

NUHS, startup Bot MD launch bot that monitors Covid-19 patients in worker dorms

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LAST month, Stephanie Ko received an SMS alerting her that a Covid-19 patient was experiencing symptoms of chest pain. The patient, a migrant worker living in a dormitory under the medical care of National University Health System (NUHS), had used a new platform to report his condition. Dr Ko alerted the dormitory's ground staff, who found him unwell and with an abnormally fast heart rate. Within minutes, they activated an ambulance to transfer him to the National Centre for Infectious Diseases for further evaluation.

The multilingual platform used by the patient, called SGDormBot, was rolled out by NUHS and local healthtech startup Bot MD to help clinicians monitor patients with Covid-19. The bot was piloted in late April in Tuas South Dormitory, and is now used in six NUHS-managed dormitories across Singapore.

It was developed to be easily accessed through widely available social messaging applications such as WhatsApp. Since its launch, more than 90 per cent of Covid-19 patients in NUHS-managed dormitories have used it to log their vital signs daily.

Its user-friendly interface reminds residents to monitor their temperature, heart rate and oxygen levels in their native language. The bot also sends clinicians an instant SMS alert whenever abnormal vital signs are reported, which enables quick interventions through telehealth consultations.

Nearly 500 alerts have been triggered so far. Nearly 100 teleconsultations have been held with the aid of volunteer translators, and of these, more than 20 residents were identified for medical reviews; 11 were sent to hospitals for further treatment.

To date, migrant workers living in dormitories make up more than 93 per cent of all reported Covid-19 cases in Singapore. Despite the expansion of isolation facilities, significant numbers of migrant workers with suspected or positive Covid-19 infections continue to be housed in dormitories, where on-site medical coverage is available only for certain hours in a day.

Dr Jen Wei Ying, associate consultant at the National University Cancer Institute, Singapore, said: "The Covid-19 outbreak among migrant workers in densely-packed dormitories has resulted in a public-health crisis with complex, multi-dimensional problems.

"Tackling this requires an approach which not only addresses our healthcare and manpower resource constraints, but also considers social, cultural, educational and language issues," said Dr Jen, who was one of the clinicians who led the development of SGDormBot along with Dr Ko, an associate consultant at the Division of Advanced Internal Medicine in NUH.

NUHS and Bot MD had earlier developed an artificial intelligence-powered app for frontline medical staff to instantly search hospital-specific information, including Covid-19 guidelines. The chatbot answers questions on several topics, including hospital protocols, drug dosage information and on-call rosters.