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# HAI AP News

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HAI AP Est. 1981

Health Action International (HAI) was formally founded in Geneva in 1981 and coordinated from Penang by Action for Rational Use of Drugs in Asia (ARDA). In 1995 Health Action International Asia Pacific (HAI AP) was formed as a collaborative network in the Asia Pacific Region to increase access to essential medicines and improve their rational use through research excellence and evidence-based advocacy. HAI AP is committed to strive for health for all now. *HAI AP News* is the organ of Health Action International – Asia Pacific and presents happenings in the region..

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In this issue we pay tribute to Lakshmi Menon who passed away on the morning of 5<sup>th</sup> August 2020 at the age of 67. She was among the most outstanding documentalists and activists involved in feminist, health and consumer movements. Lakshmi prepared the classic *Healthy Documents* for the first Peoples Health Assembly.

The world remains in the grip of the Covid-19 pandemic. Ellen 't Hoen examines the Intellectual Property issues relevant to the management of Covid-19 that can have an impact on affordability and access to technologies and medicines. She explains why the TRIPS flexibilities are no longer enough to ensure access.

There has been significant interest in Sweden's approach to the pandemic – a gamble for herd immunity. Sweden is not in our region but we feel it is worth sharing some analysis of their strategy.

There is continuous hype about silver bullets – vaccines and treatment. There are trials of vaccines and treatments with varying credibility in hundreds of settings – but in reality there is no silver bullet to control Covid-19. Updates on the processes to find a vaccine and possible treatment are included.

There are three major features in this issue: 1. A detailed analysis of the progress of vaccine development; 2. Kerala: Dr B Ekbal leads us through the state's response and describes the structures that have been put in place in collaboration with the whole of society to manage the pandemic - without neglecting the other non-covid problems like non communicable diseases and other problems associated with an ageing population. He concludes that Kerala is not the only place in India to achieve a positive outcome. For example, the Dharavi community in Mumbai, the biggest slum community in India, provides an inspiring example; and 3. The Mekong countries have also done well and we look at how it was done in Vietnam, Thailand, Lao PDR and Cambodia.

The April HAIAP News covered the success story in New Zealand that took the country to a situation with no new cases of Covid-19. Prime Minister Jacinda Ardern had warned that 'perfection' in response to the Covid-19 pandemic 'is just not possible' as she urged New Zealanders against complacency and laid out her government's plans for future outbreaks. We look at the new challenge and New Zealand's response that began on August 11.

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## Vale Lakshmi Menon



Lakshmi Menon, a most outstanding documentalist and activist involved in feminist, health and consumer movements, passed away on the morning of 5<sup>th</sup> August 2020 at the age of 67.

She prepared the classic

**Healthy Documents** for the first Peoples Health Assembly.

Lakshmi was a trained librarian and had been involved in documentation of development issues for over 40 years. She pioneered a classification system with a feminist perspective and assisted many civil society groups in appropriate information management. With information dissemination as her commitment, she compiled and edited several publications on a wide range of development issues. Among them are, *Understanding Urbanisation: a Sourcebook* (Bombay/KL: YUVA/AP2000-UNDP, 1998), *Assessing Gender Training: a Report and Handbook* (Kuala Lumpur: APDC, 2000), *Healthy Documents: a Sourcebook of important documents and instruments that impact on peoples' health* (Penang: WABA/People's Health Movement, 2001), *The Breastfeeding Movement: a Sourcebook* (Penang: WABA, 2003), *Consumer Power, Anywhere, Anytime, Anyone* by Anwar Fazal (Penang: Neo Sentuhan/Right Livelihood College 2011).

Her most recent publication was

<https://rlc-blog.org/wp-content/uploads/2018/07/The-Right-Livelihood-Way-A-Sourcebook-for-Changemakers-240418.pdf>

A great life lived well for others locally and globally. Lakshmi was based in Mumbai, India.

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## Intellectual Property and public interest in the context of Covid-19

*Ellen 't Hoen examines issues that can have an impact on affordability and access to technologies relevant to the management of Covid-19.*

July 29, 2020

The search for new treatments and vaccines needed to respond to the Covid-19 outbreak has laid bare some key issues around intellectual property (IP) and the public interest. The WHO has responded with the launch of a Covid-19 Technology Access Pool on 29 May to share IP, knowledge, know-how, technology and

data needed in developing and producing therapeutics vaccines and diagnostic tools.<sup>1</sup>

The discussion on the sharing of key technologies needed during the pandemic is now also being taken up by the World Trade Organization (WTO).

South-Africa put the discussion on the agenda of the 30 July Trade-Related Aspects of Intellectual Property Rights (TRIPS) Council (the WTO body governing IP norms agreed to by member states) with a Communication titled *Intellectual Property and the Public Interest: Beyond Access to Medicines and Medical Technologies - Towards a More Holistic Approach To TRIPS Flexibilities*.<sup>2</sup>

It would serve the public interest to share globally new knowledge and tools being developed to respond to Covid-19, but the emerging vaccine nationalism and commercialism of the last months shows a trend away from the lofty promises of solidarity expressed during the early days of the pandemic, towards a world where each country is fighting for its own interests.

Already, there have been a number of IP disputes around medical technologies needed for Covid-19 and some countries have sharpened their patent laws to enable swift use of compulsory licensing should it be necessary to ensure access to Covid-19 related technologies.<sup>3</sup>

Since the HIV and AIDS pandemic of the nineties, compulsory licensing and government use of medicines patents have been recognised and deployed to access lower-priced treatments needed to fight against disease. For a detailed overview of the use of these 'TRIPS flexibilities', see our TRIPS Flexibilities Database.<sup>4</sup>

But in the context of Covid-19 technologies, the classic TRIPS Flexibilities alone will not do the trick.

South Africa proposed at the TRIPS Council a more holistic approach to the use of TRIPS flexibilities for various technologies; and various forms of IP beyond patents, including industrial designs, copyrights and trade secrets. The submission mentions technologies to help detect, diagnose and trace people infected with the virus, protective equipment, smartphone technologies, software (e.g. needed for 3-D printing), artificial intelligence algorithms, data and databases. The country argues that TRIPS flexibilities should expand to

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<sup>1</sup> <<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/global-research-on-novel-coronavirus-2019-ncov/Covid-19-technology-access-pool>>

<sup>2</sup> <<https://www.keionline.org/wp-content/uploads/W666.pdf>>

<sup>3</sup> <<https://medicineslawandpolicy.org/2020/03/Covid-19-and-the-come-back-of-compulsory-licensing/>>

<sup>4</sup> <<http://tripsflexibilities.medicineslawandpolicy.org/>>

those areas but also recognises that the use of flexibilities for many developing countries remains a challenge.

The South African Communication invites WTO members to address the following questions:

- To what extent are TRIPS flexibilities embedded in areas outside patent protection well understood? How are Members implementing such understandings in their national and regional laws?
- What are the likely difficulties that Members may face in dealing with a changing technology landscape where embedded IP rights may affect the dichotomy between IP rights as private rights and the public interest dimensions recognised in the TRIPS Agreement?
- What are the benefits and limitations of initiatives such as voluntary licences and pledges to access much needed technology to deal with the Covid-19 pandemic?
- Are there circumstances where trade secrets can be shared more broadly? If so, what are those circumstances? Would national or international health pandemics fall within this category?

Thiru Balasubramaniam from Knowledge Ecology International, a group that closely monitors developments at the TRIPS Council, explains why he was expecting heated debates.<sup>5</sup>

He said, 'The South African proposal endeavours to lift the veil of secrecy that inhibits deep technology transfer. South Africa has identified trade secrets as crucial in enabling the production of vaccines and medicines. Broaching the question at the WTO TRIPS Council on whether exigent circumstances, including the current Covid-19 pandemic, would permit the sharing of trade secrets broadly, I would expect a heated debate at the WTO over whether current trade rules are fit-for-purpose in the Covid-19 response.'

In the face of companies increasingly making explicit plans to profit from the pandemic and growing vaccine nationalism, in particular by wealthy nations, the call for a binding agreement to 'free the vaccine' sound louder and louder.<sup>6</sup>

The former prime minister of New Zealand, Helen Clark and UNAIDS executive director Winnie Byanyima called for a monopoly-free vaccine and an effective WHO Covid-19 Technology Pool with plans for equitable distribution.

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<sup>5</sup> <<https://www.keionline.org/33551>>

<sup>6</sup> <<https://www.ft.com/content/405c0d07-d15a-4f5b-8a77-3c2fbd5d4c1c?shareType=nongift>>

<<https://www.theguardian.com/commentisfree/2020/jul/23/world-needs-coronavirus-vaccine-big-pharma-monopoly-astrazeneca-patent-pandemic>>

Law professors Frederic Abbott and Jerome Reichman propose that countries establish large scale compulsory licensing facilities to share IP related to Covid-19 health technologies.<sup>7</sup>

They explain that such licensing facilities would be compliant with both TRIPS article 31 (compulsory licensing) and article 73 (national security exception). They acknowledge that the licensing facilities they propose may run into obstacles caused by the opt-out of TRIPS Article 31bis as an importer by a number of high-income countries and they propose various avenues for them to 'opt back in'.

We have addressed the Article 31 bis opt-out issue in a briefing note.<sup>8</sup>

An impressive group of Nobel laureates, former presidents and prime ministers and various leaders in society call for legal measures to make Covid-19 vaccines Global Common Goods.<sup>9</sup>

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## The SOLIDARITY trials

From Kirsten Myhr – E-Drug

We have been overwhelmed by information on what works to 'treat' Covid-19. Some research is getting less attention even if it aims to collect enough data to draw conclusions. One of them is the WHO supported Solidarity trial:

<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/global-research-on-novel-coronavirus-2019-ncov/solidarity-clinical-trial-for-Covid-19-treatments>

It was launched by the WHO Director-General at the media briefing on Covid-19 on 18 March 2020 as mentioned the HAIAP News April 2020.

'Solidarity' was launched by the World Health Organization and partners as an international clinical trial to help find an effective treatment for Covid-19.

### Rationale for the Solidarity trial

The pressure Covid-19 puts on health systems led to the WHO understanding the need for speed and scale in the trial. While randomized clinical trials normally take years to design and conduct, the Solidarity Trial would reduce the time taken by 80%. Enrolling patients in one single randomized trial would help facilitate the rapid worldwide comparison of unproven treatments and would overcome the risk of multiple small trials not generating the strong evidence needed to determine the relative effectiveness of potential treatments.

