

## **Project Title**

Transforming Community Care through a new healthcare workforce

## **Project Lead and Members**

Project lead: Johnny Chan, Assistant Director

Project members: Jennifer Lu, Jeffrey Yoo, Tay Kee Kian, Liu Qing Mei

## **Organisation(s) Involved**

National University Health System (NUHS)

## **Project Period**

Start date: 2017

Completed date: 2019

## **Aims**

The healthcare sector faces severe labour constraints and it is thus imperative that we explore alternative models of care delivery and organization, while not compromising care outcomes.

## **Background**

By 2030, 25% of the Singapore population is estimated to be above 65 years old. Compounded by age-related chronic medical conditions, more healthcare professionals are required to deliver care. There is a need to innovate and transform care to overcome healthcare manpower constraints.

Most of the work in CareHub's transitional care and CHPs initiatives were spearheaded by nursing staff. This worked well due to the depth and breadth of nurses' clinical expertise. However, the competing demands for resources between community and acute care have led to challenges in recruiting nursing manpower in CareHub. At the same time, there was an existing group of staff in CareHub who were assisting in care coordination roles. This presents us with an opportunity for us to innovate, rethink our care model and transfer some of these tasks from nursing to manpower resources we already have.

## Methods

CareHub's nurse clinicians and operations leads have identified the following thrusts:

- 1) To map out CareHub services and peg appropriate services to the alternate workforce,
  - 2) To develop a training framework and clinical protocols to ensure that staff are appropriately trained and guide delivery of care, and
  - 3) To develop a structured career pathway for staff morale and retention.
- 4) CareHub envisages that this new workforce (called CareHub Coordinators) will work in partnership with other healthcare professional in CareHub's integrated team to deliver care in the community.

### Roles of CareHub Coordinators:

Together with clinicians and community nurses, CareHub mapped out the roles and skillsets required to perform various tasks to enable care its patients. Through this process, we have identified basic clinical tasks and roles (e.g. health counselling and telehealth) that could be performed by the CareHub Coordinators.

### Training:

Based on the roles identified, we have developed a training framework to ensure that CareHub Coordinators are equipped with the necessary skills and knowledge, taking care not to "over-medicalise" the roles (and prevent "over-training"). (Table 1) We have also developed a set of clinical protocols to guide staff in delivery of care, ensuring consistency in standards.

CareHub Coordinators are recruited from degree / diploma holders with from non-traditional healthcare fields, and undergo on-job-training and preceptorship supervised by CareHub's nurse clinicians over three months. CareHub Coordinators will have to complete an assessment before they are certified to deliver care independently. As they gain experience, they will be able to manage more complex patients in CareHub progressively.

As we continue to expand the pool of CareHub Coordinators, we seek to work with tertiary institutions (e.g. Polytechnics) to embed relevant elements into the curriculum for existing, or potentially new diplomas. CareHub would also offer internship opportunities for these

students to shorten the on-job-training phase if they subsequently join the healthcare sector.

Career Progression:

To fulfil staff aspirations, we have also designed a career progression roadmap (Figure 5). to allow them to advance to leadership positions within CareHub. Today, three staff have already been promoted to leadership positions amongst the CareHub Coordinators, and are also involved in training of new joiners. CareHub Coordinators have also been involved in projects (e.g. telehealth) to hone their leadership and planning competencies.

## Results

Since Apr 2017 to date, 36 CareHub have been recruited and trained. CareHub Coordinators have also been deployed to a total of 4 community programmes to support and train staff from other teams. In 2019 alone, they supported a total of 56 community events and have worked in partnership with community nurses to operate over 600 CHP sessions in 15 sites across the Western region of Singapore. A total of 3185 Tier 1 patients have been served by CareHub Coordinators.

Deploying CareHub Coordinators instead of clinical manpower generates savings in terms of manpower and professional development costs. Task shifting allows CareHub Coordinators to take on jobs that were previously performed by nurses; this holds promise for rapidly filling the health care workforce deficit. Quick turnaround in training time (3 months) allows CareHub Coordinators to be ready to provide services much earlier than nursing counterparts.

Basic care roles were passed onto CareHub Coordinators, and thereby resulted in higher nursing manpower productivity while maintaining the same quality of care. Nurses can focus on performing more complex care tasks, as well as serve more patients. This was measured by a time motion study and patient-to-nursing ratio. Before the introduction of CareHub Coordinators, the patient-to-nursing ratio was 21:1 in 2016. After CareHub Coordinators were deployed, the patient-to-nursing ratio increased to 40:1 in 2017, 120:1 in 2018, and 156:1 in 2019.

