Care Redesign for Referral to Nursing Home through Collaboration and Use of Value Stream Mapping
Outline of Presentation

1. Background – The need for change
2. Using a Value Stream Mapping approach
3. Preliminary results
4. Our insights
Background – The Need For Change
New nursing home in Hougang to have 290 beds

Thye Hua Kwan Moral Society will run home when it's ready next year

By MELODY ZACHARIS

A new nursing home with 290 beds is being built in Hougang and will be ready next year.

The Ministry of Health's nursing home will be operated by voluntary welfare organisation Thye Hua Kwan Moral Society. The home is part of the society's bid to do more for the community as it celebrates its 71st anniversary this year.

Some $12.5 million of the $35.1 million the society raised at its charity show in January will help patients who cannot afford fees at the home.

Meanwhile, the society's new therapy centre in MacPherson for children and a therapy centre in Tukah Blangah for the elderly will be ready in the next two months.

Speaking at the anniversary celebrations at the Singapore Marriott Tang Plaza Hotel yesterday, the society's chairman, Mr. Lee Kim Siong, thanked donors for their contributions.

He said one of the organisation's many objectives is to relieve the hardships of the elderly.

"We will continue to serve everyone better. What we do is a reflection of society's demands, and to provide for people as best as we can," he said. The opening of the children's therapy centre, for instance, is a result of children's disabilities being discovered at an early age these days, as well as parents wanting to send them for therapy as early as possible.

The society now runs more than 70 other programmes and services.

The celebrations were officiated by Minister for Social and Family Development Tan Chuan-Jin.

Considering the group on its years of years of pro-fund care and therapy, they said, it was a sense of achievement for them.

"We are proud to be the second largest society in Singapore," he said. The home will cater to residents with physical, mental, and emotional disabilities.

Kwong Wai Shiu starts its $96m transformation

Last of six buildings torn down to make way for 12-storey hub for elderly and community

Jasmin Tai

The Kwong Wai Shiu Integrated Health Services Centre is on schedule to be completed by early 2022 to help meet Singapore's growing healthcare needs.

The centre, which will be the last of six buildings to be torn down at the Kwong Wai Shiu Hospital site on Sungei Road, will have a 12-storey hub for elderly and community care.

The centre is part of a $96 million transformation of the hospital, which has been in operation for 122 years.

The centre will provide a range of services for elderly residents, including inpatient and outpatient care, rehabilitation, and home care.

The centre is expected to provide care for around 1,200 residents a year.

Small nursing homes feel the squeeze as new rules kick in

Nursing homes in the pipeline

The plan is to have at least 30 new nursing homes open by 2023, with at least 7,000 beds available.

Last month, the Ministry of Health announced the opening of a new nursing home in Hougang.

The new home, which has 100 beds, is set to open in the first quarter of 2022.

The plan to increase the number of nursing homes is part of a wider effort to improve healthcare in Singapore.

The government is aiming to increase the number of nurses and doctors in the healthcare sector to meet the growing demand for care.

The plan is expected to create around 3,000 new jobs in the healthcare sector.

The ministry also plans to increase the number of nurses and doctors training in Singapore, with a target of 5,000 new healthcare professionals by 2025.
Reasons For Action
- From Organizations’ Perspective

• Intensive processes to assess and ensure the admission of right patients i.e. medically, psychologically, socially and financially compatible

• Projected increasing demand for NHs with ageing population

• Multiple hand-offs, and non-optimised referral processes leading to:
  - Large number of patients awaiting NH placement in RH which affects RH’s capacity to take in acutely-ill patients
  - Long turnaround time and wait for NH placement

• Optimize national resources for all hospitals and NHs

• Reduce national bed crunch in RHs

• Improve right siting of patients to NHs

• Timely placement of patients to NHs
## Reasons For Action
- From Individuals’ Perspective

### RH Staff’s Voices
- Complicated referral criteria from NH, e.g. long list of requirements and supporting documents
- Variation in referral criteria from NHs e.g. MDRO swaps, utility bills, etc.

### NH Staff’s Voices
- Need to call MSWs frequently for clarifications or for more information
- Difficulty in contacting NOK of patients, e.g. uncontactable, change in contact number
- Required social / medical reports not uploaded onto AIC portal

### Patients’ / NOKs’ Voices
- Long Application Process
- Request for duplicated information
Residential Services Workgroup

Set up in Oct 2015, in response to the current NH landscape, to review and address the challenges pertaining to residential services placements with the aim to develop efficient and effective models and streamline processes.

Terms of Reference

1. Advise and lead on the business process reengineering / value stream mapping for all residential placements from the hospital to the homes with the aim of reducing the time required to move patients to the long-term care arrangements.

2. Propose and explore more cost-effective solutions to better manage patients who need more time to sort out their long-term care plans.

3. Propose changes to policy and operational frameworks, such as means-testing, to speed up the flow of patients out of the hospital.