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<sup>7</sup>

<[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3656725](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3656725)>

<sup>8</sup> <<https://medicineslawandpolicy.org/2020/04/never-say-never-why-the-high-income-countries-that-opted-out-from-the-art-31bis-wto-trips-system-must-urgently-reconsider-their-decision-in-the-face-of-the-Covid-19-pandemic/>>.

<sup>9</sup> <https://www.vaccinecommongood.org>

The Solidarity Trial started out in five parts looking at possible treatment approaches to Covid-19: standard care; remdesivir; hydroxychloroquine; the HIV drugs lopinavir/ritonavir; and lopinavir/ritonavir combined with interferon.

By enrolling patients in multiple countries, the Solidarity Trial aimed to rapidly discover whether any of the drugs slow disease progression or improve survival. Until there is sufficient evidence, WHO cautions against physicians and medical associations recommending or administering these unproven treatments to patients with Covid-19 or people self-medicating with them. WHO was concerned by reports of individuals self-medicating with chloroquine and causing themselves serious harm.

### **Participation in Solidarity**

As of 1 July 2020, nearly 5500 patients were recruited in 21 countries among the 39 countries that have approvals to begin recruiting. Overall, over 100 countries in all six WHO regions have joined or expressed an interest in joining the trial, and WHO is actively supporting them with:

- ethical and regulatory approvals of the WHO core protocol;
- identification of hospitals participating in the trial;
- training of hospital clinicians on the web-based randomization and data system;
- shipping the trial drugs as requested by each participating country.

**The interim trial results showed that hydroxyl-chloroquine and lopinavir/ritonavir produce little or no reduction in the mortality of hospitalized Covid-19 patients when compared to standard of care. Solidarity trial investigators interrupted the trials with immediate effect.**

**On 4 July 2020, WHO accepted the recommendation from the Solidarity Trial's International Steering Committee to discontinue the trial's hydroxyl-chloroquine and lopinavir/ritonavir arms.**

For each of the drugs, the interim results did not provide solid evidence of increased mortality. There were, however, some associated safety signals in the clinical laboratory findings of the add-on Discovery trial, a participant in the Solidarity trial. These will also be reported in the peer-reviewed publication.

Remaining arms in the Solidarity trial currently include treatment with remdesivir and lopinavir/ritonavir with interferon beta-1a.

The interim Solidarity results are now being prepared for peer-reviewed publication within the next weeks.

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### **Sweden:**

#### ***a gamble for herd immunity. Was it worth it?***

By Australian Broadcasting Corporation Europe – August 20, 2020  
Correspondent Bridget Brennan <https://tinyurl.com/y5u9gjhg>

Sweden's coronavirus suppression strategy was an experiment that few other nations dared champion. Instead of mandated curfews and shutdowns, Sweden chose to keep most schools and businesses open throughout the Covid-19 outbreak with the idea that a herd immunity would develop..

But the model has come under fire. Sweden's death rate is among the worst in the world. More than 5,700 Swedes have died since the start of the year and health authorities have since acknowledged there were clear failings in the preparedness of aged-care homes, just as we're seeing in Australia.<sup>10</sup> The Swedish Government has ordered an inquiry into what went wrong in aged care homes, where thousands died after being exposed to Covid-19.

Sweden has been the pariah in Scandinavia but the Government did put some restrictions in place. Large gatherings were banned and Swedes were asked to avoid non-essential travel, work from home, and to isolate if they were unwell.

Professor Joachim Dillner, Professor of Infectious Disease Epidemiology at Stockholm's Karolinska Institute says within the scientific community there is 'fierce debate' over the strategy. Prioritised testing of people who are sick, and not widespread screening of healthcare workers, was a mistake in his view. 'There was no screening of the healthcare workers in homes for the elderly, and I think at least in the scientific community, we're upset about that,' he said. 'We feel that when the WHO said 'test, test and test again' — we should have done that.'

Officials were relying on common sense of citizens. It was estimated that by rejecting tougher measures, 40 per cent of Stockholm's population would have achieved herd immunity by May. Now, some studies suggest that never materialised. British researcher Professor David Goldsmith said they would argue that it's okay and they seem quite pleased with their response. He said. 'They've had a death rate that's 10 times per million population of the local countries, which really are their best comparison.' He said antibodies weren't found in high rates in asymptomatic patients, meaning they're not likely to be immune. 'I think they've got to ask themselves: was that really the right way to go?' 'Particularly if there isn't herd immunity, which I don't think there will be.'

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<sup>10</sup> <https://www.abc.net.au/news/2020-08-08/covid-19-highlights-the-urgent-need-for-aged-care-reform/12534730>



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## Feature 1: Will there be a Covid-19 Vaccine soon?

Compiled by Beverley Snell and Prof. Krisantha Weerasuriya with reference to acknowledged sources.

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The World Health Organization has warned that, despite strong hopes for a vaccine, there might never be a 'silver bullet' for Covid-19. There is no silver bullet at the moment — and there might never be.

There are concerns that there might not be a vaccine that will work, or its protection could be for just a few months, not more.

However WHO director-general Tedros Adhanom Ghebreyesus said 'A number of vaccines are now in Phase III clinical trials (Healthy normal volunteers being tested for efficacy) and we all hope to have a number of effective vaccines that can help prevent people from infection'.

### Universal access

Seventy-five countries have submitted expressions of interest to protect their populations and those of other nations through joining the COVAX Facility, a mechanism designed to guarantee rapid, fair and equitable access to Covid-19 vaccines worldwide. On July 15, 2020 COVAX was set up under the umbrella of GAVI and was seen by Dr Seth Berkley, CEO of Gavi, as 'the only truly global solution to the Covid-19 pandemic'.<sup>11</sup>

Dr Berkley said 'For the vast majority of countries, whether they can afford to pay for their own vaccine doses or require assistance, it means receiving a guaranteed share of doses and avoiding being pushed to the back of the queue, as we saw during the H1N1 pandemic a decade ago'.<sup>12</sup>

Although trials are very preliminary, USA, UK and groups of EU countries are manoeuvring themselves to the front of the queue by placing advanced orders for vaccines that do not yet exist. While the European Parliament strongly backs the call for equitable access to Covid-19 vaccines, the International Federation of Pharmaceutical Manufacturers Associations and many pharma executives are opposed to this equitable access. On July 22, when there was good news about a Covid-19 vaccine being developed by Oxford University, what did not get a lot of publicity was that the US has invested more than a billion dollars in the Oxford

vaccine in return for 300 million doses of the first production run. Europe had booked another 400 million doses and the German Merkel Government spent 300 million Euros on a stake in CureVac, the German company which also has a promising vaccine. Dr Seth Berkley explained that if these countries now form engagements and if they start bidding against each other, it will drive up the price.

He said that 'The goal of the Covax facility is to have two billion doses by the end of 2021. We expect that 950 million, if we get to that number, will go to high income countries, 950 million to low income countries, and then about 100 million doses will be kept aside for humanitarian situations and active outbreaks that need response from the international community.'

He also said 'We will need to make sure there are adequate, for example, glass vials. We need certain types of glass vials and stoppers and syringes and cold chain and for some of the vaccines, specialised delivery systems. And if you have a lot of bilateral deals you may tie up the suppliers for this and not have adequate supplies for the global process'.

'Our belief is the best way to control this pandemic is to try to vaccinate about 20 per cent of the world's population -- not to vaccinate 100 per cent of a few countries and to leave the rest of the world with no vaccine because then you'll continue to see outbreaks of disease and the virus moving around'.<sup>13</sup>

While the race for a vaccine speeds up, Big Pharma are resisting calls for suspending patent rights to ensure that treatments and vaccines are freely available to everyone in the world while signing lucrative contracts to provide expected vaccines to the US. The international community has come together to propose equitable access to any approved vaccine that becomes available.<sup>14</sup>

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<sup>13</sup> <https://www.abc.net.au/7.30/dr-norman-swan-looks-at-what-happens-when-a-covid/12482642>

<sup>14</sup> <https://msfaccess.org/Covid-19-vaccine-6-recommendations-equitable-access>  
<https://www.who.int/news-room/detail/15-07-2020-more-than-150-countries-engaged-in-Covid-19-vaccine-global-access-facility>  
<https://www.afro.who.int/news/who-calls-equitable-access-future-Covid-19-vaccines-africa>

<sup>11</sup> <https://www.gavi.org/>

<sup>12</sup> <https://www.who.int/news-room/detail/15-07-2020-more-than-150-countries-engaged-in-Covid-19-vaccine-global-access-facility>

In the words of President Macron 'no one can own this vaccine'. Echoing Jonas Salk's response when he was asked the question who owns the patent on his polio vaccine – 'well the people'. Can you patent the sun? Salk put his words into action to ensure that no-one indeed could own his vaccine and to ensure that it could be made available and used at low cost across the globe.

### Process of vaccine development

This would be a good opportunity to delineate the two types of medicines/vaccines development. The first is the 'health based product development' and the second is the 'business based product development'.

The polio vaccine was a very good example of the first – it resulted in the near eradication of polio. No 'business based vaccine' has had that success. The tussle in the Covid vaccine between a health based and business based is clear. While logic and health are clearly the important criteria, the 'power of profit' seems to be the undercurrent that can undermine the first priorities.

### Challenges to be addressed in the development of an effective vaccine

For a vaccine to be developed, elements that promote immunity in the blood need to be available and need to be able to promote sustained immunity in the form of a vaccine. Covid-19 Antibodies have been shown to dwindle in the blood following infection. However it has been found that T cells and spike proteins that are produced independently of antibodies could be capable of producing sustainable immunity.

As most promising candidate vaccines advance, practical realities will require a process that focuses global efforts on a small handful of candidates that may have the highest impact.

More than 160 vaccine candidates are now in development, with more than 21 candidates in Phase 1, Phase 2 or Phase 3 human clinical trials.

