

The impact of outsourcing bed-based aged care services on quality of care: A multisite observational study

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Abstract

Background: Outsourcing health-care services has become popular globally, provided by both profit and non-for-profit organizations with varying degrees of quality. To date, few published studies have evaluated the quality of care in health services using outsourcing.

Objective: The purpose of this study was to determine if there were differences in quality of care (effectiveness, safety and patient experience) for a Transition Care Program designed to improve older people's independence and confidence after a hospital stay, when provided within a public health network compared to being outsourced to private facilities.

Methods: For clients discharged to a residential Transition Care Program operating across three sites from a large health service network ($n = 1546$), an audit of medical records was completed. Site 1 remained within the public health service (internally managed), whereas Sites 2 and 3 involved outsourcing to residential aged care facilities. The main outcome measures were discharge destination, length of stay and number of falls. Client demographics were analysed descriptively, and inferential statistics for continuous data and negative binomial regression for event data were used to examine differences between the sites.

Results: There were differences in quality of care between the internally and outsourced managed sites. One outsourced site discharged a smaller proportion to rehabilitation ($P = 0.003$) compared to the other two sites. There were differences in length of stay between the three sites. The length of stay was a mean of 4.8 days less at Site 1 (internally managed) (95% Confidence Interval (CI) 0.5 to 9.1) than Site 2 and 4.6 days less (95% CI 1.2 to 8.1) than Site 3. For those discharged to permanent residential care, the length of stay was 9.4 days less at the internal site than Site 2 (95% CI 3.5 to 15.2) and 7.0 days less than Site 3 (95% CI 1.9 to 12). Additionally, a lower rate of falls was recorded at Site 1 (internally managed) compared to Site 2 (outsourced) (incidence rate ratio = 0.44 (95% CI 0.32 to 0.60), $P < 0.001$).

Conclusion: An internally managed Transition Care Program in a public health network was associated with better quality of care outcomes compared to outsourced services.

Key words: aged, length of stay, patient discharge, public health, Transition care program

Introduction

Outsourcing of services, otherwise known as commissioning, is a common practice used by governments, with the aim of reducing costs and growing revenue and productivity while maintaining high-quality standard of care to patients [1]. Outsourcing is defined as the transfer of production of goods or services from an internal to an external party [2]. When this occurs, governance structures and systems are put in place with oversight from both parties to ensure appropriate implementation, monitoring and evaluation [3]. However, monitoring and evaluation of contracted out public services are rarely undertaken [4].

Commissioning or outsourcing health services was initiated in UK in the late 1980s and was then implemented by other countries [5]. In Australia, this approach to service provision became more common as part of the Australian Health Reform in 2015, which aimed to provide a cost-effective sustainable system, especially to patients with complex chronic diseases and older adults [6]. The health-care sector has used outsourcing models for supplies of various services. These include information technology (IT), logistics services, special clinical services and non-clinical services [7]. The proposed advantages of outsourcing of these activities included enhanced performance, cost reduction, increased focus on the

core business of the organization as well as improvement in the quality of the service provided [7–9].

There is variability in the type of services that are outsourced in health and their outcomes, and studies suggest differences in the expectations and satisfaction between private and public health-care providers [10]. There are multiple factors that determine the need for outsourcing or commissioning of health services. Examples of these include employee skill levels, industrial relations and the characteristics of the labour market, as well as internal management skills, ability of internal teams to implement change and relationships between management and staff [11]. A recent Delphi study examined the decision-making process in outsourcing in Iran [10]. The authors highlighted the complexity of the issue and stated that factors such as the organization strategy, skills of staff and quality of services, management, technology needs and economics contribute to the decision-making process for managers to seek outsourcing. These factors were also consistent with the findings for the Australian Health System, based on the UK experience [12].

Transition Care Programs aim to minimize inappropriate lengthy hospital stays and assist older patients and those with complex needs to transition back to the community after a hospital admission. These programs are often outsourced by health services to providers of residential aged care or other supported living facilities. These organizations are generally considered to be well placed to provide accommodation in supported settings, supplemented by therapy services to support transition back to the community or to long-term care. However, published evaluations of Transition Care Program have been very limited. The planning and role of transition care [13–15] and patient experience and service efficiency have been a focus [13, 14, 16].

In Australia, health networks determine the location of their Transition Care Program bed-based services. Some networks keep the program ‘in house’ in wards of inpatient health-care facilities, such as hospitals or rehabilitation centres, that are governed and staffed by the health network. Alternatively, some health networks outsource the Transition Care Program beds to residential aged care facilities [15]. In these circumstances, nursing care is provided by the staff employed at the residential aged care facility. Medical and allied health services are either provided through the health network, or staff are contracted privately to provide services. While tendering arrangements usually ensure that the costs of internally or outsourced sites are similar, there can sometimes be differences in staffing, environment, culture and governance. To our knowledge, there is no published literature comparing the quality of care associated with Transition Care Program sites and their impact on client outcomes in Australia.

The objective of this study was to determine if there were differences in quality of care, described in terms of effectiveness, safety and patient experience, for a Transition Care Program provided within a public health network compared to being outsourced to private facilities.

Methods

Study design and setting

A retrospective multisite audit was undertaken for all clients discharged from a residential Transition Care Program of a

health network over two financial years (2016–2018) in Australia. Ethical approval to audit data routinely collected by the Transition Care Program was obtained through the health network’s Human Research Ethics Committee (LR100-2018).

