Right care, right place, right time - improving the timeliness of health care in NSW through a public-private hospital partnership

Introduction

Appropriate, high quality, affordable and positive health care experiences that take individual circumstances and care needs into account is a key goal of the Australian health system.[1] The New South Wales (NSW) Ministry of Health supports this goal through its concept of "right care, in the right place, at the right time" and a number of core values, one of which is collaboration.[2] Timely healthcare access implies an adequate supply and right of entry to necessary services and is recognised as a central aim of healthcare quality and a fundamental feature of patient centred care.[3] Patient centred care (i.e. care that is designed to ensure it best matches patient needs, preferences, and values) is recognised by key NSW health agencies, and supported by research, as crucial to improving health care outcomes and reducing costs.[4,5,6,7] Delays in accessing needed health care has various consequences, including longer hospital stays, potential adverse effects on health outcomes and reduced patient satisfaction with care.[8,9] Such delays may also cause unnecessary suffering and increased financial burden on patients who may attempt to self-manage symptoms by utilising ineffective non-evidenced based options while awaiting formal care.[10]

NSW public hospitals are under growing pressure to improve the delivery of care, however achieving timely healthcare access is becoming increasingly difficult as the demand for NSW public hospital services exceeds supply, resulting in the inability to meet many of the required performance targets.[11] Meanwhile, the bar continues to be raised on healthcare quality standards, with more robust monitoring of performance measures, including those signalling appropriate access and timeliness of care.[12,13] Additional pubic hospitals have been built or are under development across NSW to support timely access to healthcare, with the program of major new public hospital works costing $10 billion over the next 10 years.[14] This is set against significant cost pressures, with the Commonwealth Productivity Commission calling for reforms that improve the efficiency of the

health system to relieve some of the pressures associated with Australia's growing expenditure on health care.[15]

Improvements in the timely delivery of health care require a sound understanding of the overall healthcare environment, recognition of opportunities and the development of effective strategies that fit with public health policy and societal expectations. An analysis of this type has recently been recommended by Infrastructure NSW who calls for an investigation of excess capacity in the private hospital sector and options to purchase hospital services for public patients from this sector.[14] The Productivity Commission provides encouragement on this front suggesting that the private health sector has demonstrated its ability to provide efficiencies in the provision of many hospital services.[16]

Anecdotally, there is support from the NSW private hospital sector for partnership arrangements with public hospitals, with the not-for-profit private Catholic hospital sector pointing to existing capacity to service public patients.[17] Private hospitals play a key role in the NSW health care system, especially in growing areas of need such as rehabilitation care, with private hospitals providing the large majority of all inpatient rehabilitation services across the public and private hospital sectors. Further supporting this, and providing confidence in terms of service expectations and healthcare quality are national guidelines for private hospital-based rehabilitation services, which are tied to funding from private health insurance companies.[18]

Public-private health care partnerships are grounded in a 'whole of health system' concept, which conceives a health system as consisting of *"all organisations, people and actions whose primary intent is to promote, restore or maintain health"*.[19] Although a whole of health system approach is often referred to in Australian reports and professional literature as a potential solution to maximising health resources[20,21], the utilisation of hospital resources across NSW public and private

health systems continues to be an under-examined domain and consequently, a largely underutilised opportunity to improve timely access to healthcare in NSW.

Aim and Objectives

The overall aim of the present study is to investigate and assess the feasibility of improving the timeliness of public hospital care through a NSW wide public-private hospital partnership. The aim was supported by a multi-objective research approach i.e.:

1. Investigate the current timeliness of care in the NSW public hospital system by examining a range of measures including elective surgery waiting times.
2. Investigate the occupancy and capacity within the NSW private hospital system by analysing an expert specialty area of private hospital care delivery, namely rehabilitation.
3. Identify potential transformations required to realise the public-private hospital partnership arrangement in NSW.

For the present study we used the Australian Institute of Health and Welfare's definition of rehabilitation care i.e. *"Rehabilitation care is care in which the primary clinical purpose or treatment goal is improvement in the functioning of a patient with an impairment, activity limitation or participation restriction due to a health condition"*.[22]

Methods

Data Analysis

Secondary data analyses were conducted on a range of factors informing timely access to health care e.g. NSW public hospital wait times, occupancy rates and associated access block (i.e. for Emergency Department patients requiring inpatient care) and readmission rates. NSW public and private inpatient rehabilitation utilisation rates and existing NSW private hospital capacity for additional rehabilitation patients were examined to identify whether there was potential

opportunity to improve the timeliness of hospital care through a public-private hospital care partnership.

