

THAILAND

How a Strong Health System Fights a Pandemic

Outside China, Thailand was the first country to detect a case of COVID-19. After an initial spike in cases, Thailand went 102 days between May and September without any reported local transmission of COVID-19. ¹ Thailand's four decades of investment in its health system has positioned the Country to effectively respond to the current public health crisis.



*A doctor examines a patient at the Fever and Ari Clinic at Samut Sakhon.
Credit: WHO/Ploy Phutpheng*

COVID-19 in Thailand

On January 3, a few days after authorities reported a cluster of atypical pneumonia in Wuhan, Thailand started to screen passengers from China for symptoms of acute respiratory infection. On January 10, anticipating what would happen, the Royal Thai Government (RTG) started a nation-wide public communication campaign to provide accurate information about what would come to be called COVID-19. All people living in Thailand were encouraged to protect

¹ <https://www.forbes.com/sites/alisondurkee/2020/09/03/thailand-first-local-coronavirus-case-in-100-days/#be7a28059a44>;

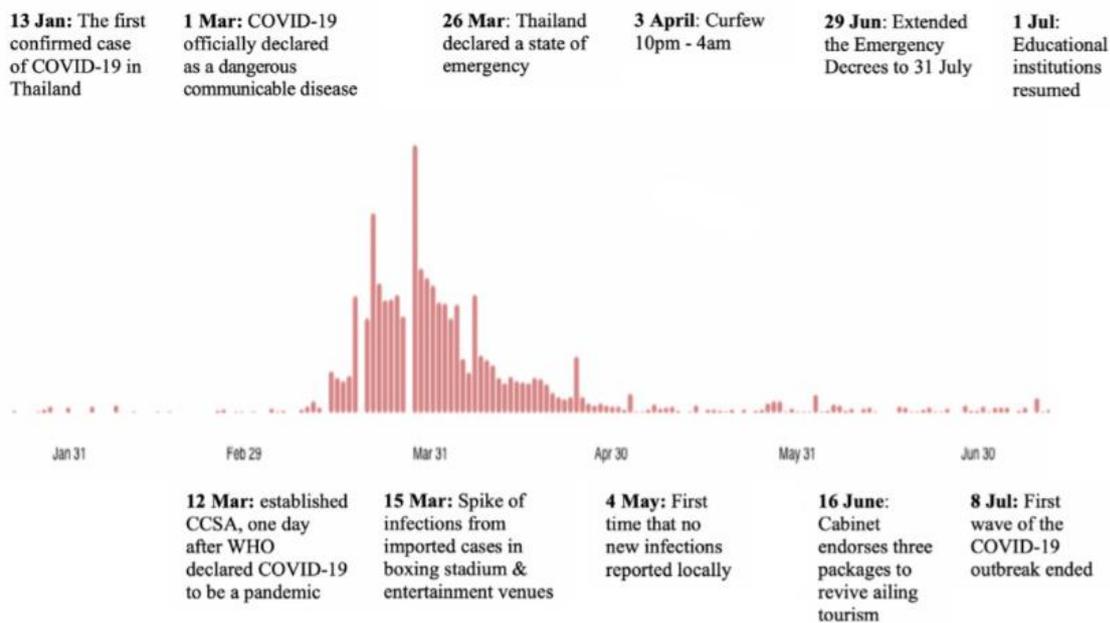
World Health Organization teams at country, regional and global levels have helped verify and validate the information and data contained in this case study, at the time of the original publication (as of September 2020)

themselves and their communities by applying basic health measures such as handwashing, mask wearing and physical distancing.

On 13 January 2020, Thailand reported that a Wuhan resident who travelled to Bangkok on 8 January had tested positive for the SARS-CoV-2 virus. This was the first COVID-19 case detected outside China. Over the next several weeks, 14 further cases were detected in travelers from China before Thailand's first non-imported, locally transmitted COVID-19 case was reported on 31 January. Cases continued to increase through February and March, many related to superspreading events which included an indoor Thai boxing event and gatherings at downtown bars (**Figure 1**). By end March, 60 of Thailand's 77 provinces had reported cases and the epidemic was widespread.

The Thai public health response was swift and comprehensive. Rapid response teams quickly managed confirmed cases by isolating and treating them, and tracing and quarantining their contacts. All cases were isolated in facilities rather than in their homes. A laboratory network for diagnosing RT-PCR was established so that by the end of July, 78% of Thailand's 77 provinces had the capacity to diagnose COVID-19

Figure 1. The Timeline of COVID-19 Situation and Response in Thailand,



After assessing health care capacity, the Ministry of Public Health (MoPH) increased the number of hospital beds equipped to manage mild, severe and critical cases. Health authorities determined needs for medical supplies, including personal protective equipment for all hospitals. Gaps were partially filled using US\$ 175,000 mobilized quickly from the South-East Asia Regional Health Emergency Fund.