### Dwindling antibodies

With Covid-19 antibodies tending to dwindle after infection and no clarity how long the antibodies will protect those who have been infected from a repeat infection, or how long a vaccine prepared from antibodies might be effective,<sup>15</sup> it is crucial to explore other elements of the immune response that can help protect from further infection – T cells and spike proteins. T cells induce robust memory responses in antibody-

seronegative and antibody-seropositive individuals – even with asymptomatic or mild Covid-19.<sup>16</sup>

Marcus Buggart *et al* explained how spike proteins and T cells have an impact on possible follow-up immunity in convalescent individuals with asymptomatic or mild Covid-19.<sup>17</sup>

**Abstract:** SARS-CoV-2-specific memory T cells will likely prove critical for long-term immune protection against Covid-19. We systematically mapped the functional and phenotypic landscape of SARS-CoV-2-specific T cell responses in a large cohort of unexposed individuals as well as exposed family members and individuals with acute or convalescent Covid-19. Acute phase SARS-CoV-2-specific T cells displayed a highly activated cytotoxic phenotype that correlated with various clinical markers of disease severity, whereas convalescent phase SARS-CoV-2-specific T cells were polyfunctional and displayed a stem-like memory phenotype. Importantly, SARS-CoV2-specific T cells were detectable in antibody-seronegative family members and individuals with a history of asymptomatic or mild Covid-19. Our collective dataset shows that SARS-CoV-2 elicits robust memory T cell responses akin to those observed in the context of successful vaccines, suggesting that natural exposure or infection may prevent recurrent episodes of severe Covid-19 also in seronegative individuals.

### Nanobodies from Llamas

With the major immediate priority being development of selective antibodies that can neutralise the SARS-CoV-2 virus responsible for Covid-19, another new advance is the recent development of 'nanobody technology'. Based on antibodies isolated from llamas, researchers have engineered an antibody that prevented SARS-CoV-2, the virus that causes Covid-19, from entering cells in laboratory experiments.<sup>18</sup>

Nanobodies are smaller, more stable types of antibody taken from the immune systems of camelid species – such as llamas, alpacas and camels – that could be more effective at fighting disease. A recent report confirmed that llama nanobodies could neutralise the SARS and MERS viruses and could also be engineered to fight SARS-CoV-2.

Since 2015, the University of Reading has collaborated with several academic and industry partners, including

<sup>16</sup> <https://www.nytimes.com/2020/08/06/health/coronavirus-immune-cells.html>

<sup>17</sup> <https://www.nih.gov/news-events/nih-research-matters/llama-antibody-engineered-block-coronavirus>

<sup>18</sup> <https://www.biorxiv.org/content/10.1101/2020.06.29.174888v1.full.pdf>

<sup>15</sup> Doores et al  
<https://www.medrxiv.org/content/10.1101/2020.07.09.20148429v1>

those at the University of Oxford to generate specialised nanobodies from llamas. The aim was to generate llama nanobodies that bind to proteins in the SARS-CoV-2 virus. These proteins include the 'spike' glycoprotein that enables the virus to enter human cells, so these nanobodies could help neutralise it.<sup>19</sup>

Professor James Naismith, Professor of Structural Biology at Oxford University and Director of The Rosalind Franklin Institute, said, 'These nanobodies have the potential to be used in a similar way to convalescent serum, effectively stopping progression of the virus in patients who are ill. We were able to combine one of the nanobodies with a human antibody and show the combination was even more powerful than either alone'.

### **Oxford vaccine**<sup>20</sup>

On July 20, 2020, the Jenner institute at the University of Oxford published in *The Lancet* early results from their clinical trial of the vaccine designed by the University of Oxford and developed in partnership with AstraZeneca. The preliminary data shows that it is safe and induced a strong antibody response in all vaccinated volunteers, suggesting that an effective vaccine could be within reach.<sup>21</sup>

The Oxford team feels that the early results of Phase 1 and 2 trials from the Jenner Institute in collaboration with investigators supported by CanSino Biologics in Wuhan, China were very encouraging.

Both groups used an adenoviral vector, and both report the vaccine achieving humoral responses to the SARS-CoV-2 spike glycoprotein receptor binding domain by day 28 as well as T-cell responses. Both report local and systemic mild adverse events such as fever, fatigue, and injection site pain. In neither trial was a severe adverse event reported.

### **General speculative comments**

The infectious diseases that have been eliminated or controlled (polio, measles, rubella) through vaccines have been through a very definite and clear beginning and a similarly definite and clear ending, but the middle (immune reaction) is not clearly known. Similarly, a Covid-19 vaccine has a clear **theoretical** beginning (an

effective vaccine) and a similar ending (eradication or elimination of Covid-19).

The journey for the previous vaccines did not have the pressure for an immediate result and had the luxury of long clinical trials to prove their efficacy. The middle (process of immune reaction), though scientifically important was not critical, so long as efficacy was proven.

The Covid-19 vaccine by its urgency may need to discover more of the middle. Proving efficacy quickly also raises the issue of whether a 'challenge' could be used. Could healthy normal volunteers be given the vaccine and then exposed under very careful strictly controlled conditions to a small infective dose of the Covid-19 virus? This is an important ethical question that is being raised and may need to be answered.

From *The Lancet*<sup>22</sup>

The safety signals from these two important Oxford trials are reassuring. But when things are urgent, we must proceed cautiously. The success of Covid-19 vaccines hinges on community trust in vaccine sciences, which requires comprehensive and transparent evaluation of risk and honest communication of potential harms. Hand in hand with the trajectory of vaccine study, pharmacovigilance infrastructure is urgently needed, including surveillance for asymptomatic infection among vaccinated and unvaccinated persons if both absolute and relative risk of adverse vaccine outcomes, such as enhanced disease, are to be determined.<sup>9</sup> These should be implemented in parallel with phase 3 trials and in preparation for phase 4 roll-out. Such infrastructure will be needed across a wide range of populations and settings, and for the spectrum of upcoming Covid-19 vaccines. Equitable distribution of future Covid-19 vaccines also requires detailed evaluation of local country needs and priorities, community engagement, and trust. Global planning is underway, but should be underpinned and informed by specific local realities. Only this way can these very encouraging first early phase randomised trial results yield the global remedy for which we all yearn.

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<sup>19</sup> <https://theconversation.com/coronavirus-why-were-using-llamas-to-help-fight-the-pandemic-139070>

<sup>20</sup> <https://www.ox.ac.uk/news/2020-07-13-engineered-llama-antibodies-neutralise-Covid-19-virus>

<sup>21</sup> [https://doi.org/10.1016/S0140-6736\(20\)31611-1](https://doi.org/10.1016/S0140-6736(20)31611-1)

<https://www.ovg.ox.ac.uk/news/new-study-reveals-oxford-coronavirus-vaccine-produces-strong-immune-response>

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<sup>22</sup> [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)31611-1/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31611-1/fulltext)

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## Russia approves 'Sputnik V' coronavirus vaccine

From ABC health reporter Paige Cockburn August 13<sup>23</sup>, and Al Jazeera, August 13.<sup>24</sup>

The Russian vaccine has not passed the Phase 3 clinical trials but Health Minister Mikhail Murashko has said clinical trials involving several thousand participants will follow.<sup>24)</sup>

'The rushed approval of *Sputnik V* is all about nationalism' said immunologist Jose Villadangos, from the University of Melbourne. 'Reckless is the mildest word you can use for the decision of the Russian authorities.'

According to the Al Jazeera report 'Sputnik V' is a vaccine developed by the Gamaleya research institute in coordination with the Russian defence ministry - based on a proven vaccine against adenovirus - the common cold. It is expected to provide immunity from SARS-CoV-2 for up to two years, according to the Russian health ministry. But the results of the limited trials have yet to be made public.

It is administered in two doses each carrying an S-antigen of the new coronavirus, which enter human cells to produce an immune response.

### Why phase 3 matters

Once a promising vaccine is developed, there are hurdles it must clear before it can be rolled out. These are:

**Preclinical:** Testing in animals. Does the vaccine produce antibodies, does it protect against illness, what dose is necessary?

**Phase 1:** Testing in a small number of humans. This phase is about making sure the vaccine is safe.

**Phase 2:** More testing in humans — does the vaccine work?

**Phase 3:** Testing in a larger number of humans to confirm its effectiveness and safety.

Then, after it has been rolled out:

**Phase 4:** Ongoing surveillance to make sure it's safe and doesn't have long-term adverse effects.

'Without phase 3, they just cannot have any awareness of the potential pitfalls and determine who should get the vaccine and who shouldn't,' said Damian Purcell, laboratory head at the Doherty Institute in Melbourne.

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<sup>23</sup> <https://www.abc.net.au/news/2020-08-13/australian-experts-react-to-sputnik-vaccine-news-reckless/12552028>

<sup>24</sup> <https://www.aljazeera.com/news/2020/08/sputnik-russia-coronavirus-vaccine-200813070859021.html>

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## AstraZeneca Vaccines Liability Clause removal

<https://www.insurancejournal.com/news/international/2020/08/03/577696.htm> Reporting by Ludwig Burger and Pushkala Aripaka August 3, 2020

AstraZeneca has been granted protection from future product liability claims related to its Covid-19 vaccine candidate by most of the countries with which it has struck supply agreements, a senior executive told Reuters.

With 25 companies testing their vaccine candidates on humans and getting ready to immunize millions of people once the products are shown to work, the question of who pays for any claims for damages in case of side effects has been a tricky point.

'This is a unique situation where we as a company simply cannot take the risk if in ... four years the vaccine is showing side effects,' Ruud Dobber, a member of Astra's senior executive team, told Reuters. 'In the contracts we have in place, we are asking for indemnification. For most countries it is acceptable to take that risk on their shoulders because it is in their national interest,' he said, adding that Astra and regulators were making safety and tolerability a top priority. EU officials told Reuters that product liability was among contentious points in European efforts to secure supply deals for potential Covid-19 vaccines from Pfizer, Sanofi and Johnson & Johnson.

The United States, however, already has a law to exclude *tort claims*<sup>25</sup> from products that help control a public-health crises in the form of the 2005 Public Readiness and Emergency Preparedness, or PREP Act.

AstraZeneca, Britain's second-largest drugmaker, has pledged to supply a total of more than 2 billion doses at no profit in agreements with the United States, Britain and European countries, among other nations and organizations.

Astra's deals differ from most rivals because it has secured government backing for production and development efforts, while competitors such as GlaxoSmithKline are looking to negotiate a price for a finished product, contingent on approval. To back its claim to forgo profits from the \$1.2 billion collaboration in the USA, Astra has even granted the government access to financial accounts related to the venture, according to Dobber. 'Because we made the promise to manufacture the vaccine at no profit, auditors of the U.S. administration will get free access to our accounting books,' he said. [Could they not include this offer when they quote the price of developing a drug and therefore the very high profits they make? Ed.]

