

# SingHealth Nursing Software Suite (NSS)

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## Background

By 2030, a quarter of Singapore's population will be above the age of 65. With an ageing population and a declining workforce, the nursing workload in the inpatient setting has also been rising. To better address these challenges, the SingHealth Nursing Task Force was formed to look at streamlining inpatient processes to allow nurses to focus more on direct patient care activities, while also improving staff satisfaction, and empowering patients to be able to be more involved in their own care.

The Nursing Software Suite (NSS) was envisioned to address these pain points:

Nurses do not know what patients want upfront when the call-bell is pressed

Patients do not know the time of their scans / tests

Patients do not have a copy of their test results

Patient's family have no opportunity to speak to the care team to ask questions

Inadequate patient education due to other pressing nursing duties

## Methodology

A multidisciplinary team comprising personnel from Nursing, Inpatient Wards, Communications, IHiS and Office for Service Transformation was formed. The team utilised the iterative **Plan-Do-Study-Act** cycle for the purpose of developing and refining the care processes even as we implemented the Nursing Software Suite (NSS).

Analyse data, feedback & insights from focus group discussions

Synthesise the findings and develop the MVP



The Taskforce conducted design thinking & process-mapping workshops, as well as focus group discussions amongst stakeholders. The insights showed that patients and caregivers wanted a user-centric platform to see their treatment plans, test results, prescribed drugs, and scheduled tests. The platform was also envisaged to allow patients to input their requests or messages via an app directly to the care team.

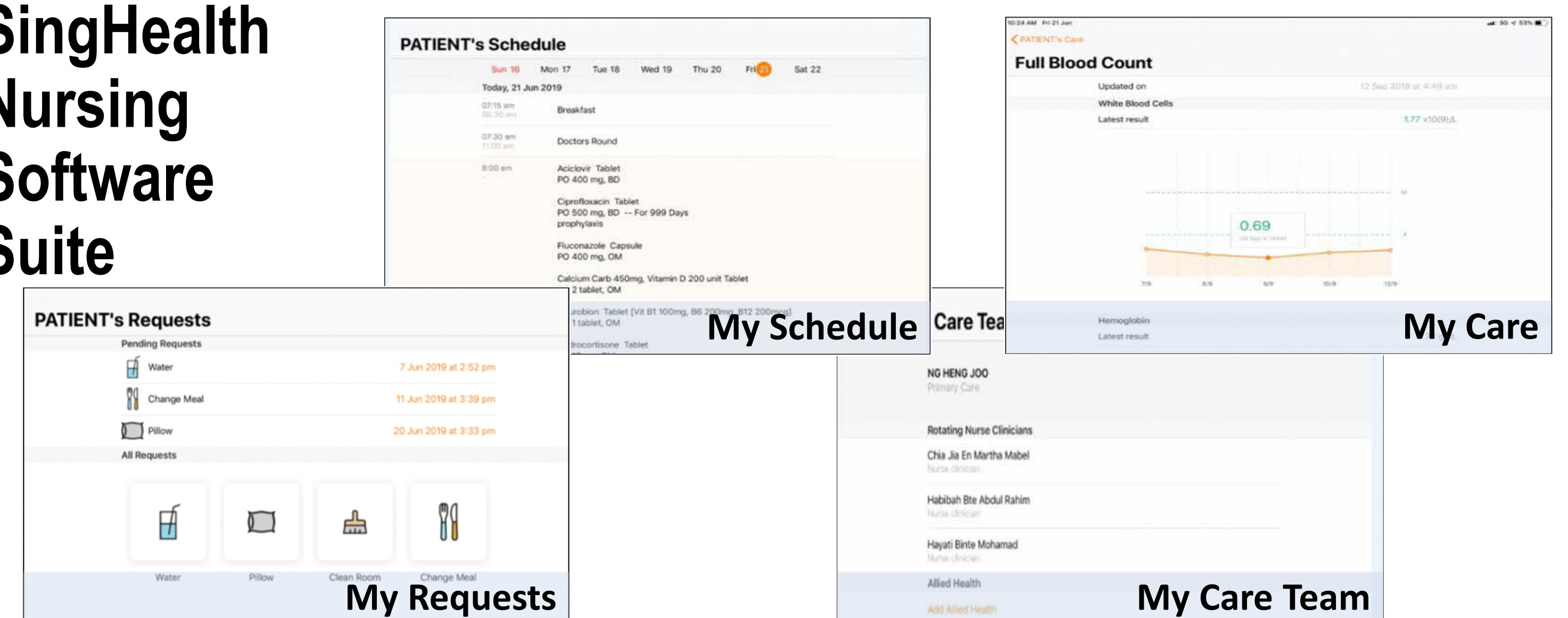
## Pilot

The pilot commenced at SGH in November 2018 and received encouraging feedback from patients and nurses. The success of the pilot had allowed the project to scale to other wards across SGH, KKH, CGH and NHCS from July 2019.

From the initial pilot, work has since started on future iterations of the NSS apps based on the feedback obtained.