Literature Review

Prevailing Australian policies, academic papers, professional grey literature and programs/projects with a focus on hospital sector contracting of clinical care services were then reviewed and analyses undertaken to determine current status, opportunities and potential changes required to maximise the use of available hospital resources. A number of key terms were identified to guide the search strategy for relevant papers, policies and programs i.e. Australia, clinical service/care, hospital: procurement, purchasing, outsourcing, partnership, contract, collaborative care and commissioning. The keywords were used in a search of appropriate databases to source the relevant literature. The PubMed/Medline, Scopus, Cochrane Library, Informit, Proquest, Emerald and Business Source Complete databases were systematically searched. The same search terms were also used in an Internet search using a common generic search-engine to identify prevailing policies, projects/programs and any relevant grey literature. Secondary searches of references in included studies and grey literature reports were also undertaken.

Keyword and secondary searches generated 28 academic papers in total. Keyword searches also generated 23 relevant professional grey literature resources and policies, and one published program. After removal of duplicates and non-clinical service related public-private contracting, the full text of seven published papers and grey literature reports, three relevant policies and one published program were explored in full. The data and literature review findings were then collectively analysed to gather an overall a picture of the relationship between the areas under investigation.

Inclusion/Exclusion Criteria

Included in this study were any experimental, pilot and descriptive studies that had a focus on public hospital sector clinical care service contracting, in any clinical care area, for any age group, from the private hospital sector. Dissertations /theses were included in the review. Excluded from this study were any academic and grey literature that were not written in English and/or had a publication date prior to 2005 (as this was deemed too out-dated to be relevant for this study). Also excluded were studies or grey literature that had a primary focus on hospital infrastructure and/or hospital management contracting rather than clinical service contacting, and marketing briefs from health industry contracting companies.

Results

NSW Public and Private Hospitals

There were 9.7 million patient separations across public and private hospitals in Australia in 2013–14, forty percent of which were for people aged 65 and over.[22] About 41% of separations (3.98 million) equating to 9.1 million patient care days (bed days) occurred in private hospitals.[22] The number of all separations increased by 3.0% for public hospitals and by 3.6% for private hospitals between 2009-10 and 2013-14.[22]

NSW Public Hospital Access

There was a 1.4% (36,500) increase in emergency department attendances at NSW public hospitals between 2013-14 and 2014-15 with less NSW hospitals meeting all emergency triage targets in 2014-15 compared to previous reporting years. Only five NSW Local Health Districts realised the target of 81% in emergency treatment performance.[11] Bed occupancy is commonly used as an indicator of public hospital access with bed occupancy over 85% signalling a potential delay in admission of emergency department attendees and/or for those booked for elective surgery.[23] In 2015, the bed occupancy rates across NSW public hospitals ranged from just over 60% to over 94% with metropolitan public hospital bed occupancy rates considerably higher than most rural areas. [11]

Unplanned readmissions

Unplanned readmissions occur when discharged patients unexpectedly return to the same hospital within a given timeframe (usually within 28 days of discharge). Monitoring the number of these patients is one way NSW Health measures the quality of hospital care. All NSW local health districts failed to achieve the NSW Health performance target for patient readmissions in 2014-15.[11]

Elective surgery wait times

In 2014–15, there were 217,727 admissions from the NSW public hospital elective surgery waiting list of 245,214.[11] This means that in 2014-15 the NSW public health system was unable to deliver care within medically recommended time frame for over 27,480 of its residents. Between 2010–11 and 2014–15 the median wait time for elective surgery in NSW public hospitals increased from 47 to 54 days and in NSW *public acute group A hospitals*, the median waiting time was 69 days. Nationally, coronary artery bypass graft had the lowest median waiting time in 2013–14 (14 days), however the median wait in NSW was 27 days.[23] The NSW Auditor General reports that NSW Health did not achieve Category 1 or 3 national surgery performance targets in 2014-15 (i.e. Category 1: procedures that are clinically indicated within 30 days and Category 3: within 365 days).[11] Wait times for elective surgery do not include the time it takes for patients to be placed on the public wait list.

