Reducing Patient Transfers: Enhancing Patient Safety and Optimising Continuity of Care

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KK Women's and Children's Hospital
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1. Background

In Singapore, patients choose the rooming arrangement during their hospital stay, either to be in a single-bedded room (A1) or in a shared cubicle with other patients. During tight bed situations, paediatric patients in our hospital are unable to be properly sited to their choice of bed. Subsequently, they will be transferred to their choice of bed when it is available. During one of the Senior Management walkabouts, ward nurses feedback that there was a high volume of upgrading of pediatric patients, especially in the evenings. Some upgrading took place within one hour of patient's admission.

As these paediatric upgrading patient's transfer occurred in the evening between 1900hr to 2100hrs it increases many non-patient care activities for clinical staff. It also poses some patient safety concerns as there is disruption in continuity of patient care due to change in care team and potential risk of miscommunication during hand over. It hinders patient's experience as parents often shared their unhappiness when the subsequent team of doctors kept asking repeated questions to re-confirm diagnosis and patient's condition.

Whenever there is a transfer, it leads to inefficient bed utilisation as two beds will be locked up until the transfer takes effect. This resulted in ineffective utilisation of our beds especially during tight bed situation, as two beds are being "locked up" and made it very challenging for staff to handle the situation. Senior Management upon receiving the feedback, noticed the potential for an opportunity to improve the work processes and tasked a workgroup to be formed. The work group was to take a review and make recommendations to resolve the problem of high volume of paediatric upgrading patient's transfer.

2. Aims

The project aims to reduce the number of upgrading transfers by 75%.

3. Evidence for there being a problem worth solving

Chart 1: Increasing trend of non-medical patient transfers hospital wide over the last three years from 2015 to 2017. There was a total of 5,791 nos. of transfer in 2017.

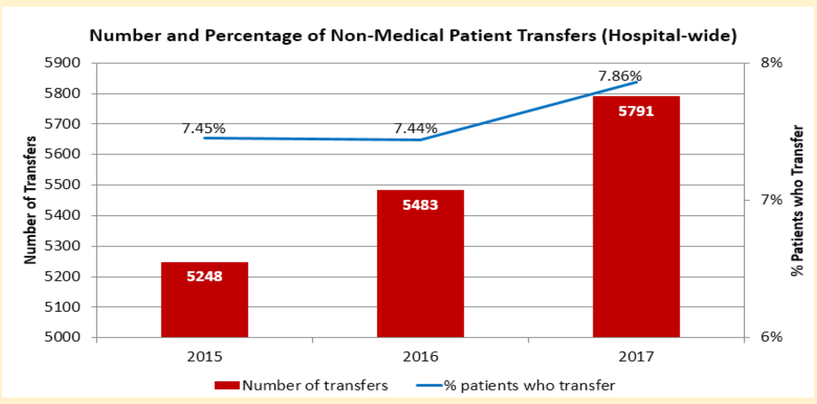


Chart 2: The proportion of non-medical related transfers between children and women from 2015 to 2017. Children have a higher volume of non-medical transfer as compared with women. In 2017, children had 14 transfers per day while women had 1.9 transfers per day.

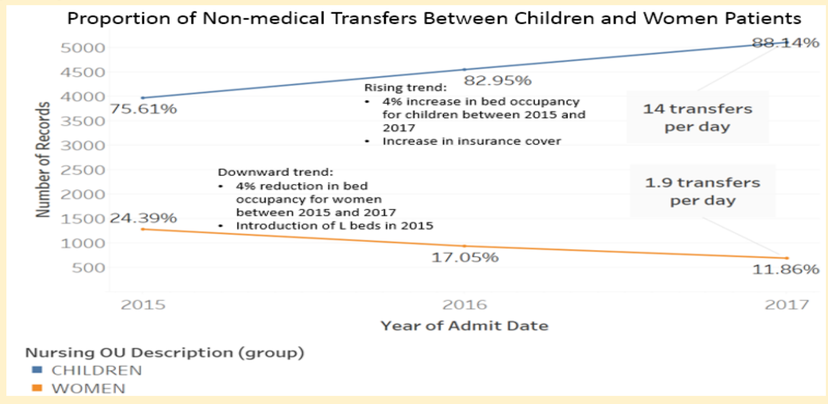


Chart 3: The increasing trend of upgraders are mainly from the paediatrics wards. In 2017, there was 93.04% upgrade and the lodger transfer constituted to 6.9%.