4. Propose a series of social archetypes of patients and families with respective protocols to address their issues.

In partnership with Ren Ci, St Theresa, Thye Hua Kwan NHs & AIC, TTSH embarked on our VSM journey in Oct 2015.
Using a Value Stream Mapping approach
Value Stream Approach

1. Value Stream Scope
   - Establish project scope, targets & stakeholders involved with process sponsors & owners with the use of SIPOC

2. Current State Mapping
   - Understand initial state through a “Go & See” approach and current state mapping to identify waste (DOWNTIME)

3. Root Cause Analysis
   - Understand the root causes of key issues through cause & effect analysis

4. Ideal State Mapping
   - Facilitate paradigm shifts; generate ideas for change

5. Future State Mapping
   - Co-create future state using lean principles

6. Implementation Plan
   - Develop action plans

7. Implementation of future state plan
   - Implement future state plan and monitor progress (PDSA phase)

8. Standardise for later improvement

Flowchart:

- Value Stream Scope
  - Current State Mapping
    - Root Cause Analysis
      - Ideal State Mapping
        - Future State Mapping
          - Implementation Plan
            - Implementation of future state plan
              - Standardise for later improvement
## Project SIPOC

### Suppliers

**TTSH**  
Ops (Comm)  
MSW  
Nursing Service  
General Medicine  
Neurology  
Neurosurgery  
Geriatric Medicine  
SOCU

**AIC**  
Care Transition Office

**Nursing Home**  
Ren Ci NH (Moulmein)  
THK  
St Theresa Home

**MOH**  
Aged Planning Office (APO)  
Aged Care Services (ACS)  
Health Finance

### Input

<table>
<thead>
<tr>
<th>Staff</th>
<th>Process</th>
<th>Output</th>
<th>Customers</th>
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</table>
| Action Team  
PACH  
Care Coordinators  
WRNs  
MSW  
MSW Exec  
Doctors  
Dietician  
Speech Therapist  
Physiotherapist  
AIC Referral team  
Ren Ci / THK / STH staff  
MOH staff | Improving NH Referral Turnaround Time and Right Siting of Patient to NH  
*Start Point: Referral source creates referral*  
*End Point: Patient admitted to Nursing Home* | 1) Improve turnaround time from identification of potential NH patients to NH referral submission  
2) Improve turnaround time of NH referral upon submission to patient admission to NH  
3) Clearer referral criteria from AIC and NH | RHs  
Patients  
MOH

### Process

**Project Sponsors:**  
1) Dr Jamie Mervyn Lim (TTSH COO);  
2) A/Prof Thomas Lew (TTSH CMB);  
3) Dr Wong Loong Mun (AIC)  
4) Loh Shu Ching (Ren Ci);  
5) Victor Seng (St Theresa);  
6) Ardi S Hardjoe (THK)

**Project Owner:**  
1) Dr Fereen Liew (TTSH);  
2) Ng Tzer Wee (TTSH);  
3) Ivy Lok (AIC);  
4) Lien Shieh Yng (Ren Ci, SPOC)  
5) Sim Teck Meh (Ren Ci)  
6) Bridget Monica Das (Ren Ci)  
7) Victor Seng (St Theresa);  
8) Ardi S Hardjoe (THK)  
9) Ang Cai Qiang (THK)

### Output

| Secretariat: | 1) Ong Yi Ni (TTSH);  
2) Ong Ming Hui (AIC) | 8) Improve patient / NOK satisfaction | RHs  
Patients  
MOH

### Customers

**RHs**  
Patients  
MOH

**AIC**  
NH  
RH  
Patients  
MOH

**NH**  
Patients  
NH Board

**Systems**  
IRMS  
CPRS  
SAP  
Casenotes  
HHMT  
NHELP  
NMTS  
Forestcare

**Equipment**  
BSU beds  
NH beds

**Forms**  
Paper and electronic forms used in TTSH, AIC, RenCi and St Theresa

**Secretariat:**  
1) Ong Yi Ni (TTSH);  
2) Ong Ming Hui (AIC)  
8) Improve patient / NOK satisfaction  
9) Policy review at governance level
Referral Source submits referral
AIC assesses for eligibility
Nursing Home assesses for admission
Patient Admitted to Nursing Home

Type of Case: General Cases (80% of cases)
Start Point: Referral source creates referral
End Point: Patient Admitted to Nursing Home

Wait List for Matching Vacant Bed

Scope of process review is on general cases as Ren Ci Moulmein and St Theresa Home only admit this group of patients.
Current State Mapping

1. Major Step
2. Process Step
3. Data Box
4. Forms, Photos & Screenshots
5. Waste
6. Handoff Diagram
7. Headlines

“Go & See”
Key Findings from Current State Mapping

100 steps within TTSH to submit a NH referral, ~ 50% deemed value-added to patient

