Singapore Healthcare Management 2024

Singapore General Hospital
SingHealth

Role-Based Messaging for more Efficient Healthcare Communications

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BACKGROUND

Effective communication among healthcare team members is essential for **care coordination**, communication of **clinical needs**, critical results **notification**, and notification of deterioration.

The de facto process involves:

- Nurses manually sourcing contact numbers of the intended healthcare professional/department, calling, and conveying the message verbally
- Commonly done by searching through **paper copy rosters, rosters in intranet/emails** or using the **staff directory app** on personal devices.

	Day Roster (During Office Hours)
Type of Roster	1. Cardiology (CVM) 2. Division of Medical Oncology (DMO) 3. Division of Supportive & Palliative Care (DSPC) 4. Emergency Medicine (DEM) 5. Dermatology (DER) 6. Endocrinology (END) 7. Family Medicine and Continuing Care (FMCC) 8. Gastroenterology & Hepatology (GAS) 9. Geriatric Medicine (GER) 10. Haematology (HAE) 11. Infectious Diseases (INF) 12. Internal Medicine (DIM) 13. IM Con Leave Forecast 14. Neonatal & Development Medicine (NEO) 15. Neurology (NEM) 16. Occupational & Environmental Medicine (OEM) 17. Psychiatry (PST) 18. Rehabilitation Medicine (RMD) 19. Renal Medicine (REN) 20. Respiratory & Critical Care Medicine (RCCM) 21. Rheumatology & Immunology (RHI)

Challenges include:

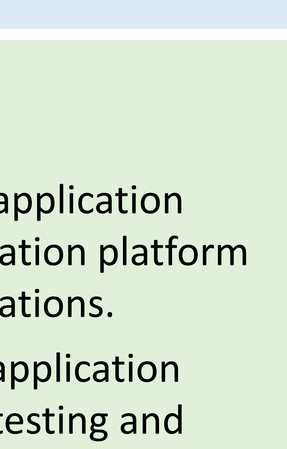
- **Difficulty in sourcing contact** information, especially for overflow cases where the patient's discipline and team doctors are not familiar to the ward nurses.
- **Limited landlines** and **phone availability** during peak nursing and medical activity, impacting nurses' ability to call and clarify.
- Non-ward-based healthcare professionals (e.g., doctors, allied health colleagues, laboratory colleagues) often struggle to reach specific ward nurses via **generic ward phone lines**.
- Staff might not be able to recall all specific details of a verbal call

Night Roster (After Office Hours)

1. Division Call Roster for Consultant and Registrars
2. Medical Officer / House Officer Call Roster*

Visit the "Doctors Orientation" page for useful information on:

- Call coverage and shift hours
- Doctors' on call rooms and Toughbook lockers location
- Clinical Handover and SBAR Communication Procedures



AIM

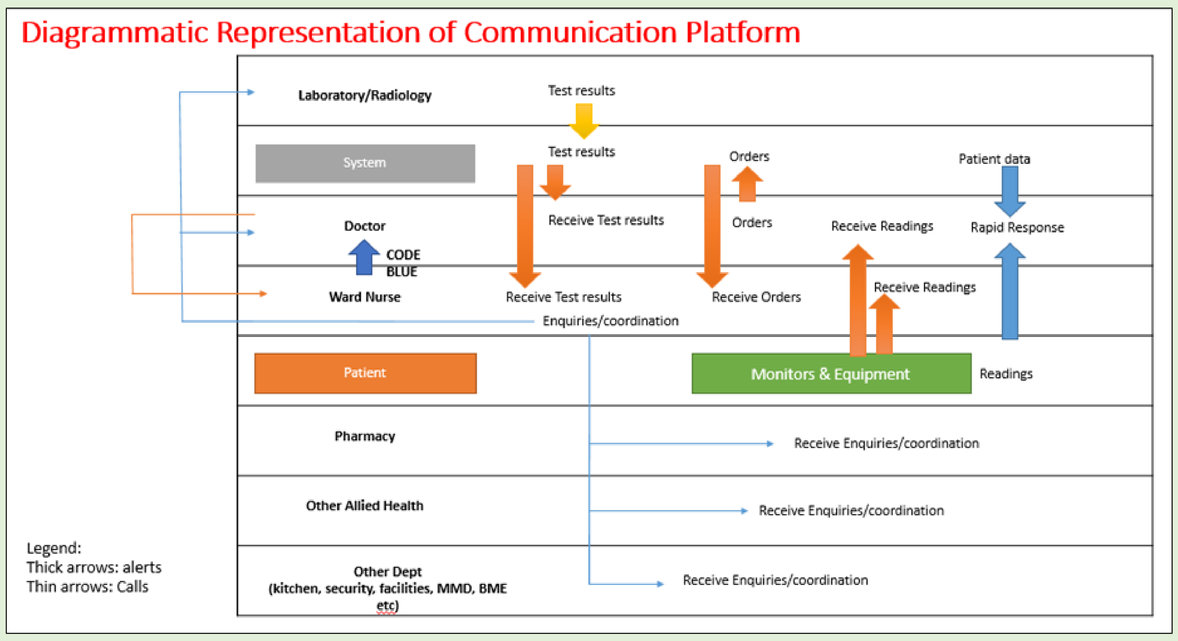
- To **enhance communication** between healthcare staff by **reducing time taken** to ascertain identity and contact number of physicians/medical/nursing team members.

