Communiqué

Deeble Institute for Health Policy Research Think Tank: Hospital avoidance and prevention

23 May 2017

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HESTA is proud to have sponsored this Deeble Institute Think Tank.

1 Think Tank overview

The Deeble Institute for Health Policy Research, the research arm of the Australian Healthcare and Hospitals Association (AHHA), facilitated a one-day Think Tank on 23 May 2017 in Melbourne, Australia, bringing together health system thought leaders and Deeble Institute academic members to answer the question, *How should the health system respond to the growing pressure to reduce the rates of potentially preventable hospitalisations?*

Further details are available on AHHA's website[1]. We acknowledge the contributions of the following presenters:

- ***Opening video address by the Commonwealth Minister for Health, the Hon Greg Hunt MP***
- ***Myth busting hospital avoidance***
  Professor Richard Reed, Head, Discipline of General Practice, School of Medicine, Flinders University and Director, Primary Health Care Research Information Service (PHCRIS)
- ***Value capture as a means of financing patient-centred Health Care Homes across Australia***
  Professor Stephen Jan, Head, Health Economics and Process Evaluation Program, The George Institute and Sydney Medical School, University of Sydney
- ***Characteristics of older people who represent to the emergency department within 30 days of discharge***
  Associate Professor Laurie Grealish, Griffith University and Gold Coast Health
- ***Primary care: system improvement and integration***
  Jodi Briggs, Executive Director, Innovation and Integration, Eastern Melbourne PHN
- ***Thunderstorm asthma: "all lined up"***
  Paul Holman ASM, Director, Emergency Management, Ambulance Victoria
- ***Alternative models of hospital care for older people – the Kilcoy connect experience***
  Dr Tracy Comans, Principal Research Fellow, Griffith University
- ***End of life hospitalisations differ for older Australian women according to death trajectory: a longitudinal data linkage study***
  Dr Melissa L Harris, University of Newcastle
- ***Acute hospital diversion of dental patients presenting to Emergency Departments***
  Associate Professor Matthew Hopcraft, Clinical Advisor, Dental Health Services Victoria
- ***Value Based Healthcare***
  Dr Deborah Cole, Chief Executive Officer, Dental Health Services Victoria

The AHHA is Australia's national peak body for public hospitals and healthcare providers. Our membership includes state health departments, Local Hospital Networks and public hospitals, community health services, Primary Health Networks and primary healthcare providers, aged care providers, universities, individual health professionals and academics. As such, we are uniquely placed to be an independent, national voice for universal high quality healthcare to benefit the whole community.

[1] http://ahha.asn.au/events/deeble-institute-think-tank-hospital-avoidance-and-prevention

2 Communiqué

2.1 Issue overview

Australia has a high quality health system, however the provision of healthcare in Australia is largely episodic and often fragmented. This is caused by a lack of coordination across healthcare providers and parts of the healthcare system, in addition to a focus on meeting immediate health needs, and disconnected funding models and layers of accountability.

Preventing unnecessary hospital admissions is a specific objective of healthcare reform in Australia, with the aim of improving patients' outcomes, reducing pressure on hospitals, and enhancing health system efficiency and cost-effectiveness. This process is generally referred to as hospital avoidance.

A widely used indicator has been developed which is referred to as potentially preventable hospitalisations, which is calculated, based on a list of ICD-10 diagnostic codes listed upon hospital discharge. These diagnoses are defined as hospitalisations that could have potentially been prevented through the provision of appropriate individualised preventative health interventions and early disease management usually delivered in primary care and community-based care settings (including by general practitioners, medical specialists, dentists, nurses and allied health professionals). Rates of these diagnoses are currently used as a health system performance indicator of accessibility and effectiveness in the Australian National Healthcare Agreement and are also a key performance indicator for Primary Health Care Networks.

Measuring potentially preventable hospitalisations provides important insight into how well health systems are performing in keeping Australians healthy and out of hospital. Data for potentially preventable hospitalisations are usually presented as either age-standardised hospitalisation rates or as the number of hospital bed days used by patients admitted for a potentially preventable hospitalisation. The Australian Commission on Safety and Quality in Health Care's second *Australian Atlas of Healthcare Variation*[2] includes these data.