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As the epidemic peaked in late March, government ministries acting together as part of the newly created Centre for COVID-19 Situation Administration (CCSA), and under the direct leadership of the Prime Minister, implemented a series of public health and social measures. A state of emergency was declared, and an evening curfew was implemented. International and domestic flights were stopped, and people were advised not to travel across provinces. The RTG closed schools, higher education institutions and non-essential businesses such as gyms, barbershops, markets, bars, restaurants, public parks, and boxing stadiums. People were asked to practice physical distancing and to stay home.

Locally transmitted cases began to decrease as a result of rapid case isolation and effective contact tracing and quarantining. By the end of April, local transmission had been controlled across the country. Public health and social measures were strategically phased out as facilities and businesses largely complied with recommendations on physical distancing, handwashing and wearing masks in public. Schools were re-opened in July. Currently there are few restrictions in activity or movement within Thailand though borders remain closed to most travel. Anyone entering the country must quarantine in a state-monitored facility for 14 days. Currently all cases in Thailand are identified among returnees in state quarantine, and therefore pose little risk to the community.

As of 29 September, Thailand reported 3559 COVID-19 cases with 31% imported cases and 59 deaths (CFR 1.66%).

How Thailand has so far succeeded in preventing widespread transmission of SARS-CoV-2

“Thailand’s response to COVID-19 offers a powerful example of how investment in public health and all-of-society engagement can control outbreaks of deadly diseases, protect people’s health and allow economies to continue functioning.”

Dr Tedros Adhanom Ghebreyesus, WHO Director-General²

For over 40 years, Thailand has invested in health infrastructure and achieving universal health coverage³. This has led to a near-total elimination of those without health insurance and has increased access to healthcare⁴. Population surveys regularly indicate high levels of

² Dr Ghebreyesus’s post on Twitter on 18 September 2020.

³ Tangcharoensathien, V. (ed.), 2015. The Kingdom of Thailand Health System Review. World Health Organization: Geneva

⁴ Thaiprayoon V, Wibulpolprasert S, Political and policy lessons from Thailand’s UHC experience. ORF Issue Brief 2017; 174

consumer satisfaction with the health system. Putting the public interest first is a commitment ingrained in Thai health professionals⁵. During emergencies the Thai people trust their health system's capacity to respond in their best interests.



VHVs monitor the health condition of the elderly in the community. Credit: WHO Thailand/Ploy Phutpheng

To support the primary healthcare system, a national programme of over 1 million Village Health Volunteers (VHVs) has, for many years, collected data, maintained health records, and educated the community on how to prevent communicable and noncommunicable diseases. During COVID-19, they contributed to Thailand's early warning system and supported surveillance, detection, contact tracing and health monitoring.

Building on its strong health system, the Royal Thai Government also invested in building capacity to prepare and respond to communicable disease epidemics. The national Field Epidemiology Training Programme (FETP) was established in 1980 with the US Centers for Disease Control (US-CDC) and WHO.⁶ – it is the oldest FETP outside of the United States. The programme has trained thousands of experts in disease outbreak investigation and control, many of whom work at provincial and district level and who managed the COVID-19 epidemic. Over 1000 Surveillance and Rapid Response Team (SRRT) have long been positioned across the country; many of these were deployed to rapidly isolate cases and ensure they were effectively treated, and to actively trace and quarantine contacts. The MoPH developed protocols to triage individuals with suspected COVID-19 and treat those with confirmed infection. Thailand's strong academic and research networks contributed evidence and expert opinion.

Laboratory and research capacity are also part of Thailand's strong health system. The Thai Red Cross Emerging Infectious Diseases-Health Science Centre in Chulalongkorn University (a WHO Collaborating Centre) has researched diseases associated with bats for more than 20 years. The Centre was able to conduct genetic sequencing of the first viruses shared by China,

⁵ <https://www.who.int/bulletin/volumes/92/7/14-030714.pdf>

⁶ http://www.interfetpthailand.net/about_index.php

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and to develop a Real-time RT-PCR assay within two weeks. Their efforts were complimented by the MoPH's National Institute of Health reference laboratory.

