals to prevent community transmission of SARS-CoV-2.^{160 161 162 163 164}

In April 2020, WHO interim guidance for facemasks stated:

“There is currently no evidence that wearing a mask (whether medical or other types) by healthy persons in the wider community setting, including universal community masking, can protect them from infection with respiratory viruses, including COVID-19.”¹⁶⁵

Pre-existing WHO guidelines also state that there is *no evidence* that face masks are effective in reducing transmission. Nevertheless, voluntary use of disposable surgical masks was recommended for *symptomatic* individuals because they may hypothetically reduce onward transmission. There was also a conditional recommendation for wider voluntary mask use during severe pandemics for public protection. Cloth masks were *not* recommended under any circumstances.¹⁶⁶

Despite earlier advice, universal mask mandates rolled out across the globe during 2020. In June 2020, the WHO also changed its advice to include mask wearing by healthy people in the community, as well as cloth masks.^{167 168}

Did the science on face masks suddenly change? No.

Much of the claimed ‘evidence’ that has prompted this policy change comes from computer simulations, laboratory studies, or observational studies,¹⁶⁹ which as the WHO itself recognises, lack the rigour of randomised controlled trials (RCT).¹⁷⁰

Moreover, laboratory studies bear little relation to everyday life, where masks are frequently handled, reused multiple times, regularly taken on and off, and lowered for talking. What is more relevant are comparisons between similar populations with, and without masks.

A recent RCT, the ‘Danmask-19 trial’ by Bundgaard et al, found *no statistically significant difference* in rates of infection with SARS-CoV-2, between those who wore masks and those who did not in the community.¹⁷¹ The results of this study are consistent with other RCTs, which found little evidence that face masks provide protection from infection with respiratory viruses in a community setting.^{172 173 174}

Despite changing its advice on the use of face masks, WHO guidance continues to acknowledge that there is *limited evidence* to support the use of face masks by healthy people in the community.¹⁷⁵

Across the globe, mask wearing rules are chaotic and inconsistent, and there is little evidence to suggest mask mandates are having a

significant impact on the spread of disease.¹⁷⁶ Governments are *enforcing absurd mandates* such as mask wearing for people alone driving their cars, when walking outside, when exercising, and most worryingly, in schools.

COVID-19 poses *little risk to children*,^{177 178} and evidence suggests that children are not major drivers of disease.^{179 180 181} There has been insufficient investigation into the impact of widespread mask wearing on children.¹⁸² Questions need to be asked about the risk masks present for children's physical health, as well as their psychosocial development.¹⁸³ Given what is known about child development and infant attachment,¹⁸⁴ what does it mean for babies and children who are growing up in an environment surrounded by masked faces?

Another obvious risk, noted by the WHO and others,^{185 186} is that masks may provide a *false sense of security* to those most at risk from COVID-19. People may believe themselves to be protected when they are not. This is another example of poor policy that potentially increases the risk to the most vulnerable.

In addition, concerns have been raised about the potential risks of *prolonged mask use*.¹⁸⁷ These include increased risk of infection, particularly associated with cloth masks,¹⁸⁸ headaches, skin infections,¹⁸⁹ breathing difficulties and hypoxia – which may affect people with chronic respiratory disorders.^{190 191 192} Masks can also impede communication for people with hearing loss and have psychological effects, particularly for people with mental health issues.^{193 194}

Policy makers should provide evidence that an intervention is effective and will not cause greater harm.¹⁹⁵ The decision to endorse mask mandates for healthy people in the community is clearly not driven by sound scientific evidence, and the risks are unknown. Therefore, these policies should *not* be recommended.

Much of the response to COVID-19, including mask mandates, has been driven by concerns about asymptomatic transmission.¹⁹⁶ However, evidence suggests that asymptomatic transmission is *not* a major driver of disease burden.^{197 198} This was noted by both the National Institute for Allergy and Infectious Diseases and the WHO.^{199 200}

Nevertheless, health officials and politicians have widely promoted the idea that asymptomatic transmission is a major driver of the pandemic,^{201 202} resulting in the mass-testing of asymptomatic people.

Contact tracing, testing and quarantining the healthy – a fool's errand?