Data and evidence presented by Professor Richard Reed suggests that this indicator is often misunderstood. Those using potentially preventable hospitalisations as an indicator were encouraged to understand its origins, its evolution in the Australian context and its strengths and limitations as a health performance indicator. It was noted that not all conditions that could potentially be measured as contributing to preventable hospitalisations were captured in the indicator, for example mental health, nor could all of the hospitalisations captured by the indicator have been prevented—context is important. Further, evidence suggests that predictors of potentially preventable hospitalisations are more related to sociodemographic determinants than disease[3, 4].

[2] https://www.safetyandquality.gov.au/atlas/

[3] Falster MO, Jorm LR, Douglas KA, et al. 2015, 'Sociodemographic and health characteristics, rather than primary care supply, are major drivers of geographic variation in preventable hospitalizations in Australia', *Medical Care*, vol. 53, pp. 436-445.

[4] Roos LL, Walld R, Uhanova J, et al. 2005, 'Physician visits, hospitalizations, and socioeconomic status: ambulatory care sensitive conditions in a Canadian setting', *Health Service Research*, vol. 40, no. 10, pp. 1167-1185.

2.2 Myth busting hospital avoidance

Professor Richard Reed outlined five myths related to hospital avoidance:

- *Hospitalisations account for most of the healthcare costs in Australia*: Reed countered that data on total health costs in Australia demonstrate this is not the case[5].
- *Potentially preventable hospitalisations are proven to be preventable*: Reed argued the predominant driver for increased potentially preventable hospitalisations is socio-economic status. There is a dearth of empiric evidence on hospital prevention[6].
- *Hospitalisations are easy to prevent*: Reed presented data on a study he performed with colleagues, which determined root-causes of hospital admissions of older adults. Although many admissions were viewed as potentially avoidable, actual avoidance would require significant changes to both the primary care and hospital care[7].
- *Hospitalisations are due to poor quality care by general practitioners (GPs)*: One of the strongest factors associated with avoiding hospitalisations is primary care access rather than quality of clinical services[8]. Initiatives to improve chronic disease management within general practice have mixed results on reducing potentially preventable hospitalisations. Care provided in the hospital prior to discharge can also impact future readmissions[9].
- *Someone knows what will work in Australian primary healthcare to reduce hospitalisations*: Reed outlined the number of initiatives currently under way, such as greater focus on care coordination and the rollout of the Health Care Home program, as examples of interventions that address multiple factors at play, but cautioned that success is yet to be demonstrated.

2.3 Some positive examples of current activity intended to prevent hospitalisations

Primary Health Networks (PHNs) develop and support evidence-based health pathways, capacity development in general practice, and data collection and analysis to inform the planning and provision of health services. PHNs are working to facilitate improved alignment of primary and secondary health service providers.

For example, Eastern Melbourne PHN in partnership with the Victorian Department of Health and Human Services, Local Hospital Networks, community health services, primary care partnerships, general practitioners, patients and others, has established a number of Collaboratives, each in a Local Hospital Network catchment area, to set priorities and allocate resources. Working groups of content experts and end users implement innovative solutions.

For patients with chronic and complex disease in the city of Whittlesea, a Collaborative is working toward systematic, measurable and sustainable measures to provide an integrated, community-based response for those complex patients with a high risk of potentially preventable hospitalisations.

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5 AIHW 2016. Australia's health 2016. Australia's health no. 15. Cat. no. AUS 199. Canberra: AIHW. p.28

6 Solberg LI 2015, 'Preventable hospital admission: are they?', *Family Practice*, vol. 32, no. 3, pp. 245-246.

7 Reed R, Isherwood L, and Ben-Tovim D 2015, 'Why do older people with multi-morbidity experience unplanned hospital admissions from the community: a root cause analysis', *BMC Health Services Research*, vol. 15, no. 1, pp. 525.

