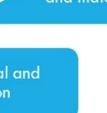


IMPROVE REFERRAL PROCESS FROM NUH TO NURSING HOMES



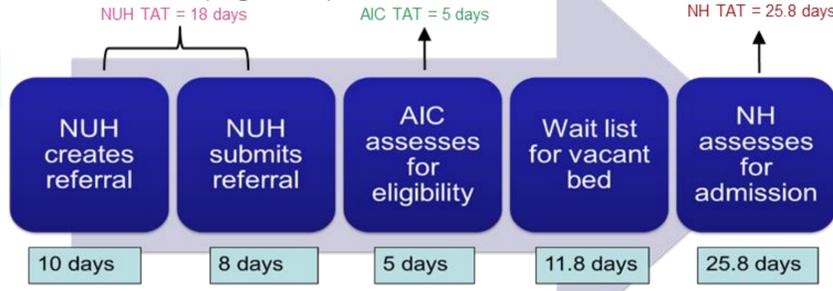
Singapore Healthcare Management 2018

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INTRODUCTION

- An increasing aging population and increased needs for Nursing Home (NH) placement for some of our patients lead to a prolonged turnaround time (TAT) from restructured hospitals to NHs.
- Workgroup comprising National University Hospital (NUH), The Agency for Integrated Care (AIC), Bethany Methodist NH, Jamiyah NH and NTUC Health NH was set up to review and address the challenges pertaining to residential services placements with the aim to streamline processes and improve the admission time to NHs.
- TAT for 160 successful NUH-NH referrals at 75th percentile was 60.6 days from January to November 2015 (Figure 1)



GOALS

- 1) Reduce TAT from initiation of referral in NUH till placement of patient in NHs by improving the end-to-end process and coordination between NUH, AIC and NHs
- 2) Reduce the number of times a referral case is returned to NUH for clarifications or rework

METHOD

- A 4.5 days Rapid Improvement Event (RIE) was held to understand the end-to-end process, identify wastes and root causes using lean management methodologies.
- Value Stream Mapping (VSM) and Gap Analysis showed multiple hand-offs and bottlenecks in the referral process.
- Unclear guidelines and different understanding of NH's assessment criteria also led to high reworks between NUH and AIC.
- A pilot was conducted for 5 months in general medical wards and further adjustments were made to the new work process.

INTERVENTION STRATEGY

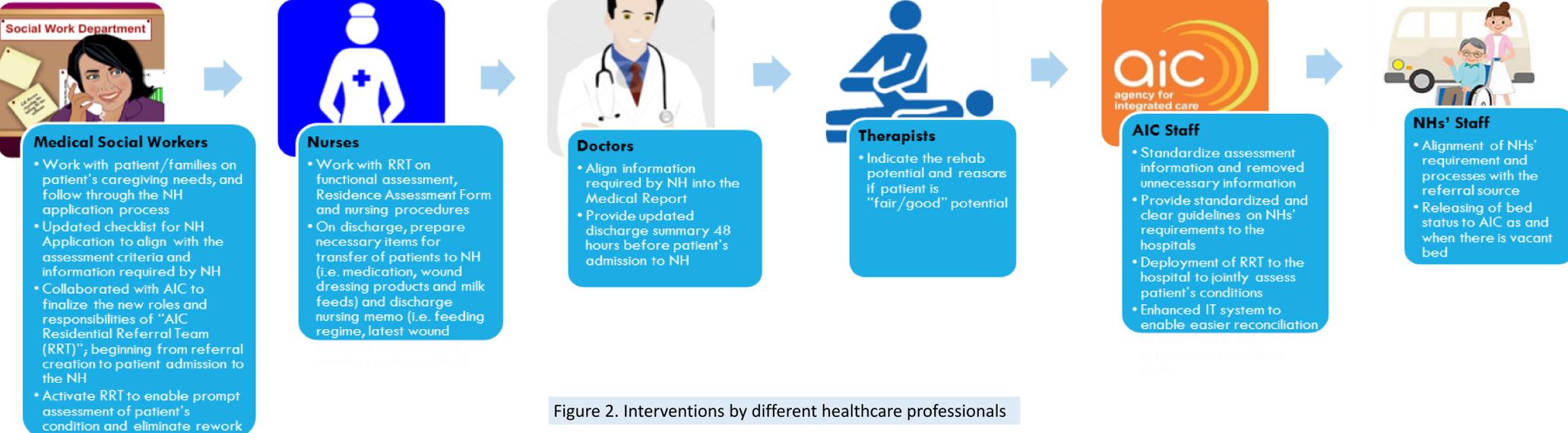


Figure 2. Interventions by different healthcare professionals

RESULTS

New work process was implemented to hospital-wide for all NHs' referrals in October 2016 after positive pilot results.

	Before RIE (75 th percentile)	After RIE (75 th percentile)	% Improvement
Turnaround Time (TAT)	NUH - 18 calendar days	NUH - 3.8 calendar days*	78.9% ↓
	AIC - 5 calendar days	AIC - 0 calendar day	100% ↓
	NH - 25.8 calendar days	NH - 14 calendar days	45.7% ↓
Revert Back (RB) between AIC & NUH	Average gross count of RB - 3.8 times per referral	Average gross count of RB - 0 times per referral since Aug 16	100% ↓

Table 1. Post implementation results

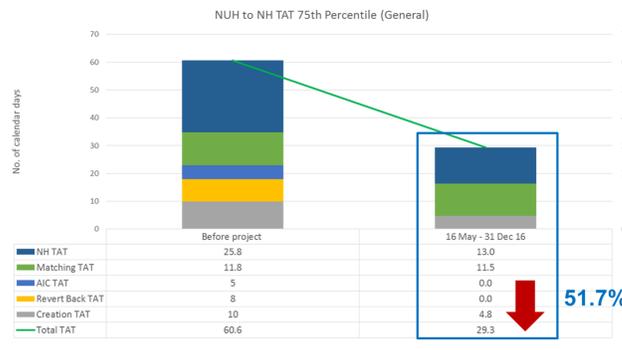


Figure 3. TAT Comparison

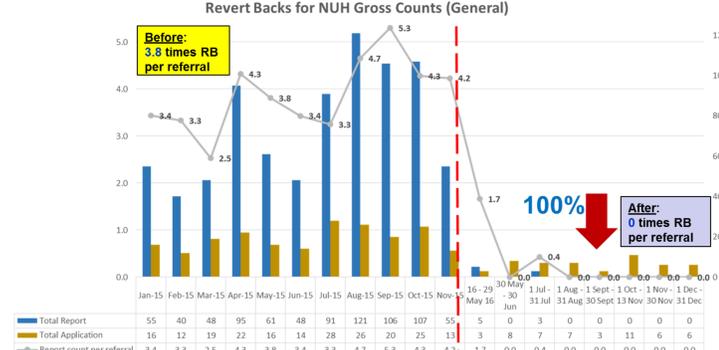


Figure 4. Rework Comparison

- ✓ Average bed days saved per patient are 7.7 days leading to cost avoidance of \$867.4K per annum.
- ✓ Improved staff satisfaction due to elimination of rework between NUH and AIC.
- ✓ Patients are assured that there is improved continuity of care and unnecessary delays are avoided.

CONCLUSION

- By eliminating wastes and closing gaps in the processes, overall TAT was reduced by more than 50%.
- Current challenge is to advocate the new work processes to all restructured hospitals and NHs so that the referral process will be standardized across Singapore.
- For sustenance, it is crucial that the different stakeholders periodically come together to align their work processes as NH assessment requirements and guidelines may change over time.