Inpatient Rehabilitation

Eighty one percent of all NSW inpatient rehabilitation care separations occurred in private hospitals in 2012-13.[24] Nationally in 2013-14, 80% of all inpatient rehabilitation separations were for people aged over sixty years. Osteoarthritis of the hip or knee was the most common reason for rehabilitation in this period.[25] Thirty seven out of the ninety one NSW private overnight hospitals currently have a specialised rehabilitation unit and there is active development of new units within existing or new private facilities across NSW.[25,26]

Over the three year period between 2011-12 and 2013-14, rehabilitation separations in private hospitals increased by an average of 4% per annum. Over the same period, rehabilitation care separations increased by approximately 10% per annum in NSW Public hospitals.[22] Rehabilitation bed days remained largely stable in the NSW private hospitals between 2011-12 and 2013-14, however they grew by over 10% in the NSW public system.[25] **Table 1** provides rehabilitation care type separations and bed days in NSW public and private hospitals between 2011-12 and 2013-14.

Table 1 around here

On average in 2013-14, there were over 1,230 available beds in private specialised rehabilitation units across NSW. In the same year, the average occupancy rate for private specialised rehabilitation unit beds was 79%.[25] Unlike public hospitals which require a level of surge capacity (i.e. 85% occupancy to ensure extra hospital capacity can be readily sourced when demands unexpectedly escalate e.g. for major incidents/accidents), private hospital rehabilitation units prefer high occupancy rates (i.e. 95%-100%), to minimise the number of empty beds. Licensed medical beds are also used for rehabilitation service provision in private overnight hospitals.

The available capacity that exists in NSW private hospital rehabilitation units was determined by assessing the 2013-14 average length of stay in the units i.e. 3.4 days, and the bed vacancy rate for the same period i.e. 21% of 1,231 beds.[25] Assuming a 100% occupancy rate is available in each specialised rehabilitation unit, this equates to an additional 27,752 separations or 94,356 bed days that are currently available each year in NSW private hospital rehabilitation services (these figures do not account for utilisation of existing licensed medical beds, or day program rehabilitation modalities in private facilities).

Academic and professional grey literature

A summary of published Australian policies, programs, papers and reports, found in this review, that inform public contracting of services from the private health sector are provided in **Table 2**.

Table 2 around here

Discussion

If nothing was to change and the current trend for public hospital rehabilitation bed day requirements continued as it has for the past few years, we can expect an additional 50,000 public hospital inpatient rehabilitation bed days required across NSW over the coming twelve months. This increased demand will compound current pressures on elective surgery and emergency department wait times, whilst potentially increasing readmission rates due to the need to prematurely discharge patients in an effort to 'clear beds' and further compromising public hospital surge capacity. This study highlights the possible additional capacity that could be made available in the NSW public hospital system if only a small proportion (currently around 15%) of public rehabilitation bed days were contracted to private hospitals, which have known expertise in this area. If the available private hospital rehabilitation beds (and associated available bed days) were used for public rehabilitation patients, enough public beds would be freed-up to allow all NSW public elective surgery patients to be treated within medically recommended timeframes, potentially improving patient outcomes, ensuring the national elective surgery performance targets are met and reducing the growing urgency for additional immediate public hospital infrastructure. Outsourcing an even greater proportion of rehabilitation bed days (i.e. more than the 15% identified in this study) could also allow NSW public hospitals to maintain appropriate surge capacity and reduce emergency wait times by easing public hospital bed block.

Shifting care from public to private healthcare providers under various funding arrangements has been used internationally to reduce public patient wait times, with mixed results.[38,39] A somewhat similar approach as that proposed by this research is one taken by the government in England, which has procured private hospital sector capacity for elective surgery since 2005. Around 15% of NHS elective surgery is now conducted by the private sector.[40,41] Researchers in the field indicate that a "tightly focused use of private-sector purchasing" may be the best approach to reducing public hospital wait times.[42]