Long time to prepare the application documentation

95% of all NH applications are reverted back

Duplication of work and information by different staff / in separate records

Inconsistent application requirements from Nursing Homes

Lots of Clarification between TTSH MSWs, AIC staff and NH MSWs

Significant TIME is spent waiting at each step
### Key Issues Faced

<table>
<thead>
<tr>
<th>Issue</th>
<th>Details</th>
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| 95% revert back by AIC | - Inadequate/unclear medical, nursing & social information  
- Inconsistent information filled in by different parties |
| Lack of understanding by TTSH doctors / nurses in the NH application process | - Referrals put up too early  
- Incomplete referrals |
| Inefficient use of resources | - Constant chasing for submission of medical, financial and social information & documents  
- Repeated attempts for clarifications |
Gap Analysis

Policy and regulation requirements

Complex and dynamic patient issues

Lack of awareness

No standardized training

Lack of clarity in roles

IT system not streamlined

Lack of standardization in work practices

Trust issues

- A lot of chasing by MSW to submit medical, social and financial documents
- 95% revert back by AIC
- Lack of understanding by TTSH doctors / nurses in the NH application process
- Clarifications by NHs to RH MSWs and ward nurses
- Root Causes
Collective Goals

• **Total Turnaround Time**
  – Initial State: 50 working days (75th percentile)
  – Target State: **23** working days (75th percentile)

• **Revert back**
  – Initial State: 95%
  – Target State: **0%**

• **Staff & Patient** Satisfaction
Future State Strategies

1. Collaborate collaborate & collaborate
   - Standardise information needed
   - Reduce duplication
   - Reduce handoff
   - Optimise manpower expertise
   - Go for First-time Right

2. Provide clarity of roles

3. Error proof processes

4. Use standard work
## Future State (1/2)

<table>
<thead>
<tr>
<th>Key Change</th>
<th>Purpose</th>
<th>What are in place?</th>
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<tr>
<td>Single Point of Referral for all NH referrals</td>
<td>Reduction in the number of inappropriate NH referrals</td>
<td>Ward principal nurses will conduct patient screening and refer potential NH patients to MSWs. MSWs will assess patients’ suitability for NH placement and trigger the NH application.</td>
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| Standardization of information to be collected | Standardization of information required and reducing the number of check backs and clarifications | 1. Standardization of Medical, Nursing and Social and Financial information required  
2. A common check list of care options for the MSWs to explore possible care options for patients and NOK |
A team of AIC staff is stationed in TTSH and responsible for:

1) Entry and updating of patient’s Nursing information onto IRMS
2) Consolidating the medical and social reports from care team and informing all stakeholders (nurses, patients and their NOK) of the result of the NH application
3) Matching and right-site patients to available NH beds
4) Ensuring updated and timely medical information is updated onto IRMS (patient medical fitness for NH placement is checked at key intervals)
Preliminary Results
Our Results So Far

Initial State: **50** Working Days (75th percentile) (excluding waiting time to match a suitable bed)

Result: **14** Working days (75th percentile) (excluding waiting time to match a suitable bed)

* Data is based on General NH cases and admitted to NH, comprising of a total of 140 cases from 1 June to 10 Oct 2016
Cases with “Reverted Back”

95% of all NH applications are reverted back.

2%*

* Data is based on General NH cases and admitted to NH, comprising of a total of 140 cases from 1 June to 10 Oct 2016
Feedback from the Ground

How it has helped

Helped to hasten the entire NH process… - MSW

No more AIC revert backs! – MSW

Nurses in Ren Ci have been very helpful in assisting with the NH applications – NHRT

Doctors have so far been very nice and responsive when prompted to assist with NH referrals - NHRT

Clearer on what is needed to be filled for medical report - GRM doctor

Areas for improvement

It will be good if doctors can help us input the medical information as soon as possible - NHRT

Financial documents needed for subsidy deviation sometimes not attached to the IRMS application – NHRT
Our Insights
It has been a long journey……

• AND we must press on

• Collaboration is key

• Everyone has a stake in this and project must work on a win-win basis

• Empathize and be willing to reach an optimal point

• Step out of comfort zone, challenge status quo, think out-of-box, don’t be afraid of failures

• Change management and getting everyone onboard
Acknowledgements

The success of this project would not have been possible without the strong support from our Project Sponsors, and the hard work and dedication of our TTSH, AIC and NH staff.

**Project Sponsors:**
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3) Dr Wong Loong Mun, Chief, Care Transition Division, AIC
4) Ms Loh Shu Ching, CEO, Ren Ci Nursing Home
5) Mr Ardi S Hardjoe, CEO, Thye Hua Kwan Nursing Home
6) Mr Victor Seng, Administrator, St Theresa’s Home

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9) Ms Sim Teck Meh, Group Director of Nursing, Ren Ci Nursing Home
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11) Ms Evonne Ng, Assistant Director, Clinical Operations, Ren Ci Nursing Home
12) Ms Bridget Monica Das, Head of Social Work Counselling, Ren Ci Nursing Home

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Thank you!

And our journey continues