Healthy ED, Healthy Hospital
The Maitland Emergency Department

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Case for change

Poor flow, long waiting times, sustained periods of time operating in crisis levels, and unnecessary complexity in processes contributed to stressed staff and poor patient outcomes in 2018.

On a day when all of these factors were present, a 67 year old woman, Mrs Hockey, had a stroke in the waiting room while waiting more than 4 hours for care.

Goal

By December 2019, patient flow processes within the ED will support safe and timely access to care for patients presenting to The Maitland Hospital Emergency Department (TMH ED).

Objectives

- The Emergency Treatment Performance (ETP) for TMH ED will improve from 65% to 71% by July 2019.
- Time seen by ED doctor will decrease by 50% from the current median time of 111 minutes by July 2019.
- The duration of time the ED spends in critical activity levels, will reduce from the current 53% to 25% by December 2019.

Method

A number of data collection methods and analysis were used including group process mapping with stakeholders, observational audits, staff tagalongs, focused task surveys, patient journey mapping, staff and patient rounding, quantitative activity data analysis, and some further fact collection from the literature.

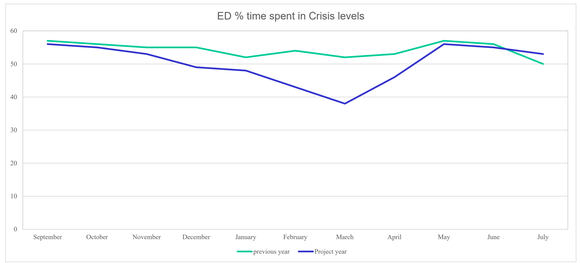
Team engagement was emphasised throughout the process and all project directional decisions were made with input from the ED multidisciplinary team.

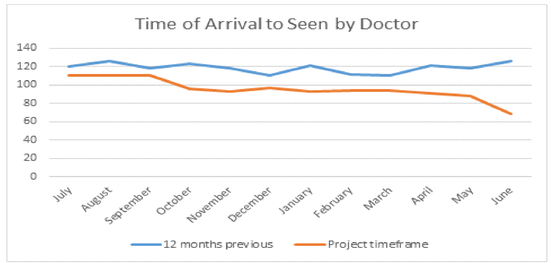
Results

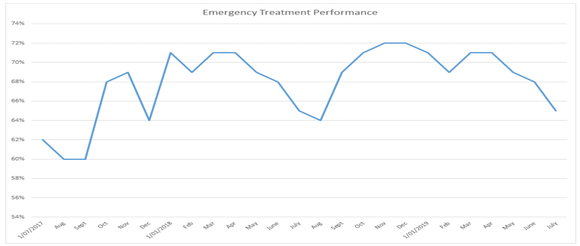
The project was successful and is on track to achieving all three objectives by December 2019.

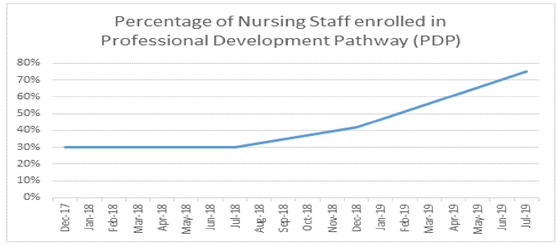
The four solutions were measured against various metrics including ETP, Sentinel events, ED Length of Stay (LOS), ED activity levels, patient journey timeline analytics and staff credentialing stats across the entire project timeframe. All metrics indicated improvement compared to the same period in 2017/18 despite increases in activity, acuity, and patient complexity.

- ETP improved from baseline 65% to reach 71% for 3 months
- ED activity levels improved from 53% of time in crisis levels to 43%
- Mean time of arrival to Seen by Dr improved by 38% from 111 minutes to 69 minutes across all Models Of Care (MOC).
- Sentinel events reduced from 7 incidents in 2017-2018 to none in 2018-2019.
- Average LOS for all patients reduced by 4% across all MOC.
- Average LOS for patients who presented with abdominal pain reduced by 32% across all MOC.
- Patient journey timeline analytics indicate the MAITZ model can reduce each part of a patient's journey by up to 40% compared to similar patients seen in other MOCs.
- Length of stay for a patient with abdominal pain treated through MAITZ is 65% faster than this cohort's length of stay before implementation of the model (267 v 756 mins).
- Staff enrolment and credentialing in Professional Development pathways increased from 33% to 75%
- TMH ED was removed from the Ministry of Health watch list due to improved sustained ETP performance.









Diagnostics

- 80% of ED patients are discharged from ED - "well" patients.
- 55% of this group are seen in an acute bed and have significantly longer LOS than any other patient cohort.
- Patients with abdominal pain represented 12% of presentations yet occupied 35% of total acute bed time.
- Non value adding tasks feature heavily in most ED processes.
- ED was operating in "crisis" level 53% of the time.
- Patients were waiting way too long to see a senior decision maker – 111mins and there was a strong correlation between waiting to see a Dr time and total LOS.
- Patients weren't having investigations started by a nurse when they first arrived.
- Help didn't come from the rest of the hospital when we needed it.
- We were leaving "well" patients horizontal for way too long.
- The data showed that the patients who were spending the longest amount of unnecessary time in an acute bed were patients suffering from abdominal pain, nausea and vomiting and mental health concerns.

Planning and implementing solutions

Four solutions were implemented by the project team in partnership with the ED and Facility Leadership Teams.

Solution One: Rewrite and Relaunch of ED and Facility Short term Escalation Plans (STEP) including clear triggers, thresholds, and accountability for responses.

Solution Two: Implementation of Professional Development Pathways for Nursing Staff including robust access and accountability for credentialing in advanced nursing care models.

Solutions Three and Four: Redesign of Front of House Care delivery including the adjustment of FACEM oversight and the development of a model designed to see and treat the cohorts of patients who are "vertical", well, and who would previously unnecessarily occupy an acute bed before being discharged after a lengthy stay. The model was branded MAITZ (Maitland Assessment, Intervention, and Treatment Zone).

Sustaining change

All four solutions are now embedded into business as usual.

MAITZ will continue to be monitored through an established data suite and feedback to staff through the leadership team. Sustainable success is achieved by the model decision makers (FACEMs) owning it's success.

Conclusion

All solutions have been part of the overall success of the project. The most successful component is the MAITZ Model of Care. Transferability is achievable through diagnostics analysing acute bed occupancy, length of stay, and discharged patient cohorts.

Acknowledgements

Di Peers, Scott Flannagan, Luke Feenan, and Kat McCutchan

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