8 Katterl R, Anikeeva O, Butler C, Brown L, Smith B, and Bywood PT 2012, 'Potentially avoidable hospitalisations in Australia: Causes for hospitalisations and primary health care interventions', *Policy Issue Review*, Primary HealthCare Research & Information Service, available from: http://www.phcris.org.au/phplib/filedownload.php?file=/elib/lib/downloaded_files/publications/pdfs/phcris_pub_8388.pdf

9 Reed R et al. *op cit*.

Other programs and trials underway in Eastern Melbourne PHN include:

- Pharmacist Workforce Model Trial: establishing and documenting the best possible medication history for patients with a view to identifying and resolving medicines issues for patients, carers and community nurses in order to reduce medication related admissions to hospital
- Fracture Management Program: GP education and training with a view to reducing fracture clinic wait times, increasing capabilities in general practice, improving connectivity and trust between GPs and hospitals, and formalising referral pathways between GPs and hospitals for clinically appropriate and agreed conditions
- Community Chronic Disease Programs: a community-based model of self-management for high risk patients with a view to improving clinical outcomes, reducing unplanned hospital admissions and improving capability and confidence of general practice teams to manage patients with chronic disease
- Diabetes Diversion Program: market development for innovative cross health system programs to address Type 2 Diabetes, in areas of the catchment that do not currently have a service response, and longer-term, reducing hospital demand due to eligible diabetes patients being supported by integrated wrap-around care in community settings

Associate Professor Laurie Grealish[10] presented on Griffith University's investigation into the clinical and social characteristics of older people who re-present to the emergency department within 28 days of discharge from a hospital stay. Grealish argued that health care providers need to proactively engage with patients and their carers as well as focus more on increasing advance care planning in the general population, trialling of integrated care models, and increasing attention on discharge and discharge summaries.

Associate Professor Matthew Hopcraft[11] provided an overview of Dental Health Services Victoria's pilot to identify patients with primary dental presentations at the emergency departments of the Royal Melbourne Hospital and St. Vincent's Hospital Melbourne in order to divert them to the Royal Dental Hospital of Melbourne. The pilot's first phase saw more than 15% of patients with primary dental presentations diverted to the Royal Dental Hospital of Melbourne. Although staff at both non-dental specific hospitals enthusiastically embraced the pilot, primary dental presentations accounted for only 0.24 to 0.65% of emergency department presentations during the pilot and was not seen as a high priority for investment from key stakeholders. Hopcraft recommended: developing and implementing policies that initiate dental diversion at the earliest possible point; ensuring strong partnerships between the various hospitals and community dental agencies; refining referral processes to the Royal Dental Hospital of Melbourne before extending the diversion process across the state; and providing regular oral health training to emergency department nurses to account for high staff turnover.

[10] http://ahha.asn.au/sites/default/files/civicrm/persist/contribute/files/AHHA_1300_Grealish.pdf
[11] http://ahha.asn.au/sites/default/files/civicrm/persist/contribute/files/AHHA_1430_Hopcraft.pdf

2.4 Moving forward

Throughout the Think Tank presentations and facilitated discussions, a number of areas of focus emerged, which if acted upon, would work toward minimising potentially preventable hospitalisations:

- Acknowledge and address health, social gaps and inequalities
- Enhance primary healthcare
- Better whole-of-system integration by working in partnership across primary, acute, tertiary, disability and aged care to ensure the right care, at the right place, by the right service provider
- Leverage digital health, data and technology
- Better engagement between service providers, patients and carers
- Increased attention on discharge and discharge summaries
- Increased focus on advanced care planning
- Shift the system toward value-based care focused on outcomes rather than throughputs
- A possible role for social impact investing

2.4.1 Acknowledge and address health, social gaps and inequalities

Predictors of potentially preventable hospitalisations are older age, low socio-economic status, ethnicity, rurality, co-morbidity, mental illness, substance use/abuse, relationship status, distance from hospital, meteorological and pollution factors. *Perils of place: identifying hotspots of health inequality*[12], a report from the Grattan Institute, indicated that hot spots could be potentially prevented. However, the locations and rates were highly variable year on year. Rates also increase in communities where there is low socio-economic status or social disadvantage[13].

Professor Richard Reed argued that improving access to GPs in outer metropolitan and rural areas may prevent hospital admissions. Areas with lower GP Access generally have lower socio-economic status but this is not always the case.

