ENTRANCE SCREENING: SAFE BORDERS

As one of the busier hospitals in Singapore, many come through the doors of Tan Tock Seng Hospital (TTSH) for medical appointments and treatments, or to care and visit a loved one. But what happens when a pandemic strikes and anyone could be a walking carrier of the virus? How does the hospital protect its borders, while maintaining the duty of treating its patients and being compassionate to those whose loved ones are ill?

In the early days of the COVID-19 crisis, administrative and operations staff at TTSH were quickly mobilised to be deployed to the Entrance Screening Stations situated all around the hospital entrances, to screen visitors and patients coming into the hospital. The Entrance Screening Stations were also swiftly set up within 4 hours.

Those coming into the premises would have to pass these screening stations, and complete their Travel & Health Declaration (THD) form which was aimed at capturing pertinent information for timely contact tracing.

These “gantries” aimed to minimise potential risks of COVID-19 infection to the patients, visitors and staff by limiting their exposure to those who had travelled to affected countries or demonstrated acute respiratory infection symptoms.

As the situation continued to evolve, so did the processes and restrictions of entry into the premises.

To ensure accessibility of care to patients in need of attention at the hospital, the team constantly improved the work processes at the entrances and exits, deployed thermal scanners, implemented the use of online forms for Travel & Health Declaration (THD), and eventually, incorporated the national digital check-in system, SafeEntry.

Eyes & Ears to the Ground

When the Ministry of Health declared that Singapore had entered DORSCON Orange, the Visitor Experience Services (VES) team at TTSH had already gone through intense preparations and simulation prior to the announcement.

With Singapore paying close attention to the development of the COVID-19 situation in China and nearby countries, plans to combat the virus were set in motion.

The VES team started planning in early January this year, and while the nation was still in DORSCON Yellow, preparations for going into DORSCON Orange had already begun.

The team planned, designed and implemented workflows/processes, and set up physical Entrance Screening stations with the necessary equipment and materials.

It was all hands on deck with the hospital's senior management demonstrating their active involvement and leadership.

A whole-of-hospital approach was needed. The engineering team worked tirelessly on the electrical and infrastructure set-up, and human resources team activated to augment manpower support to various roles within the hospital and community.

In DORSCON Orange, VES sought for constant improvement in a bid to streamline processes while adapting to the fast policy changes from MOH.

As such, Plan-Do-Study-Act (PDSA), an exercise that focuses on continuous rapid improvement cycle, was frequently deployed.

Using the PDSA cycle, the team was able to test out changes on a small scale, and then built upon the observations, feedback and statistics from these test cycles before implementation across board. By doing this, the process of change is less disruptive for those involved.

To prepare for a potential ramp-up of patient volume at the outpatient clinics, and to better understand the situation on the ground, the team engaged Kaizen Office to conduct a five-day "Time & Motion Study" in March 2020.

This involved keen observations, so as to glean insights that would not be apparent from daily visitor and patient volume data.

The engagement of Kaizen was geared towards validating the VES team's observations and predictions on their operational requirements; as well as injecting statistics to support specifically on the number of counters and manpower.

The Kaizen team observed the trends in the time taken to process a declaration form and the time visitors spent in the queue.

Combining both ground observations and the use of a simulation software, the Kaizen team validated several observations and made recommendations for optimising operational efficiency, and for dynamic allocation of manpower as the visitor and patient volume ebbs and flows throughout the day.

Kaizen's takt time collation and stimulation software provided the VES team with valuable insights and allowed for a forecast on resources required, specifically, the number of counters at the Basement 2 entrance screening station which has the highest visitor traffic in TTSH, with the added element of wait time.

Of course, all these predictions came with a set of assumptions and conditions.

The simulation results provided an added assurance for the VES team's predictions and allowed them to refine their assumptions.

VES also engaged Resource Management's assistance to route the surveillance camera feeds to the temporary VES Ops Support Centre for the team to monitor the ground situation in real-time.

This greatly assisted the team with Just-in-Time (re)deployment of manpower across stations and to render additional assistance when required.

As such, it was not uncommon for entrance screeners to be moved across stations during one single shift. This would also give staff exposure across all stations, and ensuring that they are able to perform the same duties regardless of where they were posted to.

The layout and set-up of each entrance station were also customised, which was consistent with Kaizen concept of oneway flow to facilitate ease in accessibility of tools needed, and smooth handovers between shifts.

The VES team also implemented the 6S methodology at the screening stations, where the placement of declaration questions, hand rubs, and items in boxes were clearly labelled and standardised.