Both epidemiologists in the field and scientists in the lab gained important experience responding to SARS in 2003, H1N1 in 2009 and MERS-CoV in 2016 – Thai public health authorities at all levels recognized the need for comprehensive preparedness and rapid action to manage emerging communicable diseases such as COVID-19. The population, also informed by experience with these pathogens, appreciated the need for measures such as handwashing, mask wearing and physical distancing.



Staff of the Thai Red Cross Emerging Infectious Diseases-Health Science Centre at Chulalongkorn University in Bangkok examined patient samples. Credit: WHO Thailand/Ploy Phutpheng

Effective community mobilization helped to manage COVID-19 in Thailand. Leaders in villages, subdistricts, and districts monitor people's mobility and self-quarantining in their areas. In the community, VHVs monitor the health of multiple families including their own, while tracing contacts, educating their community on preventing COVID-19, distributing masks and hand sanitiser, and reporting suspected case of COVID-19. Between 2 March and 11 April, VHVs visited a total of 11.3 million households across Thailand.

The private sector supported the RTG during the response. A Thai company, Siam Biosciences, developed locally produced COVID-19 diagnostic kits. A web application called Thai Chana was developed to help trace contacts. Hotels were repurposed into 'hospitals' to isolate mild cases of COVID-19 and for quarantine. When there was a shortage of mask and Personal Protective Equipment (PPE) in March,⁷ Thailand's private manufacturers ramped up or repurposed operations to ensure enough local supply. Local manufacturers innovated, using nanotechnology to produce reusable PPE. In May, WHO, together with the MoPH, the Ministry of Social Development and Human Security, and private partners, launched a 52-page comic book using humour to provide critical messages on COVID-19 to the population.

⁷ <https://www.bangkokpost.com/business/1878975/mask-shortage-baffling>

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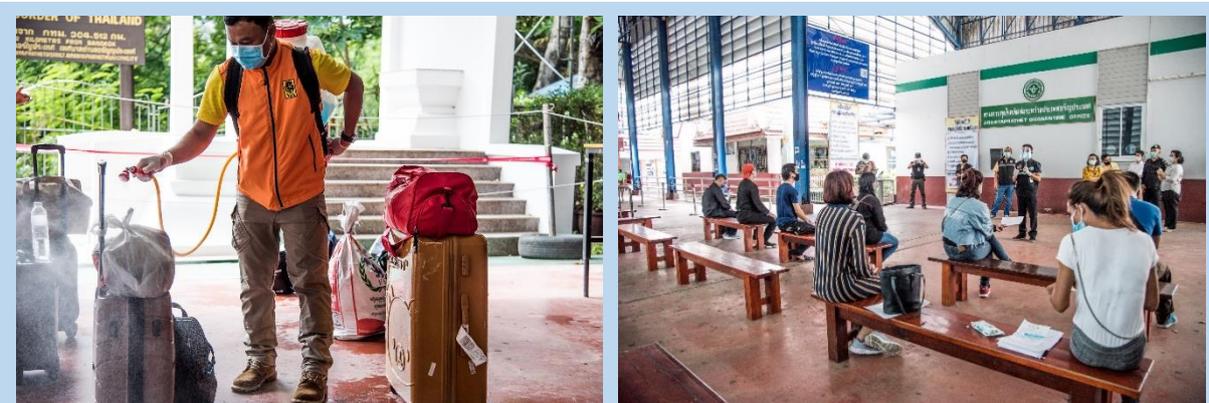
Throughout the COVID-19 crisis, essential health services for Thailand's 70 million people continued without significant disruption. The use of telemedicine, and delivery of pharmaceuticals by post was encouraged by the MoPH. New models of health service delivery are being piloted using digital technology to protect patients and health care workers from COVID-19, and to improve efficiency.

COVID-19 response challenges

Recognizing the need to avoid complacency, Thailand was the first country globally to critically assess their national COVID response from 20-24 July 2020 using the recently developed WHO 'Intra-action review (IAR) tool. As well as identifying 'best practices' the review generated recommendations to address some key COVID-19 findings and challenges, including the following.

Epidemiological, laboratory, clinical and logistic information needed to inform decision making were not always readily available. A new national data system would allow integration of data that could be easily accessed, analysed and communicated.

Although capacities for Infection Prevention and Control (IPC) are generally strong at healthcare facility level, the establishment of a national IPC programme with clear responsibilities, predictable budget and dedicated staff could support transformative improvements, including setting national IPC policy, issuing uniform guidance, establishing IPC training and credentialing standards, overseeing national laboratory-based hospital-acquired infection surveillance and auditing IPC practices.