Delayed care seeking was recognised to increase potentially preventable hospitalisation, particularly in those patients who self-managed their illness or chronic disease by avoiding healthcare. It is important to recognise and address the reasons behind this behaviour, which is often associated with social disadvantage.

2.4.2 Enhance primary care

Integrated and coordinated health systems and funding approaches can deliver a seamless transition between sectors and providers of care. The effective and efficient provision and coordination of patient-centred primary healthcare services is a critical component of a comprehensive health system, which can improve health outcomes and reduce overall healthcare costs and out-of-pocket expenses.

Collaboration between PHNs and local health districts/hospital networks (public and private) can support population health planning and reduction of inequities in health service access and health outcomes. The workforce beyond the GP needs to be considered.

With appropriate policy design, Health Care Homes have the potential in the longer term to enhance continuity of care, service coordination and team-based approaches to care, according to the needs

[12] https://grattan.edu.au/wp-content/uploads/2016/07/874-Perils-of-Place.pdf

[13] Roos LL, Walld R, Uhanova J, et al. 2005, 'Physician visits, hospitalizations, and socioeconomic status: ambulatory care sensitive conditions in a Canadian setting', *Health Service Research*, vol. 40, no. 10, pp. 1167-1185.

and preferences of patients. This will build on the efforts of PHNs that are already developing such services in their local areas.

2.4.3 Better whole-of-system integration

Healthcare should be provided with a holistic view over the life course of each individual and to their specific needs as they journey this path. This points to the importance of the continuum of care, starting with preventive care and ranging through community, primary, acute, disability and aged care.

The delivery of integrated care must be tailored to local community needs and local system capacity. This means that models of integrated care will vary across Australia. PHNs working closely with local health districts/hospital networks are suitably placed to bring a regional focus to care. Integrated care must be appropriately funded, recognising that any short-term increase in costs will be associated with future savings, and that a new approach to the sharing of risks and funding between the Commonwealth and the states may be required.

Better care coordination requires comprehensive care plans monitored by a care team, including a case manager or nurse available to improve care for patients at risk of potentially preventable hospitalisation. This concept of care coordination should be embedded in how we think about provision of healthcare. It should involve high levels of interaction with patients through face-to-face contact and be carefully targeted on high cost-users to be cost-effectives[14, 15]. This approach has greatest potential benefit for those patients requiring monitoring, self-management coaching, support for medication compliance and education.

Patient-centred medical homes, on which Australia's Health Care Homes are modelled, are starting to show some positive impacts in the United States, but full benefits are unlikely to be captured until long-term results have been evaluated.

When undertaking reviews into the root cause of potentially preventable hospitalisations, Professor Richard Reed noted findings suggesting that management of acute disease was not always optimal and that post-discharge communication was often lacking[16]. There is shared responsibility in this issue between hospital and GPs.

Could care for an individual seeking treatment for a potentially preventable hospitalisation be more appropriately managed outside the hospital? This has been shown when patients are allocated to specialised streams through triage, care in the emergency department and in providing care that is outside the hospital; for example, rapid cardiac assessment, emergency department Fast Track for those with less serious illness or injuries, or through alternative service and workforce models including advanced care paramedics and palliative care at home.

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[14] Peikes D, Peterson G, Brown RS, Graff S and Lynch JP 2012, 'How changes in Washington University's Medicare coordinated care demonstration pilot ultimately achieved savings', *Health Affairs*, vol. 31, no. 6, pp. 1216-1226.

[15] Brown RS, Peikes D, Peterson G, Schore J and Razafindrakoto CM 2012, 'Six features of Medicare coordinated care demonstration programs that cut hospital admissions of high-risk patients', *Health Affairs*, vol. 31, no. 6, pp. 1156-1166.

[16] Reed R, Isherwood L, and Ben-Tovim D 2015, 'Why do older people with multi-morbidity experience unplanned hospital admissions from the community: a root cause analysis', *BMC Health Services Research*, vol. 15, no. 1, pp. 525.