Once a disease is widespread in many countries, it is *impossible to permanently eliminate* a highly transmissible respiratory virus such as SARS-CoV-2 through contact tracing and testing. It is recognised that these measures are a waste of valuable resources, as they will not

detect a significant proportion of cases.²⁰³ Consequently, contact tracing was *not* recommended in WHO guidelines.²⁰⁴

Nevertheless, there has been widespread adoption of these policies in response to COVID-19, diverting huge health resources²⁰⁵ and creating economic gain for several biotechnology companies.²⁰⁶

The contact tracing employed for SARS-CoV-2 raises *serious ethical concerns*. These are noted in the literature; apart from privacy issues associated with the tracking of an individual's movement by mobile phones or other technology,^{207 208} contact tracing is frequently combined with mandatory quarantine.^{209 210}

Quarantining of exposed individuals is also *not recommended* in WHO guidelines, and previous research found that largescale quarantine measures should be 'eliminated from serious consideration' because the negative consequences are so extreme.²¹¹ WHO guidelines highlight the risks of quarantining ever-increasing numbers of individuals. This includes an *increased* risk of transmission within the home, and the widescale disruption of society.²¹² People who are socially and economically vulnerable are also more likely to be disproportionately affected.^{213 214}

Many countries are also forcing healthy individuals into mandatory hotel quarantine on arrival, even though SARS-CoV-2 is already widespread within their borders.²¹⁵ This is clearly nonsensical from a public health standpoint, has a negative effect on economies and is not recommended in WHO guidelines.

The PCR test – a tool of tyranny?

Contact tracing is reliant on the Polymerase Chain Reaction (PCR) test to identify individuals infected with SARS-CoV-2.²¹⁶ Concerning evidence of flaws with current PCR testing for SARS-CoV-2 has, however, been reported,^{217 218 219 220} raising doubts about the *reliability of case data*,^{221 222} including COVID-19-related mortality.^{223 224 225 226 227}

Pre-COVID medical standards recognise that a PCR test alone *cannot* diagnose a 'case' of COVID-19, in the absence of signs and symptoms of the disease, and without proper clinical assessment.^{228 229}

Although PCR testing can be useful for tracking disease outbreaks during the early stages of a pandemic, it was never intended to be used for *mass screening of asymptomatic people*.²³⁰ In January 2021, the WHO issued technical guidance for PCR testing that outlined the limitations of PCR testing and the *risk of false positives*. It concluded:

“Most PCR assays are indicated as an aid for diagnosis, therefore, health care providers must consider any result in combination with timing of sampling, specimen type, assay specifics, clinical observations, patient history, confirmed status of any contacts, and epidemiological information.”²³¹

The PCR test amplifies fragments of genetic material present in SARS-CoV-2 but it does not differentiate between live and dead viruses. Therefore, a PCR test alone *does not* accurately predict the infectiousness of an individual. Although a PCR test may be positive in asymptomatic people, or in people who have recovered from COVID-19, this *does not* automatically mean they are infectious and can transmit the virus.²³²

Consistent with other respiratory viruses, people infected with SARS-CoV-2 can be infectious for a short period before symptoms appear,²³³ and for up to eight days after symptom onset.^{234 235} However, due to the sensitivity of PCR tests, non-infectious viral debris may be detected in nasal swabs for over *two months* after infection resolves.^{236 237} A person may also test positive for SARS-CoV-2 when they *have never been infected*, due to errors within the PCR testing protocol. A false positive may occur because the test has detected genetic material from other sources, or as a result of cross-contamination.²³⁸

Concerns have been raised about the reliability of the ‘primers’ (short genetic sequences) used in some PCR tests and their accuracy in detecting SARS-CoV-2, particularly if multiple primers are not used.²³⁹ In November 2020, a group of scientists submitted a retraction request to the editorial board of Eurosurveillance for a paper by Corman et al, published on 23 January 2020.²⁴⁰ The PCR protocol in this paper set the standard for global PCR testing for SARS-CoV-2 and was promoted by the WHO.²⁴¹ The authors of the review concluded that ‘*the Corman-Drosten paper is severely flawed with respect to its biomolecular and methodological design*’. There are also major concerns about the peer-review process and conflicts of interests of the authors.²⁴² Although the retraction request was subsequently rejected,²⁴³ the concerns raised have yet to be properly addressed by the authors.²⁴⁴

Care is needed when conducting and interpreting the results of a PCR test. There is always potential for contamination during collection and analysis.^{245 246 247} Consideration of the viral load and cycle threshold (the number of times genetic material is amplified) is vital,²⁴⁸ as acknowledged by the WHO.²⁴⁹ False positive results are more likely when a *high cycle threshold* (Ct) is used because the likelihood of detecting non-infectious viral debris increases. A Ct over 30 is more likely to result in a person being labelled as a positive ‘case’ and quarantined, when they pose no risk of transmitting SARS-CoV-2.^{250 251}

Currently, there is little transparency to PCR testing protocols, which is bad practice and prevents proper scientific scrutiny.