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<sup>25</sup> criminal wrongs that are punishable by the state



## Feature 2. Kerala:

### *How this southern state of India has responded to the challenges of the Covid-19 pandemic*

Prepared in collaboration with Dr B Ekbal, Neurosurgeon, Academic and long time HAIAP member, a member of the Kerala State Planning Board since 2016 and currently chairperson, Expert Committee on Covid-19 Management, Kerala

**Kerala timeline – This detailed timeline from the first case in January to the present is well worth a look.**

<https://www.onmanorama.com/news/kerala/2020/05/06/Covid-19-timeline-kerala-india-coronavirus-chronology-important-dates.html>

The beginning of Kerala's response to the CVoid-19 pandemic was described in HAIAP News April 2020 <sup>26</sup>



### **Covid-19 in Kerala**

Kerala's success in containing Covid-19 has been widely praised both nationally and internationally, even though, to make things more difficult for Kerala, the state has been discriminated against by the central government's disaster relief

fund on specious grounds. The largely agricultural state has only modest fiscal resources of its own.

As explained in the April edition of HAIAP News Kerala's early cases from February were due to the return of Keralite workers from other states of India and from other countries. In June things started to change. It had taken 110 days to report Kerala's first thousand cases but in mid-July, it was reporting around 800 infections a day.

By July the state government said the virus was locally transmitting through coastal communities. As of 20 July, Kerala's caseload had crossed 12,000, with 43 reported deaths. More than 170,000 people were in quarantine, at home and in hospitals.

The easing of the lockdown down led to many people moving out of their homes and not taking enough precautions. 'Some amount of laxity was expected as people have begun going out to work in most areas. We are trying to motivate them to be safe,' Dr Ekbal told the BBC on July 21. <sup>27 28</sup>

One reason for the sharp increase was that nearly half a million workers returned to the state from the Gulf countries and from hot spots in other countries, as well as from other parts of India after the grinding countrywide lockdown that had shut businesses and threw people out of their jobs.

The influx could have sparked the surge in local community transmission evident since early May. Reported cases without any travel history were increasing.

Kerala has the best health indices among the States of India, reflecting the pro-public health attitude of the present and previous state governments. <sup>29</sup> However, with its high density of population, high percentage of the 60-plus population <sup>30</sup> and a large number of people with comorbidities Kerala could be is among the riskiest states in India when it comes to Covid-19. So the fight had to be extra aggressive. Kerala's Chief Minister said 'We prevented the Nipah outbreak after a month-long effort. We will defeat this,'

After recording its first Covid-19 case on January 30, infection and death rates were kept relatively low through active tracing, testing and appropriate care of positive cases.

In mid-July, Kerala was reporting around 800 infections a day. As of 20 July, Kerala's caseload had crossed 12,000, with 43 reported deaths. More than 170,000 people were in quarantine, at home and in hospitals.

### **Three types of quarantine**

- 1. Preventive quarantine:** Suspected contacts must be isolated and tested periodically – at home or in appropriate arranged accommodation - for 14 days - to protect the community at large in the case they become positive
- 2. Protective quarantine:** Vulnerable people such as frail older people and those with serious comorbidities are those that are likely to die if they become infected. These people should stay at home or in specially prepared social quarantine. Their medical and social needs need to be taken care of appropriately.
- 3. Reverse Quarantine.** People who have tested positive must be completely isolated from the rest of the community and cared for as needed in isolation until they have tested negative.

<sup>26</sup> <http://www.haiasiapacific.org/wp-content/uploads/2020/04/HAIAPNewsApril2020.pdf>

<sup>27</sup> <https://www.bbc.com/news/world-asia-india-53431672>

<sup>29</sup> <https://www.indiatoday.in/india/story/niti-aayog-health-index-list-states-union-territories-kerala-tops-1556163-2019-06-26>

<sup>30</sup> Ironically, an outcome of a good healthcare system! Ed.

Kerala's fight can be divided into four phases.

### Four Phases

**1<sup>st</sup> Phase:** Vigilance but no cases.

**2<sup>nd</sup> Phase:** Sporadic cases which means people who have travel history will spread the disease

**3<sup>rd</sup> Phase:** Spread of the disease centred in some areas or regions called clusters.

**4<sup>th</sup> Phase:** Community Transmission. Testing needs to increase to identify asymptomatic cases

**Phase 1** began in January with the return from China of a medical student who was Covid positive and then several others; and the state reported the country's first set of cases.

'We had our war room ready under the Chief Minister. Quarantine cells were set up in all district hospitals and rapid response teams in all districts were activated through the PHC system as early as January, while for other states, Covid-19 was something that was happening in far away China. That phase of early preparation was a game changer'. The **Break the Chain** campaign was launched in March with emphasis on hand hygiene.

**Phase 2:** The lockdown phase began on March 23—the system was very much in place and it was running effectively. Lockdown was imposed to ensure social distancing. Public transport vehicles would be off the roads; only shops selling essential supplies were open 7 am – 5 pm and there was no unnecessary crowding in public places. Quarantine was observed as dictated with movements tracked by the mobile phone network.

All entry points to the state were sealed, but movement of goods was not hampered. All those entering from other states were to go for a mandatory 14 days' home quarantine. The restrictions were modified, tightened or extended as needed in selected areas and then gradually lifted where the situation seemed to be more controlled.<sup>31</sup>

**Phase 3.** The third phase began on May 4 — the post lockdown phase. The situation became more serious with new arrivals from other states and from hot spots in other continents. Dr Ekbal explained that the third phase was is going to be very very tough. **Community transmission** was seen to be occurring and 72 clusters

had been identified. But with past experiences and with a proper system in place, he believed Kerala would be able to overcome that phase too.

**Phase 4.** With community transmission occurring, testing had to be increased to maximum to identify and isolate positive people. With more tests there are higher chances of identifying and isolating clusters effectively. Without increasing tests, asymptomatic patients cannot be identified. When tests are fewer, asymptomatic patients are missed and the chances for community transmission higher. Since the second week in July Kerala increased the number of tests from 3000 to 5000 tests per day to 20,000 to 25,000.

**Kerala is also a cautionary tale against premature media declarations about the flattening of the curve,**

which involves reducing the number of new cases from one day to the next.

Most epidemiologists believe Kerala has done a good job on the whole. The state boasts India's most robust public health system. The government has rolled out first line Covid-19 treatment centres with oxygen-equipped beds in hundreds of villages. The case fatality rate - the

proportion of people who die among those who have tested positive for the disease - is one of the lowest in India. The hospitals are not yet overwhelmed by a surge of patients.

### Features of the response

#### **Credible leadership**

The Kerala government has set up 18 committees and holds daily evening meetings to evaluate the situation, and to issue media updates about those quarantined, tested and hospitalized .

At these meetings, the state Health Minister and Chief Minister calmly explain what is going on, including what the government is doing. They thus provide credible leadership on the difficult issues involved, securing strong public participation for its mass campaign of containment.

#### **Guidelines, Manuals and Protocols**

To guide the ongoing response to the pandemic, the Health and Family Welfare Department of the Government of Kerala has prepared and made available Guidelines and protocols to assist in management of all aspects of the Covid-19 pandemic as well as other disasters that they have to deal with concurrently: major floods and the crash of an aircraft. These documents are continually updated to be relevant to the current situation.



<sup>31</sup>

[http://timesofindia.indiatimes.com/articleshow/74778886.cms?utm\\_source=contentofinterest&utm\\_medium=text&utm\\_campaign=cptst](http://timesofindia.indiatimes.com/articleshow/74778886.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cptst)

Examples are

*July 14:* Guidelines for Sentinel Surveillance in Coastal, Slum and Tribal areas

*July 28:* Dedicated Management Structure for coordinating Admission, Referrals and Inpatient Facilities

*July 29:* Advisory for Home Isolation of Asymptomatic Covid-19 Positive Health Care Workers

*August 7:* Advisory for Home Care of Asymptomatic Covid-19 Positive Patients

*August 7:* Framework for Health System Preparedness for managing natural calamities in the context of Covid-19 in Kerala

*August 8:* Advisory on Treatment of Passengers and Crew Members and on Quarantining and Testing of the Volunteers engaged in the rescue work at Karipur International Airport, Kozhikode.

*August 8:* Advisory Restricting Visitors to Hospitals caring for airline accident patients.

They can all be accessed here:

<https://tinyurl.com/y5mr86ok>

On August 10, Dr Ekbal spoke with Journalist R Ramakumar for a podcast describing the evolution and impact of the Covid-19 Pandemic in Kerala.<sup>32</sup>

Dr Ekbal explained that the Kerala response was early and quick. It was the structures in place in Kerala that made it possible to continue to address the increasing challenges of the pandemic.

He shared some key features of Kerala's response, undertaken by a government with very limited fiscal resources, that are instructive.

**All-of-government approach:** involving a range of relevant state government ministries and agencies to design measures to improve consistency, coordination and communication, and to avoid confusion. To address the Covid-19 issues an 11 member expert committee included appropriate specialists such as ID physicians, Public Health specialists, appropriate community members and relevant others met daily to analyse the current situation and to plan and implement responses. Others are co-opted as needed.

**Whole-of-society approach:** Wide community consultations, including experts, PHC workers, community volunteers are conducted to find the most locally appropriate modes of limiting infections, along with means to monitor and enforce them.

**Social mobilization:** Community health workers, members, volunteers and volunteers have been

mobilised and local skills strengthened to help 'manage' the pandemic. Communities have been provided with essential epidemiological information to understand the threat and related issues, to ensure compliance with prescribed precautionary measures and to avoid panic.

**No one left behind:** adequate supply of essential commodities, particularly food and medicines, has been ensured, especially to protect the most vulnerable sections of society and ensure that none fall through the cracks while the attention is on the pandemic emergency. The rise of non-communicable diseases in the state challenges the healthcare system and Kerala has a high prevalence of diabetes—14.8 percent of its population between the ages of 15 and 64 years is diabetic, compared with only 8 percent in India overall.

**In another interview with Cithara Paul on June 14, Dr Ekbal explained that until that time they had just been in intermission, in Kerala.**<sup>33</sup> 'I have learnt a lot more in the last three months than I did in my entire life,' he said, referring to his experience of leading a team of experts drawn from all fields to fight the pandemic. And he warned that the battle was not over yet.

#### After the lockdown

In June, Kerala was gradually phasing out the lockdown, although the number of infections and deaths were going up. As the lockdown lifted, the new phase became very challenging. However it **was** necessary to phase out the lockdown - there is an extent to which any government can hold on to lockdown as a protective measure. Dr Ekbal explained that the fight against the pandemic could still be managed well because of the well-planned contact tracing, stringent quarantine measures and effective implementation of quarantine.

Kerala would be expecting a huge inflow of non-resident Keralites (NRKs) from red zones and hot spots across the world and that would be bound to increase the number of positive cases dramatically. Kerala was prepared to deal with it. The focus had to be to contain the spread of the disease from NRKs to others - which could lead to community spread.

