

Patient flow and the digital hospital: leveraging the integrated electronic medical record to develop a statewide patient flow dataset

Joshua MCRAE, Andrew STAIB, Amy NB JOHNSTON



Introduction

- Poor hospital patient flow is a critical component of overcrowding in ED ^{1,2}
- ED overcrowding has catastrophic patient outcomes ³
- We need to do better! Maybe the additional whole of hospital clinical data collected by clinicians in the ieMR can help



Research objectives

- Identify what ieMR data we may need to improve patient flow
- Extract and validate these data



Methods

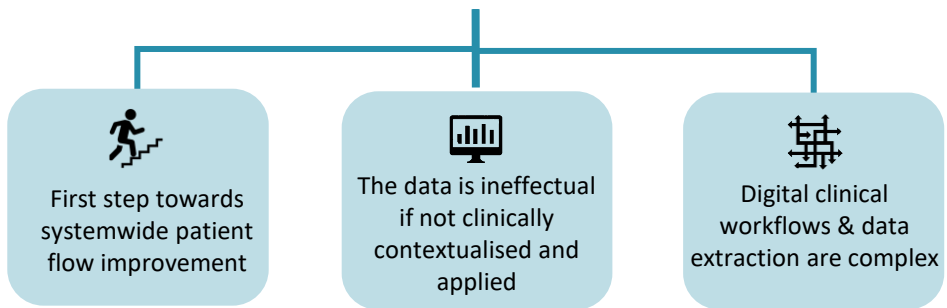
- Obtain clinical patient flow dataset requirements from 2 newly established statewide working groups
- Divide data into three tiers : Tier 1 data in the ieMR, Tier 2 data collected by other systems, Tier 3 data not yet collected including machine learning and artificial intelligence
- Extract and validate data from clinical systems databases



Results

- Clinical patient flow dataset requirements obtained
- Tier 1 data were successfully extracted and validated from the statewide ieMR and administrative systems. Some realtime data examples include:
 - Diagnostic process mapping including timestamps and measures
 - Medically ready for discharge flagging
 - Whole of hospital patient journey data inc.: ED ramping, boarding, inpatient movements.

Discussion



References

1. Hance K et al. (2019). EMJ; 36:805-806.
2. De Freitas et al. (2018). EMJ; 35:626-637.
3. Australian College of Emergency Medicine Position Statement ED Overcrowding, (2021), ACEM