Based on an internal survey, CareHub Coordinators also reported feeling better supported and had greater clarity of job roles after their integration into CareHub.

## Lessons Learnt

The development of the CareHub Coordinator workforce was driven by pragmatism and a desire to scale up our efforts in the community. Management and clinical support were crucial in this journey – from allowing us to explore the idea of “right-sizing” jobs to a new work group, to our nursing leaders stepping forward to lead and develop the training for the CareHub Coordinators.

Cost effectiveness is thus ensured as patients can now be matched to an appropriate staff for the right care, based on their needs. In the community, we are also starting to see an increase in demand for staff who may not be traditionally healthcare-trained, but are equipped them with the relevant skillsets.

## Conclusion

CareHub has managed to target improvements at different levels of the healthcare system:

- a) Patients are able to benefit from improved clinical outcomes in terms of reductions in readmission rates and length of hospital stay. There was also positive impact on clinical outcomes of post-discharge over a longer follow-up period of six months. CareHub Coordinators have also provided support and health coaching during the transitional phase of patients’ care journey to empower them towards self-care.
- b) Through manpower consolidation and job redesign, staff gain more job satisfaction and this translates into better staff retention and lower manpower search costs.

## Project Category

Workforce Transformation

## Keywords

Workforce Transformation, Job Redesign, Informal Workforce, Training Framework, Professional Development, Career Pathway

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# Transforming Community Care through a new healthcare workforce

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## BACKGROUND

By 2030, 25% of Singapore population is estimated to be above 65 years old. Compounded by age-related chronic medical conditions, more healthcare professionals are required to deliver care. There is a need to innovate and transform care to **overcome healthcare manpower constraints**.

## OUTLINE OF ISSUE

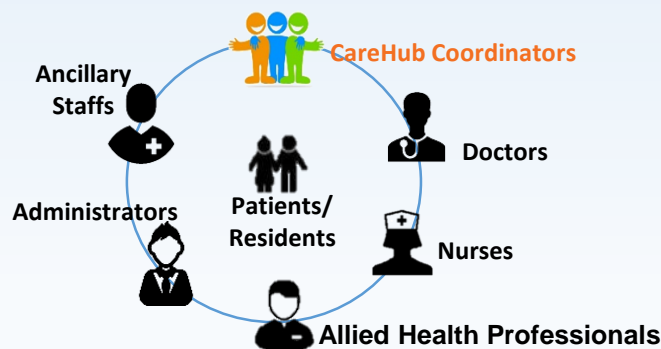
Established in 2017, NUHS CareHub is a one-stop call and care coordinating centre that supports patients with post-discharge needs, and at-risk residents in the community. Due to competing demands for scarce trained healthcare resources between community and acute care, **CareHub has embarked on an initiative to develop a new healthcare workforce for the community. This would enable scaling up of operations in the community.**

## IMPLEMENTATION

### Implementation Timeline

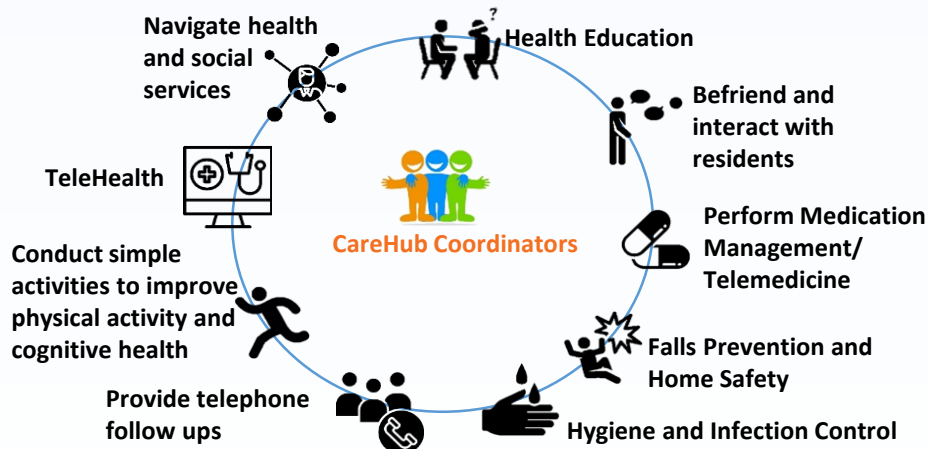
Pre-implementation	Phase 1-Starting Out	Phase 2-Training	Phase 3- Progression			
<ul style="list-style-type: none"> <li>• Mapped CareHub processes, defined CareHub Coordinators and Nursing roles</li> <li>• Introduced Care Protocols</li> <li>• Established professional development framework</li> </ul>	<ul style="list-style-type: none"> <li>• CareHub Coordinators started managing Tier 1 (simple) cases</li> </ul>	<ul style="list-style-type: none"> <li>• Began medical training for Tier 3 patients</li> <li>• Started Motivational Interview training</li> </ul>	<ul style="list-style-type: none"> <li>• Started tele-monitoring by CareHub Coordinators</li> <li>• CareHub Coordinator anchor CHP alone</li> <li>• CareHub Coordinators Inter-Disciplinary meetings (conducted by CareHub Advanced Practice Nurse)</li> </ul>			
<p><b>Phase 1 -Feedback</b></p> <ul style="list-style-type: none"> <li>• Commenced weekly journal club to share cases and to feedback on services for improvement</li> </ul>	<p><b>Phase 2-Development</b></p> <ul style="list-style-type: none"> <li>• Initiated management of Tier 3 patients</li> <li>• CareHub Coordinators started service at CHP with nurses</li> </ul>					
Mar'17	Apr'18	Jun'18	Aug'18	Dec'18	Mar'19	Feb'20