When asked 'How much more worse can it get?' he explained that there are many variables that determine whether one succeeds or not in the fight against Covid-19 and system efficiency is one crucial factor. The situation can improve or deteriorate as challenges increase so it is crucial that the system is not fatigued as the fight against the virus is not going to end soon.

'If one goes by the history of other pandemics, I would say that it can take up to one year to 18 months for the

<sup>32</sup> <https://anchor.fm/ramakumarr/episodes/Keralas-response-to-the-Covid-19-pandemic-with-Dr-B-Ekbal-Member-Kerala-State-Planning-Board-ehsgn2>

<sup>33</sup> <https://www.theweek.in/theweek/statescan/2020/06/04/this-is-just-intermission-in-our-fight-against-Covid-19.html>



virus to mutate and to become an epidemic and then an endemic. But it need not mean that the virus will be this virulent for such a long time and that is a relief. I am also hopeful that a vaccine will be found in between’.

### What are the key factors that helped Kerala in its successful fight against Covid-19?

Kerala's success story is also the success of its unique social capital—its decentralised and robust public health care system, its vibrant local governance and its educated and informed community involvement. In fact, Covid-19 has come at a time when our primary health centres and district hospitals have been witnessing dramatic improvements in infrastructure and funding. This vibrant and robust health care system in turn boosted the morale of our health care staff to fight the pandemic. Equally crucial is the role played by Chief Minister Pinarayi Vijayan and Health Minister Shailaja Teacher. The Chief Minister anchored the whole thing and led from the front. This gave the entire system the much-needed confidence. ***So it is this combination of a good system and a good leadership that helped Kerala in its fight.***

‘Kerala, with its high density of population, high percentage of the 60-plus population and a large number of people with comorbidities is among the riskiest states in India when it comes to Covid-19. So our fight had to be extra aggressive’.



‘From a medical point of view, I am certain that the lockdown has definitely helped in reducing the number of infections and deaths. But I personally feel that had it been delayed by one week, the distress it caused to the population, especially the migrants, could have been avoided. But I also feel there is no point in judging something in hindsight.’

### Management of Concurrent challenges

Kerala is yet to recover fully from the shock caused by two consecutive floods. The monsoons naturally bring back all the scary memories. Along with that, a gamut of communicable diseases like dengue and leptospirosis also come. The management of non-Covid cases is equally important.

### Daily monitoring and evaluation

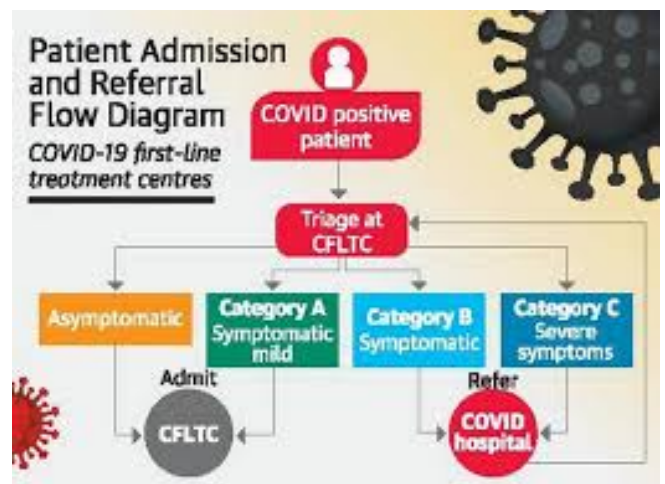
Daily Statistics are clearly and comprehensively provided here.

<https://dashboard.kerala.gov.in/dailyreporting.php>

The ‘dashboard’ is updated daily and as well as covering case figures it includes, for example, the status of quarantine, tests, hotspots; and covers the activities associated with of social volunteers, psychosocial support, community kitchen, destitute rehabilitation

### Other elements of Kerala’s response

#### ***First-line treatment centres in every panchayat***<sup>34</sup>



In July, anticipating a surge in Covid-19 cases in the following weeks based on the current infection curve, Kerala had moved fast to set up 100-bed first line treatment centres (FLTCs) in every *panchayat*, to accommodate those with mild or no symptoms to keep the rush away from the frontline Covid-19 hospitals, where the critical cases could be admitted.

District administrations, working with local bodies, took over auditoriums and community halls in every *panchayat* and municipality to set up the FLTCs. The government had allotted Rs 10 crore [nearly USD 2.5 million] each to district collectors for this. Patients who became critical, could be immediately taken to the nearest Covid-19 hospital for advanced care. A majority of the cases – as high as 60% – in Kerala have been asymptomatic, and therefore requiring only primary supportive care. Early detection of such cases and timely medical care has proven to lower mortality rate to a large extent.

While in May and June, most cases were those who came from abroad and other states in the country, the

<sup>34</sup> <https://news.knowledia.com/IN/en/articles/kerala-first-line-treatment-centres-to-come-up-in-every-panchayat-def089efa9066804923cc57ae3c200baf464918f>



situation changed. Among the 722 new infections on July 16, there were cases without a clear epidemiological link. Experts believe a rise in such cases without a clear origin of infection points to community spread.

It was estimated at the time that the infections were still restricted to 84 clusters across the state, among which 10 are large community clusters like Ponnani in Malappuram district, Chellanam in Ernakulam and Poonthura in Thiruvananthapuram. The spread of the infection appeared to be associated with market-places, business-centres and hospitals.

‘As a result of the tireless efforts and alacrity of our society, we have been successful in keeping the deaths per million under one... but if there are loopholes in our defences, it may lead to a huge disaster. We cannot afford to make any mistake on the back of misinformation,’ the Chief Minister Pinarayi Vijayan said.

#### **August 7. Health and Family Welfare Portal launched<sup>35</sup>**



Explicit guidelines for daily outbreak control and prevention are provided here with direction for Complimentary Activities covering testing, triage, establishment of care centres, provision of psycho-social support and support for people with special needs, home isolation support, community kitchens and adequate infrastructure to support all facilities and activities.

Training videos are available

<https://www.youtube.com/c/keralahealthonlinetraining>

<sup>35</sup> <http://dhs.kerala.gov.in/wp-content/uploads/2020/08/Bulletin-HFWD-English-August-07.pdf>

#### **What is the history that enabled Kerala to develop the structure to respond to the enormous challenges of the Covid-19 pandemic in 2020?**

Dr Ekbal explained that it is necessary to think back to 1996.

In 1996, it was recognised that trust in the public system had been eroded. The State government set up the People's Campaign for Decentralized Planning Movement.<sup>36</sup>

A three-tier Primary Health Care system was set up consisting of sub-centres and primary health centres that support five to six sub-centres and serve a village; and community health centres (CHCs). The sub-centres serve the smallest population and do not have inpatient capacity, while PHC facilities serve about 26,000 citizens and provide maternity services and limited inpatient services, and CHCs provide care to approximately 230,000 individuals. There are around 24,000 PHC centres in Kerala.

This system allowed the state government to delegate significant decentralized power with jurisdiction under the people in the villages so actual communities were in control of their own health. It meant that physicians and community members were working together to address community priorities. People in lower economic groups especially were encouraged to use the public PHC centres and it could be seen particularly in villages with strong *panchayat* governance, there were improvements in access to medications and health outcomes, as well as increased patient utilization of care at PHC centres.

#### **The outbreak of Nipah demonstrated that Kerala and the rest of the country would be exposed to the high risk of another outbreak making preparedness vital.**

Kerala reacted by strengthening capacity for outbreak response throughout the community. People became familiar with social distancing, masking, behaviour change, contact tracing, quarantine.

When the Nipah virus hit Kerala in 2018 these structures enabled immediate implementation of a public health response throughout the community with surveillance and interventions including non-technical support functions and evaluation to assess reduction of transmission and the impact of interventions.<sup>37</sup>

Some technical shortfalls became evident due to a relatively inexperienced cadre of surveillance personnel

<sup>36</sup> Elamon J, Franke RW, Ekbal B. Decentralization of health services: the Kerala People's Campaign. Int J Health Serv. 2004;34(4):681-708.

<sup>37</sup> <https://www.who.int/southeastasia/outbreaks-and-emergencies/health-emergency-information-risk-assessment/surveillance-and-risk-assessment/nipah-virus-outbreak-in-kerala>

in communities. However further training in field epidemiology and data analysis was provided so that skills were strengthened throughout the different levels of the system.

Kerala's PHC system has recently faced a number of challenges: the epidemiological transition towards chronic disease, erosion of public health funding, and the continued presence of private health care at much higher cost have pushed the health system to its limits. The rise of non-communicable diseases in the state has challenged the healthcare system: Kerala has a high prevalence of diabetes—14.8 percent of its population between the ages of 15 and 64 years is diabetic, compared with only 8 percent in India overall. Furthermore, the prevalence of many NCD risk factors in the state is estimated to be very high; a 2010 study found that 42 percent of adult males smoked and that 40 percent of the adult population ate diets low in fruits and vegetables, while 25 percent were overweight.

Overall, Kerala has made significant strides through investing in infrastructure, decentralized governance, and community engagement. Though many challenges remain, it is working towards making health care accessible, affordable, and responsive to an increasing burden of non-communicable diseases.<sup>38</sup>

### Could Kerala achieve Herd immunity

Dr Ekbal explained: 'Herd immunity', that arises when 60 per cent of a given population has been infected and acquires immunity has been advocated by some as the most natural way to handle a pandemic. If only the healthy young population in a country gets infected and they acquire immunity, then that is a good option. But that is unrealistic. If the vulnerable segment of the population gets infected, the death toll will be unimaginable. Sweden did try and the result in not very promising, if one goes by the death toll'.<sup>39 40</sup> Kerala's approach has proven less disruptive, less costly and more effective than most others. After recording its first Covid-19 case on January 30, its infection and death rates have been kept relatively low despite much more tracing and testing.

As of August 17, there had been 46,140 confirmed cases with 30, 029 (65.08%) recoveries and 169 deaths in the state. Kerala has maintained one of the lowest mortality rates in India (0.63%) compared with the national average of 1.92%.