PCR testing is now being challenged through the courts in several jurisdictions. In a landmark court case in Portugal, a judge ruled that a single positive PCR test *cannot be used* as an effective diagnosis of infection.^{252 253}

COVID-19 ‘cases’ – seek and ye shall find

As a result of the mass testing of asymptomatic individuals, COVID-19 ‘cases’ are often diagnosed based on a positive PCR test alone. In some locations, another test – the lateral flow test – is now also being used in addition to the PCR test for screening asymptomatic people.²⁵⁴

Millions of people globally are being forced to quarantine *whether they are infectious or not*, having a catastrophic impact on individuals and communities.^{255 256} It has induced shortages of healthcare workers who must quarantine because of a positive test, and reduced the capacity of health services to respond – in some places compounding the harms caused by the suspension of health services due to lockdowns.^{257 258}

In addition, countries have closed their borders and are implementing border screening – insisting on a ‘negative’ PCR test before travel,^{259 260} though WHO guidelines *do not* recommend these measures.

Even more concerning is the widespread testing of children.^{261 262} Children are being subjected to an unnecessary and sometimes painful intervention that provides them, or society, no benefit.²⁶³

Contact tracing and testing for SARS-CoV-2 also has serious ethical implications for privacy and the fundamental *right to refuse medical intervention*. Forcibly testing citizens is a violation of bodily integrity.²⁶⁴ How does this practice meet the ethical requirements for a ‘necessary or proportionate’ response to a respiratory virus?

Despite *not* recommending contact tracing and testing in its own NPI guidelines, these measures are being persistently promoted by the WHO.²⁶⁵ Many unanswered questions remain about undisclosed conflicts of interests, and the obvious financial incentives involved in testing and tracing large numbers of people.

SECTION 3: PANDA'S PROTOCOL FOR REOPENING SOCIETY – A RETURN TO ESTABLISHED PRINCIPLES

“Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.”

WHO CONSTITUTION²⁶⁶

Throughout the COVID-19 crisis, governments and mainstream media have spread fear throughout society. In the United Kingdom, it appears this was a deliberate strategy to ensure compliance,^{267 268} a strategy that goes against the principles of public health, and the role of the media in a democracy. Mutual trust between citizens and government is *vital* during a crisis.

Harsh rules have been applied across entire populations in many nations, irrespective of the variation in risk to different groups of people. This is the *opposite* of focused protection, which adopts long-standing principles of public health to protect those who are *most at risk* from COVID-19, while also enabling society to continue to function as normally as possible.²⁶⁹ Decades of evidence support this sensible strategy.

A great deal is known about SARS-CoV-2, including the people *most at risk* of severe illness and death from COVID-19. These facts guide PANDA's Protocol for Reopening Society.

Exploring SARS-CoV-2

Coronaviruses like SARS-CoV-2 have shared the human environment for thousands of years. Several of these coronaviruses circulate seasonally in human populations causing the respiratory infection known as the ‘common cold.’ Like many other viruses, coronaviruses undergo mutation. SARS-CoV-2 is related to the original SARS-CoV-1 that spread globally in 2003.²⁷⁰

Therefore, although SARS-CoV-2 is frequently described as a ‘novel’ virus, it shares a genetic history with other coronaviruses. This shared history has important implications when analysing susceptibility in human populations and there is evidence that many people may have cross-immunity from other coronaviruses.^{271 272 273 274 275} Consequently, the percentage of people at risk of infection will be *lower* than assumed in early modelling and fewer people will need to be infected to reach the herd immunity threshold (HIT).²⁷⁶

Epidemics end when the HIT is reached and a significant proportion of a population is immune to a disease – whether by natural infection, vaccination or a combination of both.²⁷⁷ Longstanding knowledge

shows that SARS-CoV-2 is likely to settle into an endemic state where it becomes part of the cocktail of respiratory viruses existing *alongside* human populations.²⁷⁸ This outcome has also been predicted by the WHO.²⁷⁹