**1** CareHub envisaged that this new workforce (CareHub Coordinators) will work in partnership with other healthcare professionals in CareHub's integrated team to deliver care in the community.



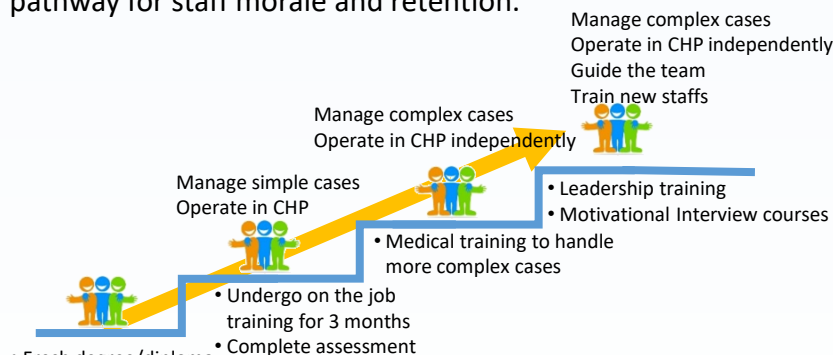
*A new healthcare workforce as part of CareHub integrated team (CareHub Coordinators)*

**2** CareHub Coordinators would be laypersons with non-healthcare backgrounds, but provided with on-job-training to operate in the community. The goal is to prevent "over-medicalising" services and avoid having to deploy highly skilled and comparatively more costly healthcare manpower for basic care needs.



*Roles of CareHub Coordinators*

**3** CareHub developed a training framework and clinical protocols to guide delivery of care and ensure that staff are appropriately trained. In addition, CareHub established a structured career pathway for staff morale and retention.



*Training and Career Progression*

## MEASUREMENT OF IMPROVEMENT

- ✓ **Positive system level outcomes**
  - 36 CareHub Coordinators have been recruited and trained
  - In 2019, supported a total of 56 community events
  - Operated in over 600 CHP sessions in 15 sites across the Western region of Singapore
  - A total of 3185 tier 1 patients served by CareHub Coordinators
- ✓ **Improved clinical outcomes**
  - Reduction in readmission rates and length of hospital stay
- ✓ **Staff Satisfaction**
  - Staff feel better supported and had greater clarity of roles
  - Better staff retention and lower manpower search costs

- ✓ **Productivity Gains**
  - Increase in Patient-to-nursing ratio: **2016 - 21:1 ; 2017 - 40:1 ; 2018 - 120:1 ; 2019- 156:1**
- ✓ **Savings to healthcare system**
  - Task shifting generates savings in terms of manpower and professional development costs
  - Relatively short training time (fresh graduations with 3 months training) – this allows for CareHub Coordinators to be operationally deployable earlier
- ✓ **Enhanced patient care model**
  - CareHub Coordinators provided support and health coaching to empower patient towards self-care

## SUMMARY

- Management and clinical support was essential in the development of the CareHub Coordinator workforce.
- CareHub's in-house training have equipped this group of staff, who have no prior healthcare experience, with the skills and confidence to work in partnership with existing healthcare professionals to provide care in the community. Patients can now be matched to an appropriate staff for the right care, hence ensuring cost effectiveness. This also frees up existing healthcare professionals to manage complex patients, meeting the increase in demand for healthcare workforce in the community.
- Through job redesign, staff gain more job satisfaction and an overall patient-level improved clinical outcomes.