<sup>38</sup> <https://improvingphc.org/kerala-india-decentralized-governance-and-community-engagement-strengthen-primary-care>

<sup>39</sup> <https://www.thelancet.com/action/showPdf?pii=S0140-6736%2820%2931673-1>

<sup>40</sup> <https://www.newscientist.com/article/2251615-is-swedens-coronavirus-strategy-a-cautionary-tale-or-a-success-story/>

### How do you assess the performance of India as a whole in the Covid fight?

I am actually surprised that disease dissemination is low in India when compared with many other countries. The picture may change in the coming days but India has been doing well on the Covid front, given its population and other social indicators. Similarly, many states are surprisingly doing well, if one goes by the available figures. For example, Chhattisgarh, Tripura, Assam and Odisha are doing exceptionally well. It is a happy thing to know that it is not just Kerala that is doing a good job. We can look at the Dharavi community in Mumbai.

### The Dharavi community - India's biggest slum has so far nailed coronavirus Covid-19

#### Here's how they did it

Australian Broadcasting Corporation, August 7<sup>41</sup>

By South Asia correspondent [James Oaten](#), Som Patidar, and Nagesh Ohal in Mumbai

Sameer Vathkar (centre), his wife Yogita, his daughter Samruti and son Omkar all suffered Covid-19 when the virus arrived in their community. (ABC News: Nagesh Ohal)



With its narrow streets, congested housing, underfunded health care and poor sanitation, many thought India's largest slum would be devastated by Covid-19. In fact, Dharavi — located in India's financial capital Mumbai — was often heralded as a prime example of why the country was ill-prepared to deal with the coronavirus. Stigma associated with the disease spread deep into the neighbourhood.

'Everyone was scared and locked themselves in their homes,' local resident and asthma sufferer Sameer Vathkar told the ABC.

'When corona was spreading in our local areas, we felt that Dharavi was going to be finished.'

Mr Vathkar tested positive for the virus in May after he took a neighbour, who had contracted Covid-19, to hospital. At the time, Dharavi had recorded only a few hundred cases, but the healthcare system was already struggling to keep up. Patients were being refused hospital admission and ambulances would go missing. Residents complained that quarantine facilities lacked basic services and cleanliness.

<sup>41</sup> <https://www.abc.net.au/news/2020-08-08/indias-biggest-slum-declares-victory-over-coronavirus/12518818>

'We thought it would be better to stay home instead of going to hospital. You would not survive in hospital,' Mr Vatkar's wife Yogita said.

Her husband's symptoms deteriorated.

'I had fever, chill and breathlessness,' Mr Vhatkar said. 'I could not stand properly. I was vomiting and shivering. I lay down on the ground in hospital. So many patients were coming to hospital, but they were not getting admitted because beds weren't available.'

Soon after, his wife and two children also tested positive to Covid-19 and were taken to various quarantine shelters.

'Corona was not just killing me, but killing my family as well,' he said. 'I lost hope for my survival and left it on God.'

### **Authorities got on the front foot by doorknocking and testing**

Much has changed in Dharavi since the early outbreak. Not only has the 44-year-old father and his family made a full recovery, but the entire neighbourhood appears on the verge of victory against the virus.

Instead of hundreds of daily cases, Dharavi in recent weeks has been reporting only single digit increases, and the number of active cases is less than 3 per cent of the total. The mortality rate is also low.

The World Health Organisation has lavished praise on local authorities after they embarked on an ambitious and comprehensive program to bring the coronavirus under control in a region where social distancing and contact tracing is impossible.

With a million residents crammed within 2.4 square kilometres, local government assistant commissioner Kiran Dighavkar said relying on home quarantine was not an option.

'In one apartment of 10 feet by 15 feet, you'll find at least 10 to 12 people,' he said. 'It is very difficult to do contact tracing because one person who used the community toilet, or toilet seat, is used by another 500 people.' 'Once it starts, it can spread like anything.'

Anything from sports centres, schools, nursing homes and hotels were converted into coronavirus treatment and isolation centres.

Hundreds of community toilets were sanitised multiple times a day.

Instead of waiting for symptomatic patients to come forward, authorities would doorknock homes to test temperatures and oxygen levels. Anyone considered at risk or showing depleting oxygen levels was taken into care.

'Slowly, slowly, the cases were appearing in all the slum pockets,' said Dr Virendra Mohite, a chief medical officer

for one of Dharavi's coronavirus hospital wards. 'So, our biggest challenge was to isolate the high-risk contacts from the slum to the institutional quarantine.'



Isolating patients in treatment centres may have been key in stopping the spread of coronavirus through the community. (ABC News: Nagesh Ohal)

'If we diagnose suspects early, it is easy to cut the chain of transmission, to start the treatment early and reduce further mortality.'

Most temporary treatment centres have been closed due to the decline in cases, but authorities say they remain vigilant for a second wave.

### **The Dharavi Model has been adopted in other parts of the country**

The system was initially rough around the edges.

Containment zones were set up with little notice, leading to distress, and residents often had to queue for hours to get essential supplies.

But the 'Dharavi Model' — as it is now known — was not established overnight, rather it was implemented lesson by lesson.

'Initially, everyone was in the dark and didn't know how to deal with it,' Mr Dighavkar said. 'There was no reference book for this. Fortunately, now the health infrastructure is in place, people know there are references, like the Dharavi Model.'

The Dharavi Model has been such a success that authorities in other parts of the country, such as Hyderabad and Kerala, have adopted the same approach.

While more than 2 million people in India have contracted the coronavirus, less than a third of those cases are now active. The number of daily cases is slowly coming down in hotspot megacities — such as Delhi, Chennai, Pune and even Mumbai — but numbers are surging in poorer states like Bihar.

'We do not have very good health infrastructure,' said Professor Shamika Ravi, from the Brookings Institute.

'While 75 per cent of our health infrastructure is concentrated in our urban areas, we are already



beginning to see the spread of infection to smaller, rural townships. 'We cannot give up on containment. It's a very large country.'

Experts have suggested that given India's huge population and diverse states, the impact of the coronavirus on India should be looked at on a state-by-state basis, rather than as a whole.



Health workers went door to door in Dharavi to check temperatures of local residents and lock down pockets of infection. (ABC News: Nagesh Ohal)

'We are already beginning to see several patients from Patna, which is the capital of Bihar, move to Delhi for treatment,' Professor Ravi said. 'That's never a good strategy.'

### Herd immunity?

There is a theory emerging that the decline in active cases in Dharavi is because a large proportion of the population has already been infected. Some have suggested herd immunity is now at play.



Some health experts have floated the idea that coronavirus was so rampant in Mumbai slums that residents developed herd immunity. (ABC News: Nagesh Ohal)

'I think Dharavi has reached herd immunity,' said epidemiologist Dr Jayaprakash Muliyl. 'There are very sparse cases. It's stopped.'

Officials in Dharavi aren't sure if herd immunity is responsible for stopping the spread. A serological survey showed 57 per cent of residents in Mumbai's slums had coronavirus antibodies, meaning more than half the residents had been exposed to the virus. Most were asymptomatic, and the mortality rate was low.

Professor Ravi said the science of herd immunity was uncertain. 'The latest data from Italy is saying ... the antibodies decay very quickly,' she said. 'Perhaps the whole concept of herd immunity needs to be questioned.'

### Covid-19 in other Indian cities

In July, another serological survey in Delhi showed almost one in four people had been exposed to coronavirus. Like Mumbai's slums, most were asymptomatic.

If extrapolated to the entire city, that would mean more than 4 million residents have been infected, which is more than twice the official national figure. Dr Muliyl says this could mean that India's official coronavirus count was 'pretty badly off'.

'Containment has not worked. The virus is spreading, and the main emphasis should be on treating the sick,' he said.

But Dr Muliyl was also hopeful the wide presence of antibodies meant a vaccine was possible.



The Vatkar family, including Samruti (left) and Omkar have now fully recovered from Covid-19. (ABC News: Nagesh Ohal)



### Feature 3: Covid-19 in the Mekong Countries

Compiled from acknowledged sources.

Valuable information is from the Lowy Institute, an independent, nonpartisan international policy think tank located in Sydney, Australia that provides high-quality research and distinctive perspectives on the international trends shaping Australia and the world.<sup>13</sup>

The countries of the Mekong region have reported so few cases that many people are asking whether their success is real

– and if it is, how are they doing it?

**The strategy behind these successes is based on the same basic factors: prioritising health above economic concerns, producing excellent public communications, enforcing early border controls, and mandating behaviour change – a strict lockdown, widespread use of masks and physical barriers, and avoiding indoor or confined spaces. These things work.**

*This account focuses on the Public Health Methods and says that they 'work'. An ironic comment would be that it is the type of interventions/strategies that poor countries can afford!*

After seven months, the Covid-19 pandemic continues to challenge the world, but some places seem to have managed surprisingly well.

The Mekong countries do not have the luxury of the advantages of islands like Australia, New Zealand and Sri Lanka where full quarantine can be implemented at a single Gateway – the international airport. After being screened, travellers are sent to designated quarantine centres. The Mekong countries have many land borders that make pandemic control very difficult.

These countries never thought they were immune from an infectious disease problem in their close neighbour the People's Republic of China. They have vivid memories of the 2003 SARS epidemic and they took the Covid-19 threat seriously from early on and responded with a SARS strategy, not a seasonal flu strategy.<sup>42</sup>

#### Thailand

Thailand began screening all airport arrivals for fever on 3 January (two days before China confirmed to the World Health Organisation that they had identified a 'pneumonia of unknown cause'). Ten days later, Thailand confirmed its first case: the first known case outside China.

After confirming just 800 cases, Thailand announced a state of emergency and began a strict lockdown on 26 March. They only began easing the lockdown in May.

Thailand was covered in the April HAIAP news when the Pandemic was being controlled and the way ahead was being considered.<sup>43</sup> (See also<sup>44</sup>)



In Thailand, as in other countries, after a lull in infections some new cases began to appear in late July August and restrictions had to be re-imposed.<sup>45</sup>

- On the 5th of August 2020, 7 new cases of laboratory-confirmed Covid-19 were reported by the Ministry of Public Health. The total number of cases reported in Thailand on that date was 3,328.
- Of these cases, about 94% (3,144) had recovered, 2% (58) had died and 4% (126) were still receiving care.
- Five of the new cases returned from Egypt. One person had traveled from Dubai and later tested positive while in State Quarantine. This person had no symptoms. The final case traveled from the United States. This person tested positive while in Alternative Quarantine but also had no symptoms at the time.