Although immunity to coronaviruses may wane over time, there is little evidence to support the notion that people who have been infected with SARS-CoV-2 are at significant risk of re-infection. Evidence from people infected with SARS-CoV-1 suggests that immunity can last many years.²⁸⁰ Research on SARS-CoV-2 suggests robust and durable immunity^{281 282} and low risk of re-infection.^{283 284 285}

Deaths from COVID-19

One of the most significant features of COVID-19 is the steep age gradient in mortality.^{287 288 289} Early data from March 2020 showed an increased risk of death and serious illness in elderly people with comorbidities,^{290 291} similar to the high-risk population for influenza.²⁹² Most deaths have occurred in this group of people.²⁹³ Data also shows that *children are much less likely* to develop symptoms of COVID-19 and are at low risk of serious harm.²⁹⁴ There is over a 1000-fold difference in risk of death and severe illness between children and elderly people with comorbidities.²⁹⁵

The infection fatality rate (IFR) – the percentage of people infected who will go on to die of the disease – is calculated from serological studies.²⁹⁶ The IFR is important when evaluating the *overall impact* of a disease or pandemic.²⁹⁷

This differs from the case fatality rate (CFR), which is the number of deaths as a percentage of diagnosed cases. The CFR can vary widely during a pandemic because the true level of transmission may be underestimated.²⁹⁸ People with mild infections may go undetected and testing criteria will also change as the need for it evolves through different phases of the crisis. Therefore, the IFR is likely to be lower than the CFR.²⁹⁹

Analysis by Ioannidis, published by the WHO in October 2020, estimated a median IFR of 0.23% for SARS-CoV-2 infection. For people under 70, the median IFR was estimated to be 0.05%.³⁰⁰ For people without significant comorbidities, the IFR is likely to be even lower. A subsequent paper by Ioannidis published in March 2021, suggests an average global IFR of 0.15%,³⁰¹ reflecting a downward trend in IFR as more data becomes available.

The literature does show a *variability* in IFR across locations that can reflect demographic or other regional differences. For example, if an outbreak occurs in an area with a high proportion of institutionalised elderly people, the IFR will be higher due to the increased risk of mortality in this age group. In addition, in some locations the inappropriate management of people with COVID-19, may have resulted in increased mortality.³⁰²

Another consideration is how deaths from COVID-19 are counted. Is COVID-19 the primary cause of *all deaths* counted as COVID-19?^{303 304}

Could the misuse of PCR testing be causing further inflation of the number of deaths? Unfortunately, the data will be hard to untangle, and the picture is likely to be unclear. Some countries, particularly in the West, include *all* deaths with a recent positive PCR result (up to a month prior) as ‘a Covid-19 death’, irrespective of the actual cause. Clearly, this can inflate the death count.^{305 306} This policy has never been followed for *any other infectious disease*.

COVID-19 – a summary of evidential facts

- COVID-19 mortality has a steep age gradient.³⁰⁷
- **Elderly people with underlying medical conditions** such as diabetes, obesity, respiratory or cardiovascular disease, are at the highest risk of severe illness and death.³⁰⁸
- COVID-19 poses **little risk to children** and is less dangerous to them than influenza.^{309 310 311 312} Children also do not appear to be major drivers of transmission.^{313 314 315}
- **Closed, crowded environments**^{316 317} and institutional settings carry a higher risk of infection, particularly healthcare settings, such as hospitals and aged care (nosocomial spread).^{318 319}
- The risk of transmission **increases with sustained, close contact**, therefore transient contacts are less likely to be a risk.³²⁰
- People who are **immunocompromised** are always at greater risk from *any* infection.³²¹
- Some people may develop a **post-viral syndrome** (referred to as ‘long Covid’), which is *not* unique to SARS-CoV-2 and occurs with many other viruses.^{322 323}

For most people, the risk of death from COVID-19 is very low.

Comparisons to the infection fatality rate for influenza are probably correct.³²⁴ The main exceptions are elderly people and people with significant underlying health issues. These are the people for whom focused protection should be offered. As with all public health measures, this decision must be *voluntary and based on the informed consent of the individual*.

People not at risk from COVID-19 can continue life as normal. This enables communities to acquire herd immunity, whilst minimising the exposure of those who are vulnerable.