PoE activities at Thailand's Klong Luek border checkpoint. Credit: WHO Thailand/Ploy Phutpheng

To further facilitate future detection of individual cases and small clusters, an enhanced COVID-19 surveillance system should be established and sustained. Routine testing of all patients meeting standardized case definitions in designated sentinel healthcare facilities would provide an early-warning system for community transmission.

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A national human resource mapping and planning effort would help to match human resources with assessed needs in every province. Close collaboration with academic institutions could then address human resource shortfalls and strengthen surge capacities. The establishment of a national quarantine authority would ensure coordination between the Ministries of Public Health, Interior, and Defence and maintain high standards, consistent implementation of policies, and facilitate an expansion of capacity.

The development of a 'concept of operations' for Public Health Emergency Operations Centres (EOC) with established and tested SOPs will strengthen operational efficiency between EOCs at national and sub-national levels, and further enhance collaboration with other Ministries, including the Ministry of Interior's Department of Disaster Prevention and Mitigation.

WHO support to Thailand and the global community in Thailand

A three level 'Rapid Risk Assessment' was done in January 2020 with WHO HQ, SEARO, WPRO and WHO China. In alignment with the Emergency Response Framework, a WHO Thailand Country Office (WCO) Incident/Event command system was established, the office Business Continuity Plan was updated, and a COVID-19 response plan developed. WCO also recruited and received secondments of extra staff, repurposed WCO technical and administrative staff and later established work from home arrangements.

Government and partner communications channels were established, and support was provided for communications & information management including dissemination and translation of technical guidance, production of 100 Sitreps, translation, development and dissemination of infographics through social media, and developing and publishing seven 'photo essays' on the WCO website.

Provision of technical and financial support to MoPH focused on intersectoral coordination, laboratory capacity strengthening, case investigation and response, migrant health, Points of Entry, healthcare facility preparedness / maintenance of essential services and vaccine development.

WHO Thailand also facilitated MoPH support to inter-country, regional and global COVID PH responses including virus sharing, laboratory diagnosis (including WGS) and webinars.

Bangkok is home to 25 UN regional offices, the UN Economic and Social Commission for Asia and the Pacific (UNESCAP) and the UN agencies working in Thailand. There are over 4000 Thailand-based UN staff and dependents. Decision makers from across the system relied on the WHO, through its Thailand country office, to provide technical guidance, risk assessments, analysis, situation updates and responses to queries from staff. At the end of January, with

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direct support from WHO, the Designated Official created a dedicated crisis management group, COVID-19 Contingency Management Team to ensure the safety of staff and the business continuity of the whole UN system in Thailand. WCO has led contingency planning using scenarios, simulations and functional exercises/drills. In May WHO supported UN agencies to plan the detailed, phased return of their staff back to offices.

In Thailand, the WHO Country Office (WCO) represented the SEARO and WPRO WHO regional offices in the UN and wider humanitarian regional fora and meetings in Bangkok. WCO regularly and actively consulted the two regional offices and coordinated bi-regional inputs WHO perspectives on the pandemic with Bangkok-based regional UN offices.

Moving ahead

“For forty years Thailand has committed to building a strong health system – investing in people, infrastructure, innovation, financial protection and getting ready for emergencies. A pandemic is where this kind of investment pays off.”

Dr Daniel Kertesz, WHO Representative to Thailand

In Thailand, the mood is optimistic but cautious. Thai public health authorities are actively preparing for further outbreaks of locally transmitted Sars-COV-2 and are encouraging the population to continue to comply with basic public health measures including mask-wearing and physical distancing.

The RTG has extended the national state of emergency until 31 October 2020⁸. The country is permitting limited tourism - a “Safe and Sealed” campaign has been launched to encourage tourism operators and tourists to practice stringent preventive measures. Visas are currently given only to tourists staying for a minimum of 90 days; all those wishing to visit Thailand must comply with specific requirements including quarantine in a state-monitored facility for 14 days.

The IAR provided unique insights in to how the RTG might strengthen its response to CoVID-19. Despite the low number of total cases in Thailand, the RTG remains committed to this goal, and to safeguarding the health of its population.

Interested to learn more about WHO's COVID-19 response across the globe? The response addresses the pillars and areas covered in WHO's [Strategic Preparedness and Response Plan](#). Find out about WHO's work in countries across the world on scaling up countries'

⁸ <https://www.businesstimes.com.sg/government-economy/thailand-extends-state-of-emergency-to-oct-31>
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preparedness, surveillance, maintenance of essential health services, coordination and much more. Follow our stories and view our videos on our [WHO response in countries](#) pages.

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