

BACKGROUND

NUHS@Home seeks to address the **impending shortage of hospital beds** by reimagining the way we deliver inpatient care by **bringing hospital-based services to patients within the comfort and safety of homes**. The concept is internationally known as hospital-at-home, and has been well established to be a less costly way to provide inpatient care with comparable clinical outcomes.

OUTLINE OF ISSUE

Due to its ageing population, Singapore is projected to have **insufficient number of hospital beds** within the next decade. There will also be **insufficient doctors and nurses** to staff these beds. The **COVID-19 pandemic** and the demand it placed on our hospital resources further increased the need to reimagine the delivery of care to meet these challenges, by bringing inpatient care to the community.

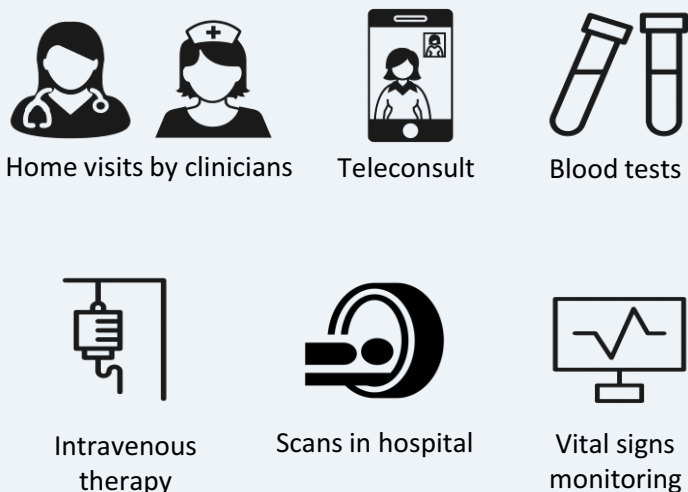
IMPLEMENTATION

Patient Journey



- Patients may be identified from different sources, e.g. Inpatient, ED and community.
- Patients will be screened for suitability by the NUHS@Home team.
- Nursing assessment through physical home visit or via tele-consult.
- Set up vital signs monitoring equipment, educate patients and caregivers on self-management of medications.
- Daily multidisciplinary team meeting to discuss care plans.
- Patients are assessed if they required any additional procedures, e.g. scans, investigations, physiotherapist visit.
- When patients fit discharge criteria, patients will be discharged with discharge medications, hospitalisation leave, and arrangement for SOC or polyclinic follow up.

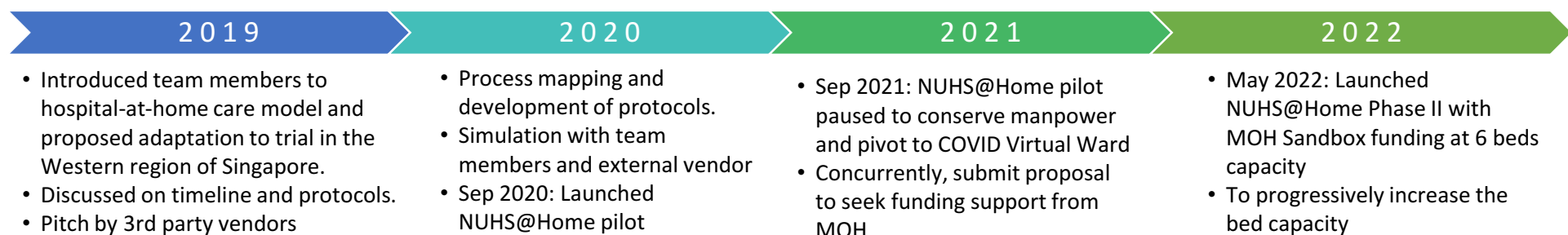
Elements of Care



Team Composition

- Consultant** : Assumes overall responsibility of care and develop protocols
- Resident**: Assists with ward rounds via tele-consult or physical review and standby for after office hours on call duties
- APN**: Oversees staff nurses and 3rd party service provider to ensure protocols are adhered
- Staff Nurse**: Assumes nursing responsibility of care through physical or virtual assessment
- Care Coordinator**: Escalates potential abnormal sign to clinicians via remote vital signs monitoring
- Pharmacist**: Prepares medication and develop medication dispensing protocols
- Program Coordinator**: Coordinates with internal and external stakeholders to facilitate patient transfer
- Other Allied Health**: Assessment on as required basis

Development Timeline of NUHS@Home



DEVELOPMENT OF IMPROVEMENT FROM NUHS@HOME PILOT

- ✓ **Clinical Outcome**
 - 14.6% 30-day readmission rate
 - 0.83% mortality rate
- ✓ **Costs**
 - Direct cost saving of 50% - 70% lower than usual hospitalisation due to avoidance of fixed hospital charges in inpatient setting
- ✓ **Length of Stay (LOS)**
 - Hospital bed days saved per NUHS@Home patient – Average LOS 4 days (median length of stay)
- ✓ **Experience**
 - Positive patient and caregiver satisfaction with the programme.

SUMMARY

- Inpatient hospitalisation has been the conventional strategy to care for acutely ill patients within our healthcare system. Hospitalisation in itself also carries potential risk, especially for elderly patients, with increasingly potent nosocomial infections, and risk of hospital-acquired deconditioning.
- Bringing inpatient care into homes is a potential long term solution to Singapore's challenge of addressing the healthcare manpower shortage which will be exacerbated by our aging population.