A New Pharmacy Discharge Model in Transit Care Hub Improves Patient Flow

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Background

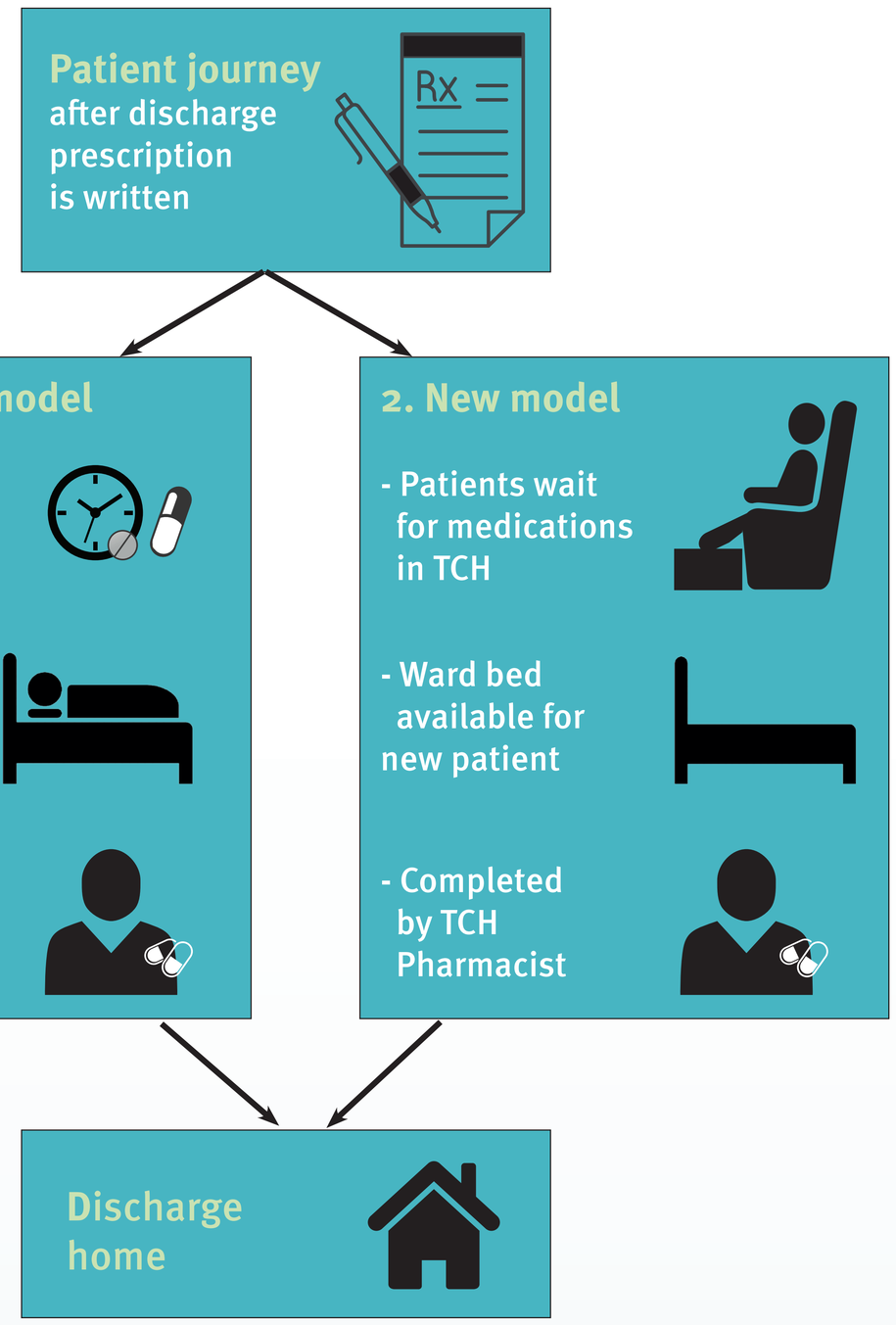
The Transit Care Hub (TCH) is an interim ward for admitting and discharging patients, often opening overnight as a 12-bed ward when the hospital exceeds capacity. In July 2018 a six-month TCH Pharmacist trial began with the aim to improve patient flow by discharging patient earlier from inpatient wards. During the trial a new discharge procedure was implemented by the TCH pharmacist, in addition the TCH pharmacist also clinically reviewed high-risk admissions through TCH.

Aim

To study the impact on patient flow, patient safety and potential cost savings of a TCH Pharmacist.

Methods

Prospective data was collected over a 20-week period. Patient flow improvements were measured by number of patients discharged by the TCH Pharmacist, change in arrival time to TCH from inpatient wards, and the number of medication histories completed. Cost savings were estimated.



Results

791 patients were discharged by the TCH Pharmacist, arriving 70 minutes earlier than other patients discharging through TCH. There was a 16% overall increase in patients discharging through TCH. The TCH pharmacist increased the number of pharmacist medication admission histories on day of admission by 14%.

Over the 20 weeks, this role saved an estimated $100,862 for the hospital. This was calculated from the 38.5-day reduction in inpatient bed days across 791 patients, eliminated pharmacist overtime expenditure on 36 occasions, and prevention of three overnight patient stays valued at $2,312 each. It was therefore estimated that this role could save $265,198 annually.

Area of Saving	Number of events during trial (20 weeks)	Projected prevented events per year	Projected savings per year
Inpatient bed days saved ($2312/day1)*	38.5 days	100 days	$231,200
Prevented HP4 pharmacist overtime when TCH opens as an overnight ward ($136.50 per night)	31 nights	80 days	$10,920
Prevented hospital overnight stay ($2312/night)**	3 nights	9	$20,808
Total			**$262,928**

* Calculated based on the time that patients left the ward; on average, patients whose discharge medications were completed by the TCH-PF pharmacist discharged from the ward 70 minutes earlier than the average patient. This gave a total of 38.5 ward bed days saved during the 20-week trial (based on 791 patients discharged by the TCH-PF pharmacist).

** Hospital overnight stays were prevented by facilitating discharges for patients who would otherwise have stayed overnight, or when the TCH-PF pharmacist intervened to shorten planned admission where clinically indicated.

[1] Thinh Nguyen (Finance Manager at PAH), average data from Queensland Health Fees and Charges Register - 1 October 20182

[2] Health Funding Principles and guidelines 2017-18 financial year. Queensland Health V1.0

Conclusion

The TCH pharmacist service enhanced patient flow by encouraging earlier discharges, improved patient safety by earlier patient reviews, and demonstrated great potential for cost savings. The role has successfully secured permanent funding.

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