

First integrated Covid-19 facility for care and recovery

The complex for Covid-19 patients at Changi Exhibition Centre has been expanded to include a new recovery area, which has about 1,700 beds. Built in just two weeks, the new facility, which is located outdoors and leverages technology to improve patient experience and protect workers, received its first Covid-19 patients on Thursday.



FOOD DISTRIBUTION

There are 16 food delivery robots at the new recovery facility that help to carry meals to designated pick-up points. Each robot can carry up to 190 meals per trip and, to increase efficiency, the food carts are fixed onto the robot. They get a full wipedown after the meals are served, mats are sprayed with chlorine solution to clean the wheels, and a UV disinfection robot is deployed in common areas to add another layer of sanitisation.



UV CABINET

Developed by DSO National Laboratories, this cabinet-like machine uses UV energy to disinfect surgical masks, face shields and personal belongings. Each machine can disinfect 30 items at one time and it takes about 15 minutes. "We have tested it up to 30 times. The mask will not be destroyed by this process," said Dr Loke Weng Keong, director of the chemical, toxins, radiological and nuclear defence programme at DSO.



TELECONSULTATION

More than 80 per cent of daily consultations with patients at Changi Exhibition Centre are done via teleconsultation. There are two teleconsultation stations in the recovery facility, compared with six in the care facility. But the two stations also serve as a five-bed sick bay, a resuscitation and stabilisation bay for patients before they are taken to hospital, and a satellite dispensary. There are at least two nurses at each station and volunteers off site are on standby to do on-the-spot translations.



SECURITY

A wall of screens showing CCTV footage from common areas is monitored closely by security officers from Ranger Investigation & Security Services at the joint operations centre. Security systems with geo-fencing and crowd monitoring capabilities alert the officers to any unauthorised entry or overcrowding.



SOLAR

About 1,130 solar panels cover 20 per cent of the recovery facility's projected energy consumption. There are three ground arrays with some of the highest efficiency panels in the market, and a roof array mounted atop two temporary tents. This first-of-its-kind solar tent was the effort of several public agencies and the private sector. There are 17 off-grid solar lamps to light the toilet and laundry areas, solar fences and solar sound barriers will be piloted, and battery energy storage systems are also in the works.

