Delivering Quality and Safe Care Through the Dedicated Inpatient Care Team

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Aim(s) (Project Background)

More than 20 ward round teams pass through a single ward daily. Nurses and Pharmacists are profession groups which are ward based while other professional groups such as Medical Social Workers (MSWs) and therapists often take charge of patients scattered across multiple wards and are rotated on a regular basis. Consequently, the current setup has made it difficult for healthcare workers across different professional groups involved in the care of a single patient to get to know each other and communicate with one another. This would result insufficient awareness of the entire care plan of a patient among healthcare workers, bringing about communication gaps impacting on the delivery of quality and safe care to patients.

In Nov 2017, a project commenced with the goal to improve communication on medical wards between different professional groups. The project team hope to deliver quality and safe care to every patient with him/her having a Dedicated Inpatient Care Team made up of dedicated specialist, nursing team and allied health professional who manages him/her holistically with proper handovers and provides him/her with accurate information and consistent messaging throughout the patient journey. (Fig. 1)

The following family of measures were established to look into the impact of the initiative on quality and safe care of patients (Fig. 2) and key processes that would be affected by the initiative. (Fig. 3)

Fig 1: Dedicated Inpatient Care Team

Fig 2: Measures for Quality and Safe Care

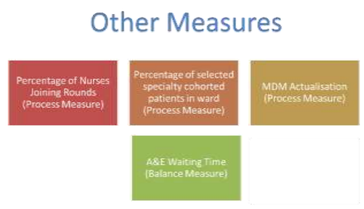

Fig 3: Process and Balance Measures

Changes (Methods)

An observational study was conducted at the start of the initiative with observers shadowing ward rounds teams in the main building and integrated building to look into existing ward round practices. This was followed by a solutioning workshop attended by stakeholders.

Fig 4: Solutioning Workshop

Fig 5: Documentation of existing setup from observational study

The following were identified during a solutioning workshop as the 3 key components that would contribute to the success of the initiative.

1) Cohorting of selected medical sub-specialties to reduce number of ward round teams in the ward.
2) Joining of ward rounds by nurses and other ward based professional groups.
3) Establish communication between doctors, nurses and non ward based professional groups with important issues timely brought up and discussed via routine Multi Disciplinary Meetings (MDMs).

Targets (Best Practices)	Gap Analysis	Key Changes
Healthcare staff know the members of the other disciplines	Healthcare workers do not know the names of staff involved in the care of a patient	Cohorting of selected specialty in ward to reduce no of teams
Timely follow up of action items planned during ward rounds	Reliance on case notes, eMR and referral documents for follow up	MDM and setup of communication platform
Establish communication between staff	Lack of direct communication between profession groups	Joining of physical rounds and MDMs

Table 1: Gap Analysis and Idea Generation

The 3 components underwent a small scale test of change in 2 cubicles, followed by cohorting of an entire ward for a limited period of time. When the team built up a high degree of confidence that the changes would work, the team went on to test for sustainability of the initiative through a pilot implementation at Ward 29 for 4 months followed by long term implementation of the setup at Ward 29. (Fig. 6)

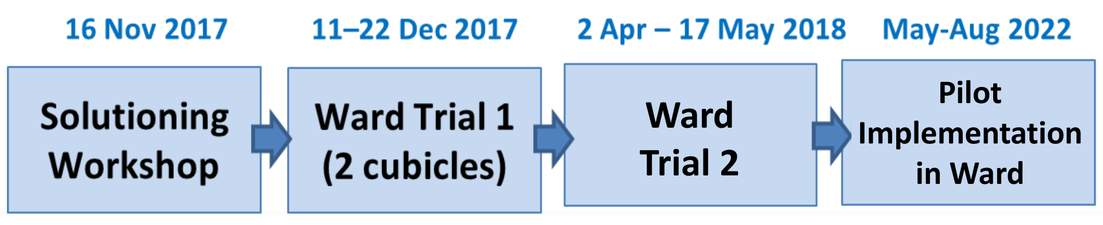

Fig 6: Project Journey

The PDSA cycles of the 3 key components are described in the table below (Table. 1):

Key components	PDSA 1	PDSA 2	PDSA 3
Cohorting	Test cohorting of patients with 2 cubicles in a ward for a 2-week period.	Test cohorting of patients with the whole of a ward for a 1.5 month period to prove the feasibility of cohorting selected specialties in an entire ward.	Renal, internal medicine and rheumatology pilot implementation in a ward for a 4-month period to demonstrate sustainability of cohorting long term.
Joining of Rounds by Nurses and ward based profession groups	Test how to enable nurses to join ward rounds and the possible scope of discussions during ward round between doctors and nurses.	Test how to enable nurses and ward based profession groups to join ward rounds and the possible scope of discussions during ward round.	Test feasibility of nurses and ward based profession groups joining physical rounds based on prioritization matrix.
MDM	MSWs, renal doctor, renal coordinators and renal unit nurses join weekly MDM on Tuesdays, 10.30 am and coordinate through Tigerconnect group.	PNs, therapists and ward supervisors join weekly MDM.	Dieticians join weekly MDM.