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Point of Entry

The THD form was made available online, allowing THD to take place by accessing a QR code or with assistance by the entrance screeners to key in the information on laptop or mobile devices, a functionality that the VES team worked on with IHiS and other departments to support.

Developed using the FormSg form builder tool, entry results from the online form were extracted and translated into formal reports and charts for data analytics by OCEAN. Based on this information, the VES team was able to finesse manpower deployment according to peak hours and stations.

This information also forms the basis for VES to project and predict the impact of policy changes on manpower and number of stations and counters for future planning.

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The entrance screening involved having visitors and patients complete the THD form, which required them to submit their personal details such as their Singapore identification number or other approved forms of identification for foreigners.

Based on their declaration, entrance screeners would decide the next course of action with reference to an internal decision card developed by the Visitor Experience Services.

The decision card would contain a table stating clearly what the entrance screener should do based on their response to the declaration questions, for example, whether the individual coming in should be given a round sticker or be referred to the NCID Screening Centre. All entrance screeners must be familiar with this decision card before being deployed to their stations.

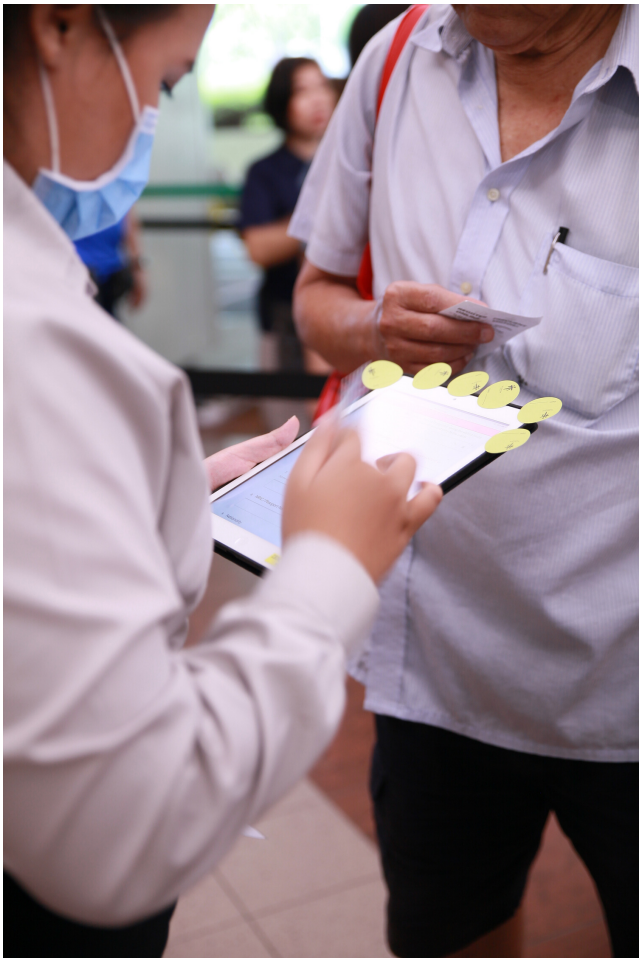
In early May, SafeEntry , developed by the Government Technology Agency, was launched. The system, which was also deployed at TTSH, require all coming into the premises to check-in and check-out, automatically recording the time of arrival and departure, allowing for contact tracing.

Everyone coming through to the premises would need to complete the THD and SafeEntry.

“Having records of who comes through the premises allow for more accurate contact tracing. In addition, we are also safeguarding everyone in the hospital to ensure patients and visitors coming into our premises are not a case definition as classified by MOH. Even if they are, appropriate steps are taken to minimise risk of exposure,” said Ms Cheryl Lim, Director of Operations, TTSH.

A New Normal

The additional steps required for entry - with THD and SafeEntry - would naturally cause some form of inconvenience for those who need to enter the premises, especially since it would require more time for them to come through the doors.



This formed the greatest challenge for the VES team, as they try to get everyone accustomed to THD and SafeEntry.Staff, especially those deployed as entrance screeners, were often questioned on the necessity for such measures, however, these queries have decreased as they gradually start to accept this new normal.

As always, the team, understanding what the visitors and patients would have to go through, worked tirelessly to reduce the inconvenience where possible, by ensuring that the processes are tight and manpower was sufficient to clear the queue as fast as possible.

The need for THD and SafeEntry may be here to stay. While it may not be at our entrances/exits or using the current FormsSG IT platform, we are likely to still have some resemblance of such measures in other forms and incorporated into other IT systems at our inpatient registration counters or SOCs etc.

These are, after all, good practices and necessary for contact tracing purposes.

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