
CONFERENCE ABSTRACT

Anticipatory and Responsive Care addressing Potentially Preventable Hospitalisation. The MonashWatch Case Study

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Introduction: A Potentially Preventable Hospitalisation (PPH) is an admission for a condition where hospitalisation could have potentially been prevented through provision of appropriate timely chronic disease and/or acute condition care. The HealthLinks Chronic Care algorithm predicts PPH (patients at risk of 3+ hospitalisations) from Victorian admitted episode public hospital data. This is so that local health systems find innovative approaches to improve outcomes for these patients.

Innovation: A complex systems and anticipatory journey approach to addressing the PPH, the Patient Journey Record System (PaJR) is described. TeleCare Guides (TCG) track the health of individuals at risk of PPH with a \geq weekly telephone calls using a web-based system. Prediction algorithms on details of the outbound TCG telephone calls anticipate individual trajectory trajectories in order to optimize emergency hospital use. The MonashWatch deployment incorporating PaJR is conducted by Monash Health in its Dandenong urban catchment area, Victoria, Australia.

Theory: A Complex Adaptive Systems (CAS) framework underpins PaJR, and recognizes unique individual journeys, their historical and biopsychosocial influences, and difficult to predict tipping points. Rosen's anticipation theory informs the framework. PaJR uses perceptions of current and future health (interoception) through analytics on ongoing conversations to anticipate possible tipping points. Timely intervention in the biopsychosocial domains of their unique trajectories is intended.

Evaluation: Monash Watch is actively monitoring a variable cohort of 259 active patients from a monitored cohort of 674 who have either died, moved on, been lost etc. with 270 controls over >36 months (ongoing). Trajectories of SRH (Self-rated Health), AH anticipation of worse/uncertain health, and TCG concerns demonstrated a tipping point 3 days before acute non-surgical admissions. The -3 day point was consistent across age and gender. PaJR-supported services achieved consistent reduction in acute bed days (20-25%) vs. target 10% and high levels of patient satisfaction.

Conclusion: Anticipatory care is an emerging journey tracking data approach that uses human conversations as the core metric demonstrates improvements in processes and outcomes. Multiple sources can provide big data to inform trajectory care, however simple tailored data collections may prove effective if they embrace human interoception and anticipation.