<sup>43</sup> <http://www.haiasiapacific.org/wp-content/uploads/2020/04/HAIAPNewsApril2020.pdf>

<sup>44</sup> <https://reliefweb.int/sites/reliefweb.int/files/resources/2020-07-29-tha-sitrep-98-covid19.pdf>  
<https://reliefweb.int/report/thailand/coronavirus-disease-2019-Covid-19-who-thailand-situation-report-29-july-2020>

<sup>45</sup> <https://reliefweb.int/sites/reliefweb.int/files/resources/2020-08-05-tha-sitrep-99-covid19-r03.pdf>

<sup>42</sup> <https://www.lowyinstitute.org/the-interpreter/what-s-secret-southeast-asia-covid-success-stories>

- There were no new deaths reported by August 5.
- In the 71 days to August 5, all Covid-19 cases detected in Thailand had been in people who were infected outside of Thailand and were diagnosed after arriving in Thailand (there have been no reported cases due to local transmission).

Thailand has directed that members of the public must continue to follow preventive measures including distancing, regular hand-washing, avoiding touching the face, wearing masks.

## **Vietnam <sup>46</sup>**

As of 3 August, Vietnam's Ministry of Health confirmed a total of 7147 cases of Covid-19. However, 373 of the affected patients had recovered and been discharged from hospitals so there were 374 active cases. <sup>47</sup>

In mid-July, Vietnam still had no reported deaths, and months without a locally transmitted case. Fans packed into football stadiums, schools had reopened, and customers returned to their favourite cafes.

### **On July 25, Vietnam's Red Cross reported the first community transmission case after 99 days in Da Nang. <sup>48</sup>**

'We were already back to normal life, said a 27-year-old from Da Nang in central Vietnam. But by the end of July, Da Nang was the epicentre of a new coronavirus outbreak, the source of which has stumped scientists. Cases suddenly surged after 99 straight days with no local transmissions.

So what went wrong? 'I'm not sure anything went wrong,' says Prof Michael Toole, an epidemiologist and principal research fellow at the Burnet Institute in Melbourne. Vietnam's spike shows that 'once there's a little crack and the virus gets in it can just spread so quickly,' Prof Toole says.

'There's evidence [the virus] was circulating in Da Nang for several weeks before that first case was diagnosed,' says Dr Justin Beardsley, a senior lecturer in infectious diseases at the University of Sydney whose research has focused on Vietnam. There could be some element of people dropping their guard, he adds, while noting that Vietnam showed exceptionally strong community engagement when it came to curbing spread of the virus.

In Hanoi Prof Rogier van Doorn, director of the Oxford University Clinical Research Unit, says the source of

<sup>46</sup> [https://burnet.edu.au/system/asset/file/4155/8.1\\_Know\\_C-19\\_Hub\\_Global\\_Analysis\\_August\\_7.pdf](https://burnet.edu.au/system/asset/file/4155/8.1_Know_C-19_Hub_Global_Analysis_August_7.pdf)

<sup>47</sup> <https://www.vietnam-briefing.com/news/vietnam-business-operations-and-the-coronavirus-updates.html/>

and <https://www.bbc.com/news/world-asia-53690711>

<sup>48</sup> <https://reliefweb.int/report/viet-nam/vietnam-red-cross-Covid-19-response-weekly-update-9-7-august-2020>

this latest outbreak remains a 'mystery'. It had started with a man who tested positive without any travel history; it is still unclear how he contracted the virus. Some have pointed to recent people-smuggling cases along the Vietnam-China border. But it has been reassuring, says Prof Van Doorn, that all new cases in other parts of the country so far have had a direct link to the Da Nang outbreak. Crucially, there has been no reported community transmission outside of the city and bordering province. This is something authorities will be monitoring closely.

'What was successful before is being done again. I'm again impressed,' he adds. <sup>49</sup>

Like Thailand, Vietnam went early and hard, prioritising health over other concerns. It began strict border controls in January, cancelled public events and schools, strictly enforced wearing masks, shut all non-essential services and imposed a three-week lockdown in April. Also like Thailand, Vietnam employed extensive contact tracing, but only targeted testing.

Vietnam has recorded ten deaths due to the pandemic during July having had no deaths prior to this recent outbreak. The latest cases have been reported from Da Nang, Ho Chi Minh City, Quang Nam, and Quang Ngai

As a precaution, Da Nang city authorities announced 15 days of social distancing measures from July 28. In compliance with the measures, residents in six districts were advised to stay home except for necessities such as food, medicine, and emergencies. Several streets were placed under lockdown. As part of the social distancing measures, all flights, passenger buses, taxis, and trains to and from Da Nang were suspended. Three hospitals including Da Nang General Hospital, Hospital C, and the Orthopedic and Rehabilitation Hospital where patients first visited before testing positive, were put under lockdown.

Non-essential businesses such as bars and nightclubs in Hanoi and Ho Chi Minh City have also been closed since 30 July until further notice. Gatherings of more than 30 people have also been banned. Flights are suspended.

Each resident is set to be tested for the virus, and a field hospital has been erected as every resource is thrown at slowing the spread of the disease.

## **Lao PDR and Cambodia**

Lao PDR has not reported a single locally acquired case since mid-April, just one imported case from South Korea in mid-July. Cambodia had a spike in mid-July but to date they are down to 2 cases a day.

<sup>49</sup> <https://www.bbc.com/news/world-asia-52628283>

Dominic Meagher writing for the Lowy Institute<sup>50</sup> explains that we can be fairly confident that the situation claimed in these countries is real because Covid-19 is not subtle. Exponential growth of a disease that leaves highly infectious people in hospital for weeks inevitably means the end of your health system within two months and widespread panic leading to economic collapse.

He believes Thailand, Vietnam, Cambodia and Laos would be overrun by disease if they had not been running an effective strategy for six months. Social media would be full of rumours and evidence of deaths. There are no signs of a cover up. Lao PDR is a slight exception, having confirmed just 19 cases and according to the Lowy Institute there is no further evidence of an epidemic. Lao actions demonstrate a comprehensive strategy that has been working.

#### **Cambodia Situation Summary: Highlights<sup>51</sup>**

- As of 2 August 2020, 240 confirmed cases of Covid-19 have been reported from Cambodia, of which 197 have recovered. 202 cases were acquired overseas, representing 10 nationalities in addition to Cambodian, with the rest locally acquired. Two patients were currently being treated in Khmer Soviet Friendship Hospital and 33 at Chak Angrae Health Centre, both in Phnom Penh, and six at Kampong Speu Provincial Referral Hospital. Two Americans were being treated in an isolation room at the US embassy in Phnom Penh.
- 1,114 contacts were being quarantined at a quarantine centre in Phnom Penh or in their respective province and were monitored daily for possible development of symptoms.
- Points of Entry (POE) measures are currently being strictly implemented, including testing on arrival and upon completion of 14-day quarantine for all airport passengers and at border crossings.

#### **Why have these countries mostly done the right thing when others seem incapable, despite the simplicity?**

So long as their borders remain well controlled and they continue using physical barriers and masks, these Mekong countries are likely to continue to see relative success. Weather and architecture may have made it easier for the public to avoid enclosed spaces. But the big difference has been attitude – both of leaders and of the public.

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<sup>50</sup> <https://www.lowyinstitute.org/the-interpretor/what-s-secret-southeast-asia-covid-success-stories>

<sup>51</sup> [https://www.who.int/docs/default-source/wpro---documents/countries/cambodia/Covid-19/Covid-19-joint-who-moh-sitrep-05.pdf?sfvrsn=845addf3\\_2](https://www.who.int/docs/default-source/wpro---documents/countries/cambodia/Covid-19/Covid-19-joint-who-moh-sitrep-05.pdf?sfvrsn=845addf3_2)

Most importantly, the governments strongly encouraged people from the start to avoid crowds and confined spaces, and to always wear cloth masks when they left home. Masks are a familiar accessory in the region, often worn to reduce pollution inhalation, and people remember SARS and other coronavirus epidemics, so the public was quick to respond.

Laos (with a much smaller population than the other countries) had some advantage from fewer international arrivals than Thailand or Vietnam after the first case was confirmed on 24 March. Just five days later, the government announced a strict lockdown and closed all borders. The lockdown lasted nearly seven weeks, while international arrivals continued to be restricted until June. Social distancing rules were implemented, and non-essential businesses were closed.

While the successful parts of their strategies are shared across the region, the Lowy Institute feels there have also been some responses that may not have been optimal. Cambodia, in particular, has adopted a severe crackdown that was seen as restricting freedom of expression, peaceful assembly and association. Unwarranted surveillance is not part of a good Covid-19 response. Independent investigations can occur without risking a new Covid outbreak. Cambodia can successfully control Covid without these abuses.

The right measures for stopping Covid-19 are no secret, but implementing them takes commitment. The virus spreads physically (mainly over short distances) and the more virus someone is exposed to, the more likely they are to get infected. Distance, barriers and good ventilation (fortunately available in all these countries?) are the only ways to interrupt transmission. If it is known exactly who has the virus, responses can be targeted. However infection with the corona virus is often asymptomatic. If surveillance breaks down or is inadequate for any reason, you need a general strategy. In that case lockdowns and universal masking are the only options.

High levels of testing are critical to identify infected people then isolate them and their close contacts individually. But testing isn't a requirement for a strategy based on universal compliance – mandatory quarantine for new arrivals, nationwide lockdown, and nationwide use of masks and barriers don't rely on identifying who is infected.

**All that's required is good leadership and effective communication.**



## New Zealand:

### 102 days free of Covid-19 then August 11 –

In the HAIAP News April 2020 we described the successful approach of New Zealand, a small high income island country, to control Covid-19. NZ is an example of a tightly controlled situation with the resources and the will to follow-up all avenues. The response demonstrates the difficulties of dealing with the virus.

A fresh outbreak of Covid-19 in New Zealand was detected on August 11 following its elimination 102 days earlier, providing a sobering reminder of how the virus can evade the toughest defences.<sup>52</sup> The country responded swiftly.

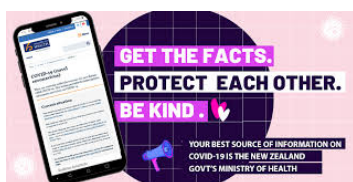
New Zealand had declared zero remaining Covid-19 cases on 8 June after enacting one of the strictest lockdowns in the world. Restrictions were eased, but tight border controls remained that included a ban on international visitors; quarantining New Zealanders who returned from abroad; and requiring protective equipment for all airport and seaport workers.

These measures allowed New Zealand to go 102 days without recording any new locally acquired Covid-19 cases.

On 11 August, the country was rocked by news that four members of a family in South Auckland had tested positive for the virus, without any identifiable source of infection. One member of the Auckland family that first tested positive works at a chilled food warehouse so that facility was immediately closed along with three other sites the company had around the city. The 160 staff across all the facilities would be tested for Covid-19.

