



Singapore Healthcare Management 2017



Singapore General Hospital
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Predictive Analysis of Bed Situation in SGH Using Dashboard in Tableau

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Introduction

Predicting bed situation is of great importance to proactively manage potential bed crunch in SGH. The predictive dashboard was developed with the help of Health Science Research team using Tableau and implemented in May 2016. Thus, it has allowed management to identify the possible contributing factors to tight bed situation and take proactive measures to alleviate bed crunch.

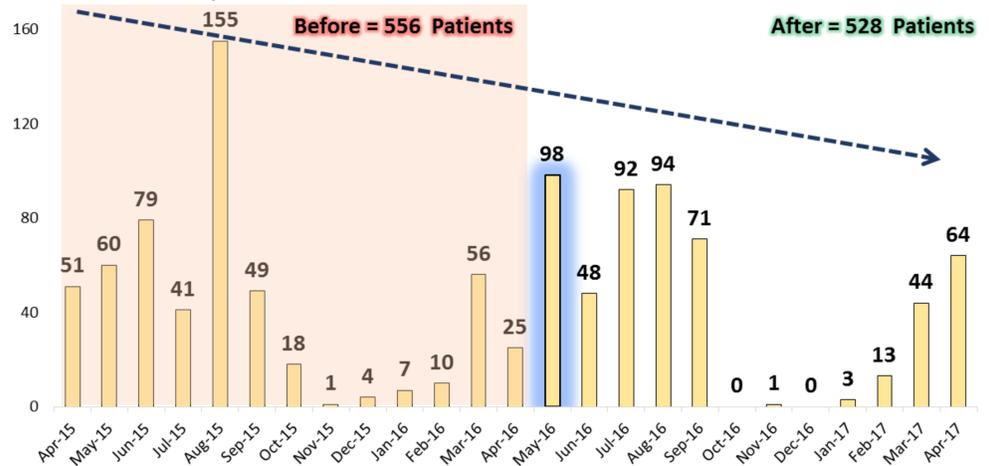


Results

5% reduction in number of long wait cases from 556 cases (Before) to 528 cases (After)

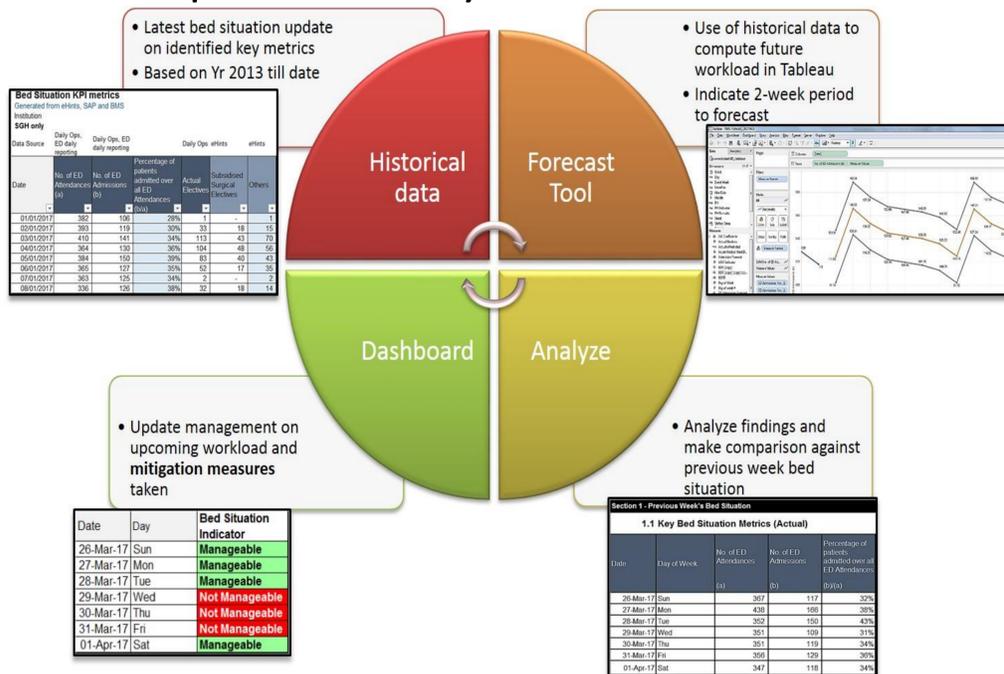
13% reduction in number of 4hr cases from 12,166 cases (Before) to 10,578 cases (After)

No. of Patients Waited for More than 10Hrs Before & After Implementation of Predictive Dashboard

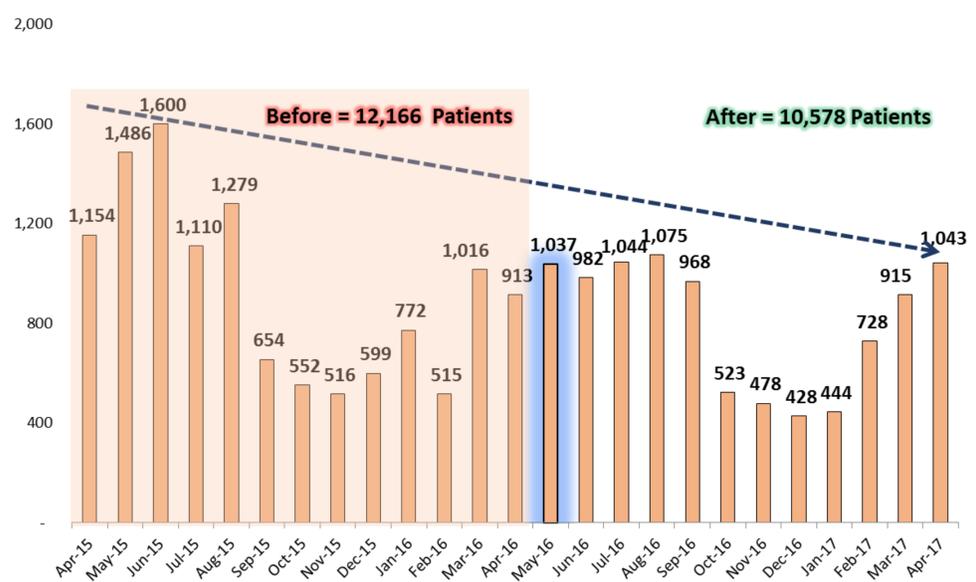


Methodology

Our predictive model is based on DMAIC data-driven improvement cycle:



No. of Patients Waited for more than 4Hrs Before & After Implementation of Predictive Dashboard



Mitigation Measures

- Email and SMS HODs to step up discharges/referrals to SKH wards & cap scheduled admissions to cater expected high workload
- Stagger reporting time for scheduled admissions to avoid longer waiting time for beds
- Bed Management will co-ordinate with Nursing for earliest discharged beds to shorten patients' wait time
- ED doctors to moderate admissions and offer patients to SKH@AH (if criteria fits)
- FME to defer non-urgent repair works, spot cooling installation etc
- Housekeeping to deploy sufficient resources to expedite bed cleaning processes

Conclusion

The predictive tool has enabled Management to take proactive actions through engagement with respective stakeholders. It has also helped to minimize patients' waiting time for beds.