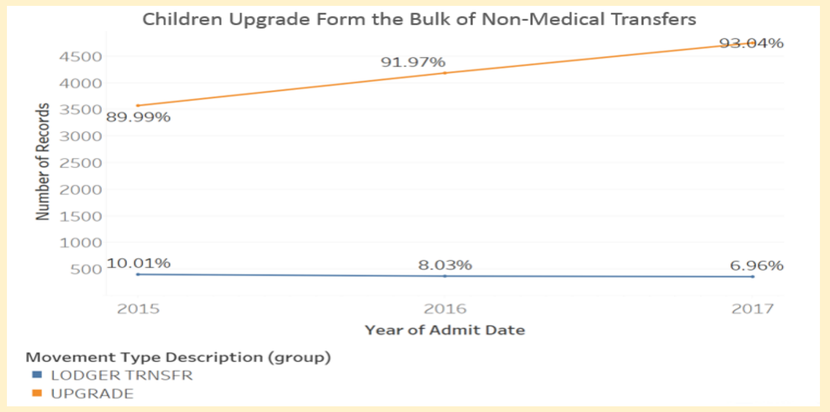


Chart 4:. In 2017, out of 4326 patient on waiting list for A1, 99.84% of these patients were discharged as A1.

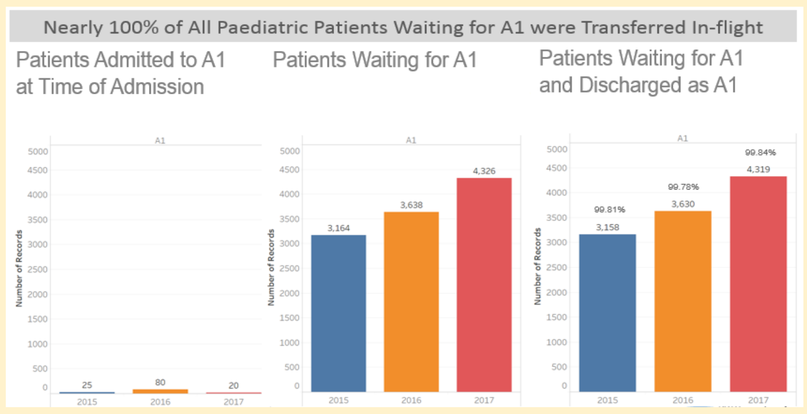
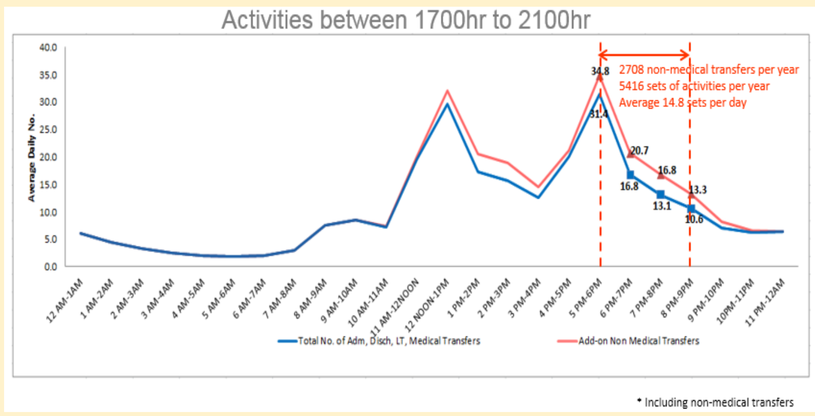