2.4.4 Leverage digital health, data and technology

Information and communication technology infrastructure was identified as one of the foundations for preventing hospitalisations. Participants noted the findings of the CSIRO Telehealth Trial[17] that reported the effects of introducing at-home telemonitoring of vital signs for patients suffering from a wide range of chronic conditions who were frequently admitted to hospital. The trial identified that approximately 750,000 people aged over 65 with complex chronic conditions would benefit, as well as showing a significant economic benefit at the Commonwealth, state and territory levels. Coordinated reforms, with the roles and responsibilities between Commonwealth, state and territory governments articulated, are needed.

The need for linkage of datasets was also identified. Participants discussed the Productivity Commission report on data availability and use[18], to which the Australian Government is yet to respond.

2.4.5 Better engagement between service providers, patients and carers

The use of Patient Reported Experience Measures (PREMs) and Patient Reported Outcome Measures (PROMs) are widely considered as critical in driving improvement of services. Proactive engagement with consumers and families through co-design will assist in ensuring services more effectively deliver on better patient outcomes.

The move toward value-based healthcare is also an opportunity to encourage better engagement between service providers, patients and carers.

2.4.6 Increased attention on discharge and discharge summaries

Discharge is a key factor in avoiding potentially preventable re-presentations to hospital. Discharge summary documentation is often completed by the most junior medical staff in hospitals. Summaries are often delayed, incomplete, inaccurate and are not received by primary care providers. This leads to follow up care being delayed or not being provided appropriately, risking long-term recovery of the patient. Improved discharge summaries are necessary with a focus on the timely and accurate communication of hospital investigations and treatment, and also care planning after admission.

Discharge planning is associated with shorter hospital stays and decreased readmission rates for older adults[19]. Those discharged through transitional care programs have shown reductions in 30 day hospital readmission rates by 20% or greater[20]. This shows the impact that adequate discharge planning can have on these vulnerable individuals.

To enhance hospital monitoring of, and accountability for re-presentations and to drive positive change, hospital re-presentation within 28 days should be included in clinical governance processes such as hospital morbidity and mortality meetings.

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[17] https://www.csiro.au/~/media/BF/Files/Telehealth-Trial-Final-Report-May-2016_3-Final.pdf

[18] http://www.pc.gov.au/inquiries/completed/data-access#report

[19] Gonçalves-Bradley D, Lannin NA, Clemson LM, Cameron ID and Shepperd S 2016, 'Discharge planning from hospital', *Cochrane Database of Systematic Reviews*, Issue 1, Article no. CD000313.

[20] Coleman EA, Parry C, Chalmers S and Min SJ 2006, 'The care transitions intervention: results of a randomized controlled trial', *Archives of Internal Medicine*, vol. 166, no. 17, pp. 1822-1828.

2.4.7 Increased focus on advance care planning

Associate Professor Laurie Grealish and Dr Melissa Harris stressed the importance of advanced care planning in the general population.

Individuals and medical professionals often feel uncomfortable discussing preferences for end-of-life care, resulting in low advance care planning completion rates and poor implementation. At present, too many Australians experience uncertainty, pain and suffering in the final months and days of their lives, and die in circumstances that do not conform to their preferences or expectations[21].

Medical practitioner concerns have been identified regarding issues such as substitute decision making, powers of attorney, the role of guardianship tribunals and the legal consequences of making the wrong decision for care withdrawal. Harmonisation of laws about advance care planning documents and substitute decision-makers across all jurisdictions would support a nationally consistent approach that will protect clinicians from medico-legal risk, provide clarity to patients and their families, and improve outcomes for medical professionals and individuals.

2.4.8 Value-based healthcare

Value-based care is emerging as a solution to address rising healthcare costs, clinical inefficiency and service duplication, and to make it easier for people to get the care they need when it is needed. Value in healthcare is measured by looking at the outcome achieved by a particular type of care or treatment, divided by cost of providing that care. Activity is readily monitored through volume and process based measures, while safety and quality measures are less easily captured and monitored. Capacity to measure outcomes is increasing with improved technical expertise and expanding recognition of its importance.

The International Consortium for Health Outcomes Measurement (ICHOM) has organised working groups around a broad array of conditions to develop international minimum datasets for measuring health outcomes. ICHOM currently has 21 standard sets that have been evaluated, with a large number under development. The intention is that by the end of 2017, ICHOM standard sets will cover more than 50% of the global disease burden.

