# Sample Literature Review Two

## The Impact of Primary Care on Potentially Preventable Hospitalizations

'Keep people healthy and out of hospital' is a goal of the NSW State Plan (Department of Premier & Cabinet 2011 p. 23) and a common pursuit worldwide as a way of improving healthcare quality and reducing expenses. The cost imperative is the significant savings that could be made by governments and citizens, as highlighted in a recent report by Delta Health Technologies (2012 p. i): every 3% reduction in USA hospitalization rates, would keep nearly 100,000 patients in their homes and save Medicare approximately $US700M. This brief literature review defines primary care and potentially preventable hospitalizations (PPHs), outlines the links between primary care and PPHs, and explores improving collaboration and partnerships between hospitals and primary care so as to contribute to reductions in PPHs.

Primary care, in the Australian context, is the 'general practice, nursing and allied health professionals … who provide locally-based first contact care in the community setting' (Naccarella et al. 2007 p. 39). It is recognized, at a system level, as contributing to population health overall (Macinko, Starfield & Shi 2003) and, at the level of the individual, as acting as the patient's broker and facilitating their care across hospital settings and other primary care providers (Tieman et al. 2007).

Consequently, potentially preventable hospitalizations are hospital stays that could be avoided if a patient instead received 'timely and effective access to primary care' or was treated more appropriately in a primary care setting (Nolan 2011 p. 979). PPHs also appear in the literature under related terms such as 'potentially avoidable admissions' (Bureau of Health Information 2011 p. ii), 'needless', 'unnecessary', 'unplanned' or 'readmissions' (van Walraven et al. 2011 pp. E391–E392). Also relevant is the research on repeat visits to a Hospital's Emergency Department (ED), which many patients use as their primary care provider and that may or may not lead to a hospital admission or readmission (Hardy et al. 2001, Skinner, Carter & Haxton 2009, Naughton et al. 2010, Moore et al. 2011).

Reported rates of PPH vary and turn out to be difficult to measure consistently. van Walraven et al. (*op. cit*) reviewed in detail 34 international studies of hospital readmissions reporting a

median rate of 27% and a range of 5–79%. They criticized 31 of the reports for the subjective criteria used to classify an admission as avoidable.

PPH research from a primary care viewpoint initially focused on ambulatory care sensitive conditions (ACSCs). This concept, originally a list of 28 conditions (Nolan *op. cit.* p. 979), was developed for the American context by Billings et al. 1993, who proposed ACSC hospitalization rates as a proxy measure of primary care access (cited in Roos et al. 2005 p. 1168). ACSCs have been investigated internationally and are relevant to Australia as a metric of primary care access (Ansari 2007a p. 92). Studies have shown that expansions in targeted primary care services can reduce PPHs; both generally, for example in Vermont USA (Wallack 2011), and in subsets of ACSCs for example in Brazil with diabetes, respiratory, and circulatory conditions (Guanais & Macinko 2009).

Clearly, gaps in care between discharge from hospital and home put patients at risk of an adverse event. However, PPHs are not solely attributable to deficits in primary care. Ansari (2007b, p. 96) identified 10 factors that contribute to regional variations in ACSC hospital admission rates: demographics, socioeconomic status, rurality, health system factors, prevalence, lifestyle factors, environment, adherence to medication, propensity to seek care, and severity of illness. This variability is apparent in the most recent international comparison of some ACSC hospitalization rates. Australia was 3rd lowest for diabetes (OECD 2011 p. 107), 3rd highest for Chronic Obstructive Pulmonary Disease and close to the OECD median for asthma (*Ibid.* p. 105). The 60-fold difference for diabetes was confirmed as not related to the underlying disease rate in each country (*Ibid.* p. 106).

More recently, requirements in the USA of the Patient Protection and Affordable Care Act 2010 have focused attention on hospitals with worse than expected readmission rates within 30-days of discharge. Foci of research include inadequate discharge planning and underlying variation in rates of 'first' admission that impact subsequent readmission rates (Jha, Orav & Epstein 2009, Epstein, Jha & Orav 2011). This has triggered debate on the (culp)ability of hospitals to control for circumstances that result in readmission up to 30 days after discharge e.g. a patient smoking after a heart attack or unable to get to their follow-up appointment (Joynt & Jha 2012).

To invigorate primary care in the USA, a new focus has emerged and is extending internationally: the Patient-Centered Medical Home (PCMH) or 'medical home', The Joint

Principles of PCMH were first defined in 2007 as accessible primary care, that knows the patient well and helps coordinate their care (Peikes et al. 2012 p.1). An international survey of patients in 11 countries showed that while 91% of Australians had a doctor, only 51% had a medical home, compared to 33-74% in other countries (Schoen et al. 2011 p.7). A recent report (Peikes *op. cit*) indicated it is too early to fully assess and refine the PCMH model , as research of a consistent and comprehensive model is just emerging.

Improving hospital – primary care collaboration to streamline patient care is considered more challenging in Australia than other comparable health systems, such as New Zealand and Britain, where national government is entirely responsible for all primary care funding. In Australia, responsibility for primary care policy and funding is split, with General Practice the domain of the Commonwealth, and state/territory governments in control of public hospitals, public EDs, and publicly-funded community health services (McDonald et al. 2007). This has traditionally lead to debates, tensions, duplications, and gaps in patient care between hospitals and the primary care provided by General Practice, Community Health, and EDs (Siminski et al. 2005).

Martin-Misener et al. 2012 extensively reviewed the international literature on primary care collaboration and identified a comprehensive array of enablers and barriers. Of note were addressing 'separate and siloed bureaucracies … territorial ownership conflicts about programs and mandates' (*Ibid*. p. 9) and that not all changes required additional funds, as some collaborations successfully pooled resources, incorporated in-kind contributions or utilized volunteers (*Ibid*. p. 8). Another paper to identify minimal costs in some PPH reduction programs was a recent study of 800 homecare agencies in the USA that listed 22 common strategies. The top 15 strategies were used by over 60% of agencies studied and what distinguished successful agencies from unsuccessful agencies was how effectively the strategies were implemented. The components for successful implementation were senior leadership; data driven decisions; real-time tracking of key elements; mandatory planning meetings; and targeted practices (Delta Health Technologies *op.cit.* pp. 3–4), which overlap considerably with many enablers identified in Martin-Misener et al. (*op. cit.*).

In summary, many factors contribute to potentially preventable hospitalizations. Improvements in collaboration and care coordination between primary care and hospitals can address local factors and influence local rates of PPH.

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