Chart 5: Time taken to effect each transfer and the total time spent to facilitate transfer in 2017

Time Motion Study to Facilitate a Transfer	
Department	**Time Spent**
Admission Staff	16 mins
Nursing (Outgoing Ward)	84mins
Nursing (Receiving Ward)	44mins
Porter	40mins
Housekeeping	20mins
Total Time Spent	**204 mins**
Total Time Spent to Facilitate Transfer in 2017	
No of Transfers	4,749
Total Time Spent to Facilitate a Transfer	204 mins
Grand Total Time Spent	**4,749 x 204 mins = 968,796 mins = 16,146.6 hrs**

Chart 6 : The increased volume of nursing activities between 1700hr to 2100hr were compounded by 2708 upgraders. Each upgrading created two sets of activities, sending and receiving, thus a total 5416 sets of activities per year. Giving an average of 14.8 sets per day.



4. Methodology

A retrospective data analysis was conducted for year 2017, pre implementation data showed:	Our team brainstormed for solutions as followed:
➢ An average of 14 paediatric upgrading patient's transfer per day in the inpatients paediatric wards. ➢ 99.84% of paediatric patients were transferred inflight. ➢ Paediatric upgrading patient's transfer occurred during the peak period of nursing activities in the evening between 1700hr to 2100hrs. ➢ A time motion study was conducted, involving all major stakeholders and it took a total of 204mins to facilitate a paediatric upgrading patient's transfer	1. Organising and sharing of the project to Nurse Managers and Patient Service Associates to gain their support and understanding. 2. A focus group was conducted to gather stakeholders concerns, addressing and finding solutions to alley their anxiety. 3. Developing, disseminating and training on the use of the verbatim for the stakeholders to ensure consistency in our communication. 4. In between while doing the project, we presented and sought Chief Nurse and Chief Finance Officer advice on the various implementable solutions. 5. Prior implementation, Senior Management decision was sought to allocate minimum of 12 (A1) beds for new admission.

5. Results – Pre and Post Implementation data

Tangible Benefits

Chart 7: A significant reduction of 96.8% in the no. of patient transfers

Chart 8: A total of 64% of paediatric patients admitted to their choice of A1 on Admission

Chart 9: A total of $564,620 man-hour saving per year

Man-hour saved from all stakeholders			
Departments	Pre Implementation Time Spent	Post Implementation Time Spent	Time Saved
Admission	1266.4 hrs	45.6 hrs	↓ 1200.8 hrs
Nursing (Outgoing)	6648.6 hrs	239.4 hrs	↓ 6409.2 hrs
Nursing (Receiving)	3482.6 hrs	125.4 hrs	↓ 3357.2 hrs
Porters	3166 hrs	114 hrs	↓ 3052 hrs
Housekeeping	1583 hrs	57hrs	↓ 1526 hrs

Man-hour Saving of $564,620/Year

Intangible Benefits

Patients:	Staff mentioned that:
➢ Safety through continuity of care, as they are being transferred within the same ward when a bed is available ➢ Are able to • Get their choice of class on admission • Out of High Dependency will be transferred to their choice of class A1	➢ The time saved are spent on patient care ➢ There is no disruption in medication round and report handover ➢ They are more confident in communicating with parents/caregiver. ➢ There is a significant reduction in the no. of calls from Admission office for patients transfers ➢ There was a reduction in bed linen changed and cleaning of room by housekeeper

6. Conclusion

On the first month of implementation, we saw an enormous improvement of 96.8% reduction in upgrading patient's transfer, as shown in Chart 7. The team was able to identify the causes and find targeted solutions to break the vicious cycle. An innovative idea of allocating 12 (A1) beds to right site our patients was a brave decision. The reduction in upgrading transfers had enhanced patient safety as there is continuity of care and also enhancing their experience. We monitored the project closely, it was noted that the reduction remained steadily in the downward trend with no major issues observed thus far.