The aim of value-based healthcare is to achieve the best outcomes at the lowest cost, while also providing the right services by the right person at the right location at the right time. This departure from the traditional fee-for-services model will necessarily involve the integration of care across different services.

[21] Bekelman JE, Halpern SD, Blankart CR, Bynum JP, Cohen J, Fowler R, Kaasa S, Kwietniewski L, Melberg HO, Onwuteaka-Philipsen B and Oosterveld-Vlug M 2016, 'Comparison of site of death, health care utilization, and hospital expenditures for patients dying with cancer in 7 developed countries', *JAMA*, vol. 315, no. 3, pp. 272–283.

In a 2013 article in the *Harvard Business Review*, Porter and Lee outline a strategic approach to improving healthcare[22] that will:

- Organise care into integrated practice units
- Measure outcomes and costs for every patient
- Move to bundled payments for care cycles
- Integrate care delivery systems across facilities
- Expand excellent services across geographical reach
- Build an enabling information technology platform

Dental Health Services Victoria is currently implementing a significant cultural change program alongside the transition towards value-based care. The aim of this work is to identify low-value care and then to reduce and eventually eliminate it. Chief Executive Dr Deborah Cole noted that engaging a 'coalition of the willing' is necessary for widespread practice and systems change, particularly when labour substitution is warranted.

Five lessons based on Dental Health Services Victoria's experience in implementing the ICHOM approach:

- Leadership is critical throughout the organisation. This is particularly evident as health is very hierarchical.
- Outcomes measurement is a team effort. All staff need to be able to access this information to make changes that are appropriate.
- There is no one-size fits all solution. Customising will be necessary.
- The first step is often the hardest. Set a timeline. Keep the rhetoric going.
- Data needs to be accessible and actionable to have an impact. It should be timely, and

2.4.9 A possible role for social impact investing

Professor Stephen Jan proposed an innovative model of value capture as a means of financing patient-centred health care homes across Australia[23]. Jan argued social impact investing, and the use of social impact bonds, could present an opportunity to address potentially preventable hospitalisations through innovative program design, focused on outcomes and aligning the interests of Commonwealth, state and territory governments.

In this model, state and territory governments would underwrite bonds for patient-centred health care homes, with dividends contingent on reduced hospitalisations and based on a predetermined scale linking performance levels with the return on investment. The Commonwealth could act as the bondholder along with an option for the sale of bonds to private investors.

Among the possible advantages to this model, state and territory governments would not be burdened financially until cost savings were realised, and it would strengthen the case for Commonwealth investment in the rollout of patient-centred health care homes by providing the Commonwealth with an offsetting stake in the expected savings in hospitalisation costs, and aligning

[22] Porter ME and Lee TH 2013, 'The strategy that will fix health care', *Harvard Business Review*, Published October 2013.

[23] http://ahha.asn.au/sites/default/files/civicrm/persist/contribute/files/AHHA_1000_Jan.pdf

the interests of the Commonwealth, state and territory governments toward a common goal across the primary and acute sectors.

2.5 Conclusion

There is no panacea to solve the issue of potentially preventable hospitalisations, and actions to address this must be multifaceted, integrated and innovative.

Based on Think Tank presentations and discussions, the way we currently define potentially preventable hospitalisations in Australia may result in underlying contributing factors being disregarded, which reduces our ability to address these factors and minimise potentially preventable hospitalisations.

The Australian Commission on Safety and Quality in Health Care's second *Australian Atlas of Healthcare Variation* include data on potentially preventable hospitalisations as they relate to chronic disease and 18 clinical conditions and notes that the Australian healthcare system must shift to better integrated primary care with a focus on coordinated care.

While primary care and greater system integration are part of the solution, the Think Tank demonstrated that we must also acknowledge and address health and social inequalities, better utilise data and technology, promote better engagement between clinicians and patients, increase attention on discharge and discharge summaries, focus more on advanced care planning, shift the system toward value-based care focused on outcomes, and be open to novel funding mechanisms such as social impact investing.

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