Table 2: PDSA Cycles of 3 key components

Measures (Results , Outcomes and Figures)

Measures for Quality and Safe Care:
Length of stay (LOS) and 90D readmission rates have shown improvement for both renal and IM patients. Staff survey showed an improvement of about 20% in % favourable for questions related to communication and awareness of care plan. OPE (Office of Patient Experience) conducted an interview of 200 pilot ward patients and scored 8.4/10 for overall ward experience.

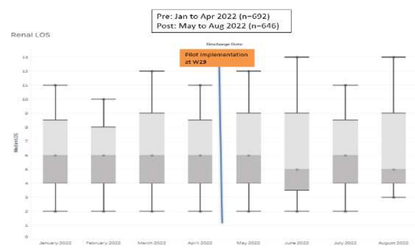

Fig 7: Renal LOS before and after

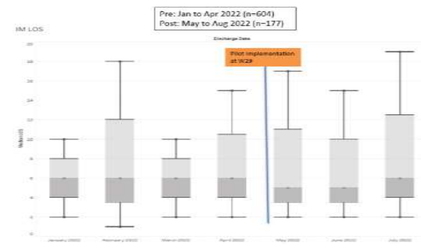

Fig 8: IM LOS before and after

Period	Phase	Readmission No (Renal)	Readmission Rate (Renal)	Readmission No (IM)	Readmission Rate (IM)
Jan to Apr 2022	Baseline	2/692	0.29%	1/604	0.17%
May to Aug 2022	Pilot Implementation	1/646	0.15%	0/177	0%

Fig 9: Readmission rates before and after

Nurses joining rounds improved from a median of 47% to 79%. (p-value=0.00, Mann-Whitney Test) The team realised that due to the manpower situation, it was challenging for nurses to join majority of the renal/IM rounds. Therefore, the nurses were asked to prioritise complex cases to join regardless of specialty instead resulting in improvement in the percentage of rounds joined.

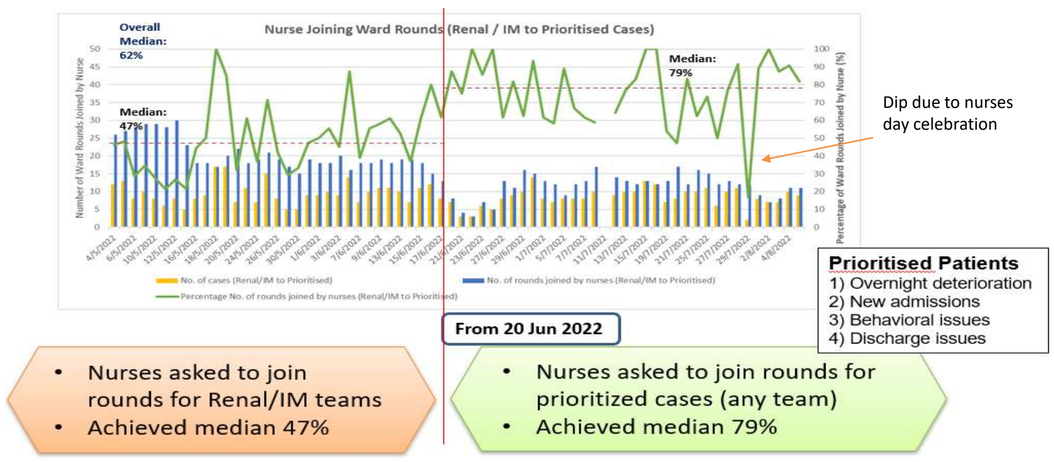

Fig 10: Nurse joining ward rounds before and after change

Cohorting of selected specialties at pilot ward was operationally challenging and often fluctuate between 50% to 80%. The difficulty was the need to allow patients to overflow into the ward due to consistently high bed occupancy rate. MDM Actualisation was 100% and there were no negative impact to emergency department wait time.

Conclusion

The key challenges faced by the project team was overcoming operational challenges faced by the various stakeholders. The successes of the project include establishing a system for cohorting selected specialties, making operational changes to enable nurses to prioritise cases to join ward rounds and getting the multidisciplinary care team to communicate regularly through MDM and the tigerconnect platform. Plans are in place to spread the initiative to other medical wards within CGH.

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