Protecting the vulnerable and the tragedy of aged care

“Our response to COVID-19 must respect the rights and dignity of older people.”

UNITED NATIONS SECRETARY-GENERAL³²⁵

The risk of death from COVID-19 for elderly people in institutional settings is significantly higher than for those in the community.³²⁶ This sad reality is highlighted by the high numbers of deaths in care homes across many locations (an average of *41% of deaths* at the

time of writing).³²⁷ In some cases, transmission has been aided by staff working at multiple sites.³²⁸ People with COVID-19 were also discharged from hospital to care facilities in the early stages of the pandemic, likely contributing to deadly outbreaks.^{329 330} This outcome is the *antithesis* of ‘focused protection’ which means reducing (not increasing) risks for a vulnerable cohort.

In many care homes, visitors have been banned and residents imprisoned, sometimes for months on end, increasing the risk of infection by quarantining the healthy with the sick, and adding untold anxiety, depression and loneliness to the lives of older people.³³¹ Given the high numbers of deaths in care homes during lockdowns, these strategies clearly have not prevented deaths – they may have made things worse. In some locations, care home residents died in a state of neglect.^{332 333 334}

Policies that quarantine the elderly and cut them off from their loved ones for long periods of time are undoubtedly inhumane and ignore people’s psychosocial needs. The mandatory nature of these policies has taken away the rights of care home residents to *choose what risks they wish to take* and live a full and engaged life.³³⁵

Sadly, the widespread measures taken to ‘protect the elderly’ have resulted in people dying alone, without the comforting presence of their loved ones, stripping them of human dignity and causing immeasurable anguish to their families.³³⁶

Focused protection does not ignore the risks. Policies and procedures in aged care facilities can be developed to *balance* the risk of infection, with the need to *uphold the rights* of residents and their families.³³⁷ The rights of elderly people in the community should also be upheld. They must be supported to shield *if they wish*.³³⁸

The rights of the child in the time of COVID-19

“In all actions concerning children, whether undertaken by public or private social welfare institutions, courts of law, administrative authorities or legislative bodies, the best interests of the child shall be a primary consideration.”

“States Parties recognize the right of every child to a standard of living adequate for the child’s physical, mental, spiritual, moral and social development.”

“States Parties recognize the right of the child to rest and leisure, to engage in play and recreational activities appropriate to the age of the child and to participate freely in cultural life and the arts.”

“States Parties recognize the right of the child to education.”

THE UN CONVENTION ON THE RIGHTS OF THE CHILD)³³⁹

Given the established low risk to children, there has been *no need* for school closures, or for children to be deprived of social connections and activities vital for their wellbeing.

Children and young people have been forced to carry the ongoing burden of the response to COVID-19. The price they have paid across the world includes missing school and university education, social and cultural participation, and contact with loved ones such as grandparents and extended family. They may suffer reduced future employment potential, poverty and an increased likelihood of death or serious disease. It also hardly needs saying that the world's children and young people will *bear the broader economic impact* of 'lockdowns' in the years ahead.

Children from disadvantaged communities are suffering most of all. The predicted increase in child poverty in developing countries – 142 million children in 2020 alone – will have significant long-term consequences.³⁴⁰

Lockdowns and the ongoing global response to COVID-19 contravenes the UN Convention on the Rights of the Child.

Reopening society – a blueprint

“Human dignity should be respected above all.”

PANDA'S PROTOCOL FOR REOPENING SOCIETY³⁴¹

PANDA argues that mandatory lockdowns have no place in any society. They are *failed experiments* that inflict significant suffering upon humanity. Misuse of other NPIs has already caused corresponding harm. Freedom, dignity and human flourishing have been crushed by these measures, worldwide.

PANDA is calling on governments and health authorities to return to existing principles that take a holistic view of health and respect human dignity. Conflicts of interest must be addressed and open scientific debate restored. This will begin the process of re-building societies across the globe.

As highlighted in this paper, in times of crisis, governments and health authorities must provide *reassurance and leadership*, give accurate information, and ensure society, including health systems, can function as normally as possible. Governments should empower citizens with information and resources to take action to maintain their own wellbeing, as well as that of their families and communities. History shows this is the best way to ensure any public health response is *lawful, effective, proportionate, and ethically justifiable*. Most importantly, this approach ensures that fundamental human rights are upheld, and *human dignity is respected above all*.

This is the heart of PANDA's Protocol for Reopening Society.

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