In the days before the outbreak was discovered, members of the family had normal community contact with others. So in line with its 'go hard, go early' strategy, the government put Auckland in lockdown the next day, banning residents from leaving home for non-essential reasons.

Authorities in Auckland also began testing anyone with even remote connections to the new cases, as well as all port workers, staff at quarantine facilities and anyone with cold and flu symptoms, in an effort to find out where the virus had come from and how far it had spread. By 18 August, this testing blitz had identified another 65 cases connected to the original family cluster, as well as one in a man employed at a quarantine facility.



<sup>52</sup> <https://www.newscientist.com/article/2252136-return-of-Covid-19-to-new-zealand-shows-that-no-one-can-relax/>

## What is known about the original source of the New Zealand outbreak?<sup>53</sup>

*Epidemiologist Amanda Kvalsvig, Senior Research Fellow in the Department of Public Health at the University of Otago, Wellington New Zealand says Genomics could reveal details about the source of the country's first outbreak in more than 100 days.*

On June 4 NZ Prime Minister Jacinda Ardern had warned that 'perfection' in response to the Covid-19 pandemic 'is just not possible' as she urged New Zealanders against complacency and laid out her government's plans for future outbreaks.

'Every country we have sought to replicate or have drawn from in the fight against Covid has now experienced further community outbreaks,' Ms Ardern said in a speech at New Zealand's parliament in Wellington.

The new cases came to light after a 50 year old person developed symptoms and presented for testing. Following that original positive test, the household and other contacts were tested, identifying further cases.

All of the new cases seemed to be part of the same cluster, but that wasn't linked back to its point of introduction into the country. That was concerning because it was not possible to know how long the outbreak had been propagating and how many other cases might have been missed. The public-health system has attempted to trace 'backwards' identifying each source of the known cases, and then 'forwards' to identify other close contacts of that source.

Authorities were exploring the possibility that the virus arrived on packaging in cold storage but that was ruled out. Global experience with Covid-19 outbreaks suggested it was far more likely to have originated from person-to-person close contact, either while people are en route to New Zealand or during quarantine at the border.

### Could the virus have been spreading undetected in the community for some time?

It is considered possible that the current cases are several generations on from the original introduced case, or cases. Because around one-third of Covid-19 cases cause no symptoms, a transmission chain could propagate through several generations before someone became unwell enough to have a test.

Another factor is that winter coughs and colds make it harder to detect a spike of Covid-19 transmission in the community. However, the routine surveillance system to track influenza-like illnesses had recorded no significant uptick in these illnesses in the previous

<sup>53</sup> <https://www.nature.com/articles/d41586-020-02402-5>



weeks; in fact, the incidence has been far below what is usually seen at this time of year.

It seems likely that the outbreak dates to a more recent introduction through the border in one way or another. But it would be good to know exactly when and how it arrived.

### **What could genomics tell us about this latest outbreak?**

Genomic epidemiology is a powerful tool for tracing outbreaks back to the source, so it's particularly relevant to the current situation, where the original case is still unknown. Genomic sequencing was used to investigate Covid-19 clusters in New Zealand earlier this year, and in several instances, investigators were able to link cases to a known cluster when conventional public-health methods hadn't been able to establish the link. It can also identify situations in which cases seem to be linked through close contact, but actually belong to separate clusters.

If all of the Auckland cases turn out to be from one cluster, that will be good news for outbreak control. If there's more than one cluster, it will suggest more widespread transmission.

Genetic sequencing suggests the new outbreak in the Auckland family has been caused by a coronavirus strain that recently entered New Zealand. It most closely resembles a strain that is currently circulating in England, but how it sneaked into New Zealand is still a mystery. One suggestion - later ruled out - was that it entered the country in a frozen food shipment, since one member of the family that first tested positive works at a chilled food warehouse.

Another suggestion is that a returning citizen with the virus may have incubated it for longer than normal – so it wasn't picked up by testing during quarantine – and then entered the community.

**Single mystery case:** A single Covid-19 positive case of a maintenance worker at the Rydges Hotel was identified, despite having no links to the border or to the South Auckland community cluster. Genome testing revealed that hotel worker had the same strand of the virus as a returnee from the US, however the returnee and the worker had no physical contact. NZ Director-General of Health Dr Ashley Bloomfield said it's possible an 'intermediary' person spread the virus, or it could have been caught from a contaminated surface.

Bloomfield said serology was being used to determine whether there may have been an intermediary who tested negative but who had unknowingly contracted Covid-19 at an earlier point. There have been further separate positive cases including a woman arrived via Sydney from Qatar on August 14.

On August 18, 13 more cases in the previous 24 hours, took the number to 69 at that time. Twelve of the new infections could be linked to the cluster in South Auckland, while an unlinked male worker who carried out tasks on rooms in the hotel had tested positive on 16 August. Genome sequencing indicated that man's infection was not linked to the South Auckland outbreak. Instead, experts linked it with a positive case who had returned from the US and was quarantining in Rydges since 31 July.



The New Zealand scenario illustrates the complexity of dealing with this virus.

### **What has been the public-health response to these new infections?**

The response has been swift, backed up by decisive government action. The Auckland region, where the cases were identified, is now at Alert Level 3 - the second-highest of four levels - with people instructed to stay at home apart from essential movement. The rest of the country is at Alert Level 2, which includes physical distancing measures and limits on mass gatherings.

People with Covid-19 and their contacts are being tested and traced. These are familiar measures but there are some new approaches, too. For example, the government now recommends the use of face masks, and people with Covid-19 in the community will spend their isolation period in dedicated facilities instead of at home.

Amanda Kvalsvig believes clear advice on risk would also help. For instance, there's emerging evidence that the virus is transmitted readily in closed settings where people are speaking loudly, laughing and singing. This changes our thinking about 'mass gatherings' and gives a more nuanced sense of where the risks are.

New Zealand is fortunate to have outstanding political and scientific leadership to generate rapid and decisive action to protect population health. A key element has been excellent communication with the public about what is happening and what is expected of them.

Stringent control measures have caused hardship for many people, so the high levels of adherence are a testament to the trust that people have in government at the moment. We've also seen tremendous compassion and innovative spirit around the country. Control measures have imposed a heavy burden on low-income communities, in particular on Māori and Pacific populations. Community organizations, notably those led by Māori, have provided vital support, delivering food parcels and re-orienting health and social services to be accessible to those most in need.

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## News in Brief

### **'Free' Trade agreement update**

For Complete story see [TWN.org](https://www.twn.org) <sup>54</sup>

By *Jomo Kwame Sundaram*

KUALA LUMPUR, Malaysia, Aug 11 (IPS) – The Trans-Pacific Partnership (TPP) Agreement should be dead and buried after President Trump announced US withdrawal immediately after his inauguration in January 2017. After all, most major US presidential candidates in the last election, including Hillary Clinton, had opposed the TPP.

However, the Japanese, Australian and Singaporean governments have kept the TPP alive, first by mooting TPP11, i.e., minus the USA, later pretentiously relabelled the Comprehensive and Progressive TPP (CPTPP), with the hope that the US will re-join later.

Other governments have remained 'on board' for various reasons, mainly foreign policy considerations, rather than with serious expectations of economic benefits, while ignoring the dangers and risks.

The CPTPP did not even get rid of the most onerous TPP provisions, but only suspended some intellectual property (IP) and other provisions, mainly of interest to the USA. These can easily be reincluded to bring the USA back in after the November election.

However, other onerous aspects, such as investor-state dispute settlement (ISDS) provisions, remain. In the wake of Covid-19, lawyers are already advising foreign investors how to use extraordinary coping measures to sue governments, which will cost them even if they win.

If re-elected, the Trump administration's opposition to ISDS can easily be accommodated to bring the US back on board as it seeks new measures to isolate and weaken China. Biden could revive a TPP avatar, having supported it before as Obama's loyal Vice-President.

Reselling the TPP in the USA will not be easy. Already, many US manufacturing jobs have been lost due to corporations automating and relocating abroad. President Trump has changed US public discourse so much that most Americans now blame globalization, immigration, China and foreigners for the problems they face.

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### **Medical Product Quality Report: Covid-19**

With the recent emergence of Covid-19, there has been a growing number of reports of substandard and falsified (SF) personal protective equipment, diagnostic tests, medicines, and vaccines. WHO began a system

for reporting so information can be found in the public domain on SF Covid-19 medical product problems. It is planned that these reports will be issued every month as an aid to regulators, health workers, policy makers and international organisations, across the global health spectrum, in their understanding of the issues that we face.

available at:

<https://www.iddo.org/news/first-global-tool-track-news-reports-substandard-and-falsified-medical-products-live>

The reports with and without annexes can be downloaded from:

<https://www.iddo.org/news/new-six-month-report-flags-growing-number-medical-product-quality-concerns-relating-Covid-19>

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### **From blockbuster to 'nichebuster':**

#### ***How a flawed legislation helped create a new profit model for the drug industry***

BMJ 2020; <https://doi.org/10.1136/bmj.m2983>

29 July 2020

*Twenty years ago, the EU passed a law to motivate the drug industry to develop medicines for rare diseases. But a system intended to help patients with neglected maladies primarily turned into a corporate cash machine. Daan Marselis and Lucien Hordijk report:*

After reaping 12 years of orphan exclusivity rewards in Europe, company executives at Celgene (now Bristol-Myers Squibb) were on the verge of celebrating yet another monopoly extension. If the European Medicines Agency (EMA) authorised Celgene's latest orphan application for lenalidomide (Revlimid), the company would obtain a fourth orphan designation for its crown jewel — prolonging 'market exclusivity' of this famous oncology drug.

Lenalidomide is not a typical rare disease treatment. It is derived from thalidomide, the notorious molecule that was pulled from the European market in the 1960s for causing birth defects. After a few molecular tweaks lenalidomide became one of the most profitable orphan medicines ever marketed. Our data show that, up until 2019, lenalidomide made €55bn (£50bn; \$64bn) in worldwide sales.

Why would the EMA consider rewarding this already very lucrative product with yet another 10 years of market exclusivity — an incentive package meant only for drugs that would otherwise not be profitable? We have analysed two decades of sales data and found that companies have reaped billions of profit off the back of orphan drug designations. The European Commission is set to publish a review that suggests most of these drugs would have been launched anyway without favourable monopoly rights. The findings could lead to reform in Europe.

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<sup>54</sup> <https://www.ksjomo.org/post/cptpp-trade-liberalization-charade-continues>