While discrete collaborative arrangements between public and private hospitals might exist under local arrangements across Australia, the literature review conducted for this study found few formally published Australian papers, reports, pilots, examples or policies guiding public-private hospital clinical service contracting in the grey nor academic literature. Of significance to this study is that no supporting Australian literature (evidence or grey literature reports) could be found for public contacting of private inpatient rehabilitation services. This study did however find that public-private health partnership projects that are in place or underway primarily focus on partnering in the design, construction and/or maintenance of hospital infrastructure and/or management under agreed funding, risk sharing and ownership arrangements.[43] A number of these partnerships have been problematic with identified issues in public and private sector costs, conflicting objectives, cultural divisions and a lack of understanding of the other party, governance and contract management issues, quality and performance disputes and sustainability.[32] These and other problems, while requiring more detailed investigation, may need to be considered in private hospital clinical service purchasing initiatives. International research has found that local programs that are adequately resourced and linked to long-term whole of health system approaches, where there is an appropriate collection and use of information, as well as sound leadership and clinician engagement are necessary for ultimate success.[39]

The largely policy driven, crude increase in private hospital service delivery in recent years, largely due to the overall need for hospital services by a growing elderly cohort and expansion and uptake of a growing number of medical technologies, has not been enough to take the pressure off public hospitals[44], nor is it expected to in the future.[45] The efficiency gains from key policies that were developed to improve public hospital capacity as demand increased, such as early discharge and same-day treatment, are now believed to be exhausted.[45]

Rather than the current public policy strategy that focuses on consumer choice to access private hospitals, which has been found to have the least evidence of effect[39], a more strategic, collaboratively planned approach is required if the real potential of a whole of health system approach is to be realised. Effective approaches require a sound evidence base including local models that have been reliably developed and tested, and found to be valuable from all perspectives, including consumers. Such evidence based models are not currently available in Australia. A strategic public-private health services research program which enhances and expedites research efforts aimed at securing a better understanding of available capacity and other opportunities (including relevant legal, regulatory and policy frameworks) across the public and private health systems, and identify and test workable models that improve the timeliness and effectiveness of hospital and other health care in Australia is required. To allow this research, better access to real time data is required to gain a concise picture of private hospital capacity. The Australian Institute of Health and Welfare in its first report in the Australian hospital statistics series to focus specifically on private hospitals indicates that "*there are still many areas where data and information on private hospitals need to be improved".*[25] Nevertheless, available data and analyses reported in this study suggests there is scope for public hospital rehabilitation patients to be treated in private hospitals, with the current average annual occupancy rate for private specialised rehabilitation beds at 79%[26] and further private hospital rehabilitation capacity available by use of licensed medical beds for rehabilitation service provision where appropriate.

The extent to which Australians' have the right of timely entry to public hospitals depends somewhat on prevailing public policy, funding and attitudinal barriers that limit the utilisation of available private hospital services. Opportunely, this study did find a growing political concern for public hospital demand and a willingness to at least consider available options to address capacity issues, including recommendations from Infrastructure NSW, the current NSW health minister and federal policy advisors through the Council of Australian Governments, to identify effective strategies to collaborate with the private hospital sector.[35,46,47] This dialogue needs to be progressed through a detailed strategic public and private hospital sector analysis to identify opportunities and barriers to a whole of hospital system approach to providing timely access to care.

Limitations

There are several limitations of this study. First, the two key secondary data sources used in the study Australian Institute of Health and Welfare and the ABS both acknowledge limitations in their data. Second, in this study we have assumed that 100% occupancy rate is available in private hospital specialised rehabilitation units, however this may not be the case, which would affect available bed day calculations. There is no detailed information available regarding occupancy rates both within specialised areas and across private hospitals in Australia, including existing variability and desired rates, and we consider this an important health services research need. Thirdly, the general lack of published Australian literature on the topic made it difficult to gain a full understanding of current initiatives to inform the status of clinical service public-private partnerships in Australia.

Conclusion

The US Institute of Medicine defines access as the 'timely use of personal health services to achieve the best possible outcome'.[48] Barriers to access that result from the inefficient use of existing capacity and failure to design services around the needs of patients, particularly when these needs

are medically advised, is a failure of the NSW public health system objectives to provide appropriate high quality hospital care. This study was unable to investigate the nature, level and cost of morbidity and mortality experienced by the over 27,480 NSW residents that could not be offered public hospital care within the medically recommended time frame, because this information is not currently collected. Neither is information collected on the effect on the economy of time lost from work as a result of increased morbidity suffered throughout the public hospital service wait. This kind of information may be more compelling with regard to the importance of this issue.

Conflicts of Interest

There are no conflicts of interest

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