

SINGAPORE | COVID-19 CARE FACILITY

Crisis Accommodations

To manage a surge in COVID-19 cases in mid-2020, Singapore swiftly repurposed several large developments—such as the Singapore Expo Convention Centre—into temporary but robust community care facilities, helping to relieve pressure on hospitals.



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The Singapore Expo Convention Centre's ten exhibition halls were temporarily converted into a care facility for COVID-19 patients in April 2020.
Image: SingEx-Sphere Holdings Pte Ltd

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The Challenge

When COVID-19 first appeared in Singapore in January 2020, the country's pandemic response system swung into full gear. Hospitals divided medical personnel into work teams, freed up wards to deal with confirmed cases and deployed additional equipment to treat conditions such as severe pneumonia.

In the two months after the first COVID-19 case was confirmed in Singapore, the disease was kept firmly under control, even as it spread rapidly across the world. However, the number of new daily COVID-19 cases began to increase dramatically in April 2020. The disease was spreading

among migrant workers residing in dormitories and interacting at workplaces as well as recreation centres. By month's end, Singapore had recorded more than 16,000 COVID-19 cases.

The rapid spread of the disease threatened to place immense pressure on Singapore's healthcare system. Only 13,000 hospital beds are available across public and private hospitals, and specialty care facilities. Many healthcare workers had already been deployed to affected worker dormitories. The government had to react quickly to alleviate any potential stress accumulating on Singapore's hospitals.



Before the pandemic struck, the Singapore Expo Convention Centre regularly hosted large-scale events such as car shows.
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Interior view of an exhibition hall at the Singapore Expo Convention Centre, after it had been temporarily converted into a care facility for COVID-19 patients.
 Image: *Ministry of Health, Singapore*



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The Solution

As the disease spread, so did more information about its epidemiology. For one, it emerged that many who are infected only require minimal medical care. In addition, COVID-19 has been found to have a relatively low mortality rate: in fact, among patients aged below 60 with no underlying medical conditions, the rate is close to zero.

These COVID-19 characteristics meant that the government could look for innovative ways to isolate and care for a majority of patients who did not require urgent medical care, thereby reducing the strain on Singapore’s hospitals.

In April 2020, the government converted a series of large-scale non-medical venues into “Community Care Facilities” (CCF) to accommodate COVID-19 patients who did not require acute medical care. One of them was the Singapore Expo, the country’s largest convention and exhibition

venue. The Expo was sitting unused as events had been cancelled due to the pandemic.

The Expo was converted into a CCF in a few phases. In the first phase, two of the Expo’s ten exhibition halls were repurposed into a medical-grade care facility that could house 950 patients in individual cubicles. The work was completed in three days. By June 2020, all ten of the Expo’s exhibition halls were converted into a CCF, with a total capacity of 8,500 beds.

The venue housed two groups of COVID-19 patients: (i) individuals who were asymptomatic or only had mild symptoms, and (ii) formerly hospitalised patients who had significantly stabilised.

The Expo CCF had to meet strict safety, liveability and sanitation standards. This not only included the construction of makeshift cubicles, toilets and



A patient at the Expo Community Care Facility having a teleconsultation via Temi, a remote-controlled robot.
Image: SingHealth

|| The Expo Community Care Facility had to meet strict safety, liveability and sanitation standards.



shower facilities, but also the sourcing of essential medical and communication devices, and furniture. Additionally, each exhibition hall was split into two zones: a red zone for COVID-19 patients and a green zone to house on-site medical staff. Exhaust systems and filters had to be installed to prevent cross-circulation of air between the zones.

The government enlisted various entities, such as state-owned investment company Temasek Holdings, to gather resources required for the facility. For instance, Surbana Jurong, an infrastructure consultancy under Temasek, was responsible for designing and outfitting the facility.

From the healthcare sector, companies such as Woodlands Health Campus and Parkway Pantai were responsible for tasks such as establishing workflows for medical staff and providing manpower for medical operations.

Hospitality firm Resorts World Sentosa provided non-medical care for patients such as cleaning and meal management, while security company Certis CISCO enforced security operations at the venue.

From the public sector, the Singapore Armed Forces activated its medical corps to provide care to patients, supplementing the efforts of the Ministry of Health.

These facilities played a critical role in enabling Singapore to manage the spread of COVID-19 especially after cases started to increase significantly around the beginning of April 2020.

The Outcome

Collectively, the CCF established at Singapore Expo and other venues such as the Big Box shopping mall in Jurong and the Changi Exhibition Centre were able to house more than 17,000 individuals at any one time. These facilities played a critical role in enabling Singapore to manage the spread of COVID-19 especially after cases started to increase significantly around the beginning of April 2020.

As the situation in Singapore stabilised and the number of new daily infections fell during the second half of 2020, the government started to close the CCFs, starting with the Changi Exhibition Centre facility in August. The Expo was also repurposed into a first-of-its-kind “bubble” facility which opened in February 2021 to house business travellers arriving in Singapore without the need for them to serve a period of quarantine, provided they remained at the facility throughout their stay.

The conversion of the Expo into a CCF is an example of a national-level pandemic response that capitalised on the expertise and capabilities of public agencies and private sector entities in a synergistic way. The government negotiated and finalised the land and space requirements with the owners and operators of the venues such as the Expo, but it took the concerted effort of all partners to mobilise the infrastructure, manpower and other resources needed.

These factors have been important elements in the country’s response to the current pandemic, and promise to establish a firm foundation for approaches to future health crises. 🗨️