## Results

### SingHealth Nursing Software Suite



#### Nurse's feedback

"In the past, patients would ask us everyday for their blood tests results and vital signs. We would then have to go back to our workstation, access their results and jot it down on a piece of paper. With the application now, patients can see everything with the touch of a button and they do not need to ask us for their results anymore, allowing us to focus on other, more crucial tasks."

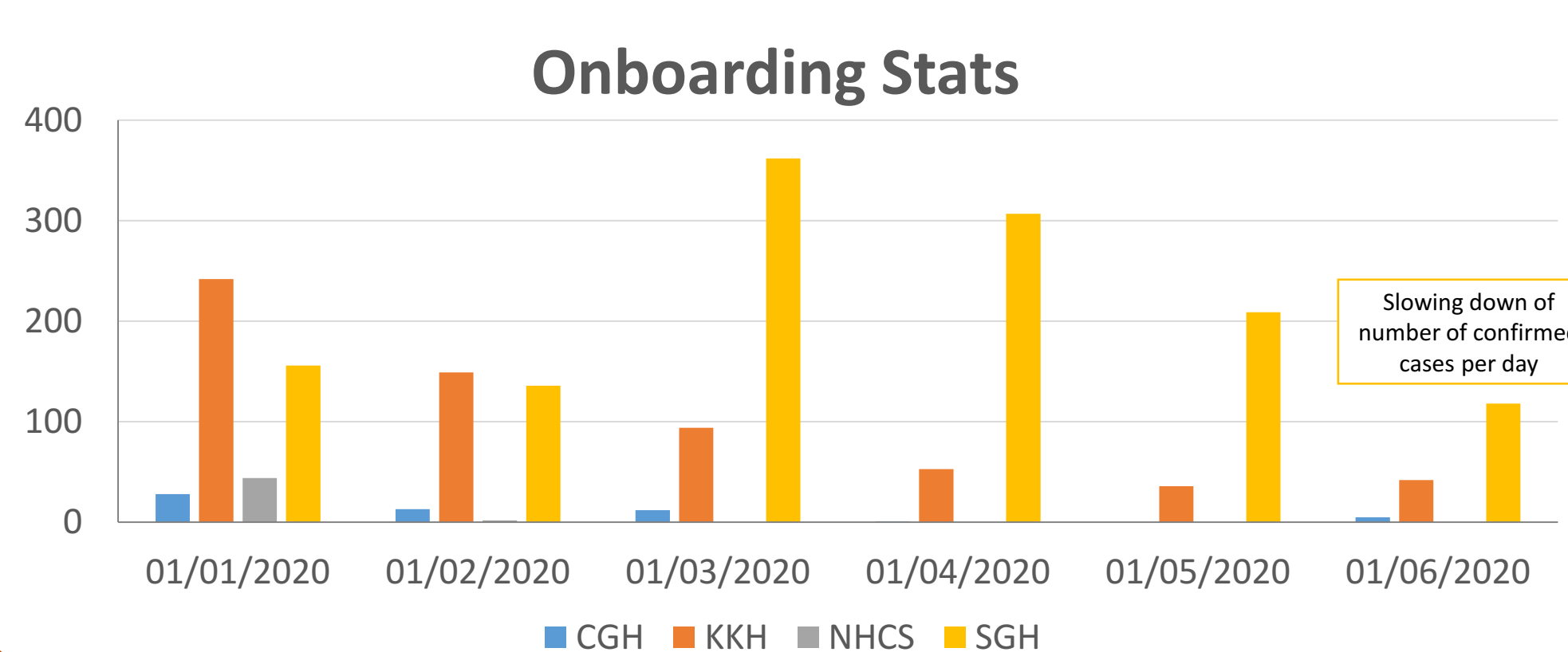
NC Mabel Chia, Ward 77

#### Patients' feedback

"Using the application, I am able to monitor the various results such as my haemoglobin and my absolute neutrophil count, along with a day-by-day trend-line. With this, I know what is going on in my body at any point in time, and I do not have to keep asking for the results from the nurses."

Mdm Koh, a 63-year old patient of Ward 77

## NSS iPads redeployed during COVID-19



iPads diverted to isolation wards.

NSS used for call-bell requests (to minimize face-to-face interaction)

NSS enhanced to be able to display COVID-19 test results

"I personally like the 'My Care' and 'My Schedule' tab within this iPad, so that I can keep track with the latest test results and care schedule. The games and reading materials such as the COVID-19 materials and drawing books are encouraging..."

- patient, ward 68, 05/2020

### Patients found it useful

"I can check my results, vital signs and medication. The games in the iPad is very helpful during the isolation period."

- patient, ward 68, 03/2020

"This iPad is very useful. Didn't feel bored because of the games. Very accessible to details of the result, schedule and information."

- patient, ward 68, 03/2020

## Conclusion

As Singapore journeys towards fulfilling our ambitions to become a Smart Nation, our processes in healthcare must similarly catch up and we must not be averse to adopting apps or technology, as these will ultimately benefit both staff and patients. The Nursing Software Suite provides a glimpse of our vision of the future of inpatient care, where we can have richer integration of systems and processes so as to coordinate more seamless and deliver more patient-centric care to help our patients in their recovery to health.