METHODS

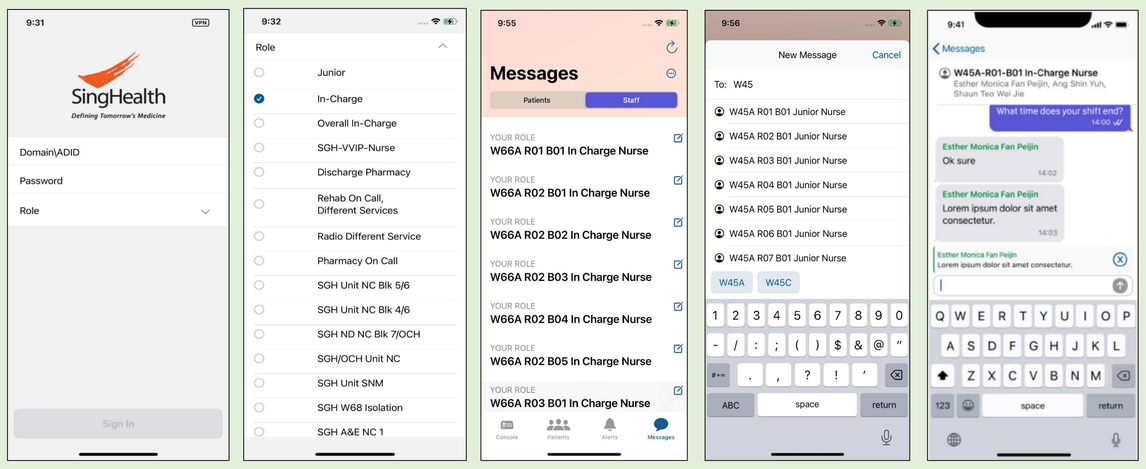
- The project team collaborated with a mobile application developer and Synapxe to create a communication platform within **StaffHub**, an app supporting staff operations.
- **Agile methodology** was used to develop the application allowing for iterative development, frequent testing and incorporation of user feedback throughout the process.
- Instead of searching for specific individuals, the platform allows staff to look for **specific roles** (e.g., nurse in charge for W45 room 1 bed 1, or HO1 on-call).

ACKNOWLEGMENTS

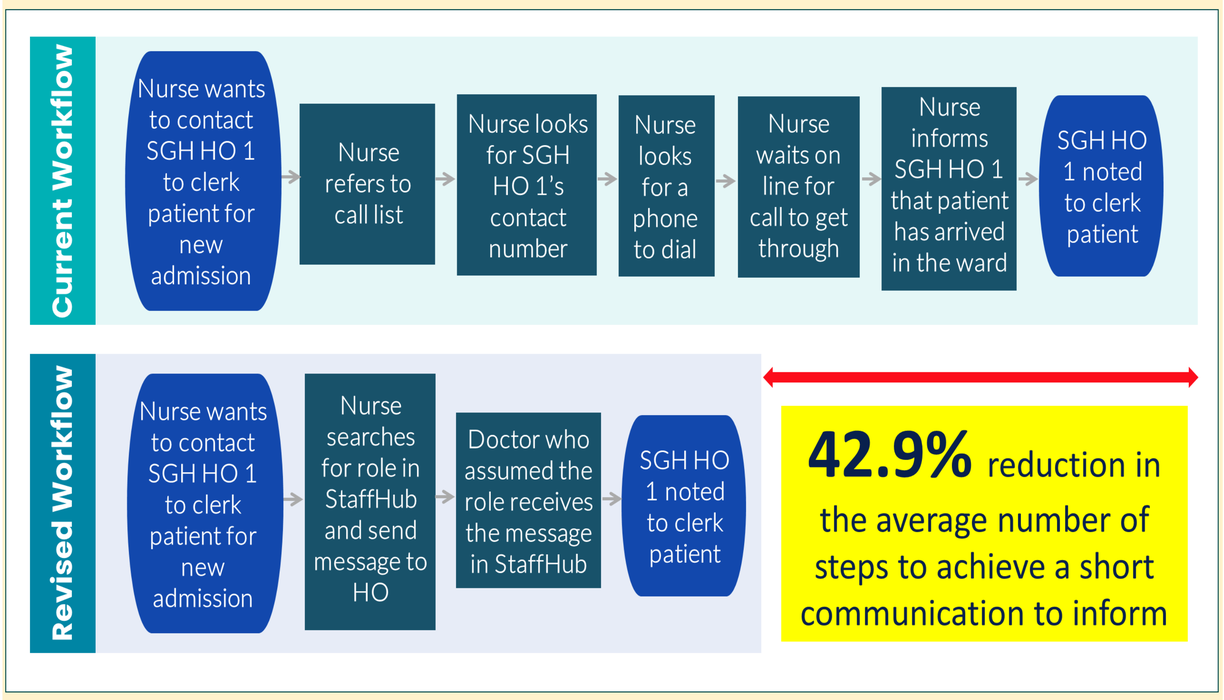
The project team would like to acknowledge our Synapxe colleagues Mr Patrick Ng and Mr Shaun Teo for supporting the project, as well as NCS Singapore for the App development.



StaffHub App

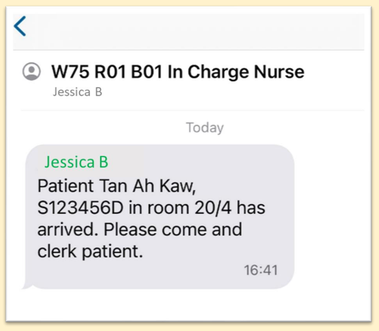


RESULTS



Sample Message sent by Nurse to SGH HO 1

Sample Message received by SGH HO 1



CONCLUSION

- Role-based communication has the potential to **minimize the time** and **effort** required in healthcare communication.
- It can **increase efficiency** and improve the **timeliness** of care provision.
- Ongoing feedback and data collection will inform further improvements to the system.