CONFERENCE ABSTRACT

Big Data Evaluation of an Integrated Care Initiative for Vulnerable Families

19th International Conference on Integrated Care, San Sebastian, 01-03 April 2019

John Eastwood

Sydney Local Health District, Australia

Introduction: In March 2014, the New South Wales (NSW) State Government of Australia announced the NSW Integrated Care Strategy. The NSW Government's Integrated Care Strategy funding enabled the establishment of an integrated care initiative called Healthy Homes and Neighbourhoods (HHAN). The Initiative was designed as a population-based, family-centered, care-coordination network that functioned across agencies to assist vulnerable families to navigate the health and social-care system, to keep themselves and their children safe, and in doing so, promote social cohesiveness. The intention was also to reduce unplanned and potentially preventable or avoidable admissions to hospital.

Theory/Methods: The HHAN evaluation framework included the monitoring of unplanned and potentially preventable or avoidable admissions to hospital. Ethics was obtained for the analysis of quantitative outcomes of HHAN clients. In accordance with Clause 17(3)(d) of the NSW Health Administration Regulations, personally identifying information (including names) can be provided to the Centre for Health Record Linkage for the purpose of obtaining a unique identifier number to be used for the purposes of funding, management, planning and evaluation of health services.

Minimum data on patients accessing the Integrated Care (IC) services was linked to:

i) records of the Admitted Patient Data Collection (public hospitals) and NSW Private Hospital Inpatient Statistics Collection, from 1 January 2010 onwards

ii) records of the Emergency Department Data Collection, from 1 January 2010 onwards.

Results: Preliminary results demonstrated a reduction in probable preventable hospitalisation, emergency department visits, admissions and length of stay for members of HHAN families. The impact varied by age and gender but was evident for both child and adult members of HHAN families. The reductions were greater in the second year after enrolment with HHAN Integrated Care Program.

Discussions: The preliminary hospital related outcome evaluation findings suggest that HHAN is having a positive impact on avoiding hospital presentation. In order to directly measure the impact of IC on outcomes for patients a reliable estimate of the counterfactual would ideally be obtained. Given that a randomised control trial is not feasible for IC, Propensity Score Matching (PSM) techniques will be employed to retrospectively construct a plausible comparison group.

Conclusions (comprising key findings): The HHAN Initiative was designed to assist vulnerable families to navigate the health and social-care system, to keep themselves and their children safe. The initiative was originally conceived as a "twin generation" child protection intervention with outcome objectives related to child development, housing and family safety. The reduction in

avoidable hospital presentations and admissions was unexpected. The findings suggest that targeted "whole of family" interventions may be beneficial more generally.

Lessons learned: Intensive whole of family wrap around care coordination of vulnerable families has a positive impact on a avoidable hospital presentations and admissions

Limitations: The results are preliminary and not yet subject to comparison with a counterfactual population group.

Suggestions for future research: The HHAN intervention model should be studied with other "high risk" patient groups including those adults who do not have children.