The Transition Care Program provides short-term support and care to older people for up to 12 weeks at the end of their hospital stay. As a goals-based program, it can be delivered in the home (home based) or in a residential care setting (bed based). This study investigates the bed-based component of the program, and clients are directly allocated to the next available bed. The Transition Care Program operates out of three sites. One (Site 1) is an internally managed subacute site, a ward with 27 beds staffed and managed by the public health network. The other two sites are residential aged care facilities, run and managed by independent organizations. These facilities have contractual arrangements set-up by the health network, through a tender process. One outsourced site with 15 Transition Care Program beds is a not-for profit organization; a further outsourced site with 30 Transition Care Program beds is a church-based organization. Due to tendering requirements, there is no cost difference between the sites, but there are differences in governance, staffing, culture and environment. At the internally managed site (Site 1), all care is provided by employees of the health network. Nursing staff employed at the internal site are registered or enrolled nurses. Site 1 also has a weekly orthopaedic round, not available at the other sites. Consequently, when beds are available, clients with fractures are transferred to that site as a first option. At the two outsourced sites, all care is provided by employees of the contracted facility, with the exception of geriatrician, allied health and case manager roles who are employees of the health network based at the contracted facilities. Most care staff provided by the externally managed sites are personal care attendants, with a registered nurse in charge of each shift. The internally managed site has predominantly four-bed wards, some of which are set around a central nurses’ station. Both outsourced sites have longer corridors with single rooms (Site 2) or a mix of single and double rooms (Site 3). [Figure 1](#) provides a visual representation of the program and the services provided at each site.

Participants

All clients discharged from the Transition Care Program from July 2016 to June 2018 were included in this study, and their medical records were audited.

Data collection

Quality-of-care outcomes were collated from routinely collected data. Demographic information was collected including age, gender and primary diagnosis. Socio-economic level was determined using Socio-Economic Indexes for Areas data developed by the Australian Bureau of Statistics that ranks areas in Australia according to relative socio-economic advantage and disadvantage [17]. Areas are categorized on a scale of 1—indicating most socio-economic disadvantage, through 10—most advantaged using Census data. Data describing each of the sites including the number of beds, staffing and environment were also collected.

The outcome measures used for this study were based on the quality of care described by the National Health Service (NHS). Three components of quality of care are defined as

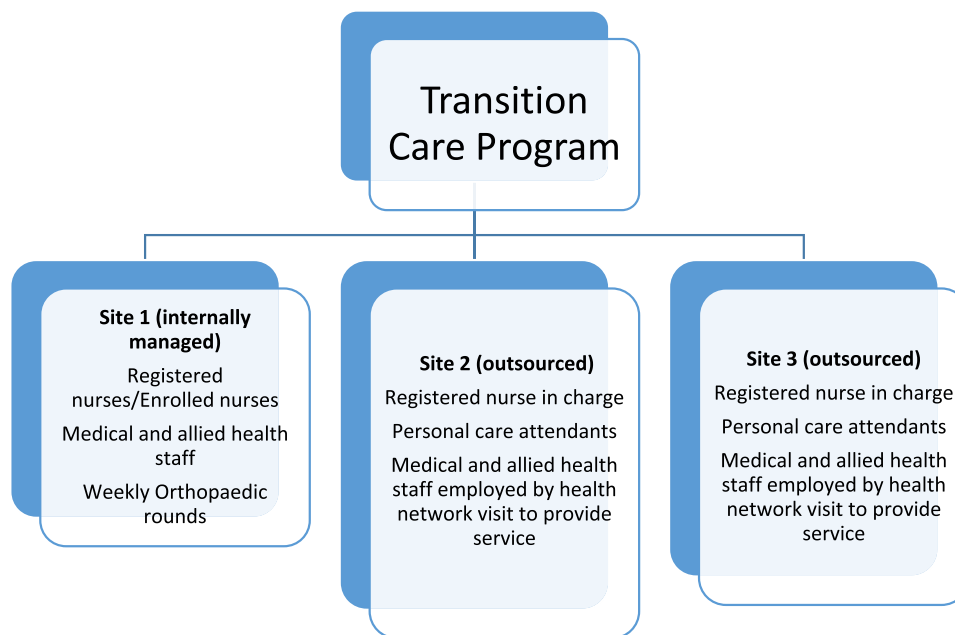


Figure 1 Transition Care Program structure.

care that is clinically effective, care that is safe and care that provides a positive experience for patients [18].

In this study, we collected data on clinical effectiveness (measured via client discharge destination—residential aged care, home, rehabilitation, acute hospital, other), level of independence (measured by Barthel index with a reported minimally clinically important difference of 9.8 units in older hospitalized patients) [19, 20] and length of hospital stay (defined as the number of days admitted to the Transition Care Program).

Client safety was measured by the number and incident severity rating (ISR) of adverse events reported on The Victorian Health Incident Management System (VHIMS) dataset for the collection and classification of clinical incidents, occupational health and safety incidents, hazards and consumer feedback [21]. An ISR 1 indicates a severe outcome including death, ISR 2 represents a moderate outcome or significant injury (e.g. fracture) and ISRs 3 or 4 indicate minor or no injury. The most common events recorded in the VHIMS database are falls. Behavioural issues, skin tears/pressure injuries and incorrect diets were also reported.

Falls risk was also measured using an amended version of the Falls Risk Assessment Tool (FRAT). Clients are scored from 0 to 30, with a higher score indicating a higher falls risk. The FRAT was scored on admission to the program, then again after a week or sooner if the client fell.

Patient experience was measured by the number of complaints lodged in the network feedback system (VHIMS) as described above.

Data analysis

All statistical analysis was performed using SPSS, version 25 (IBM SPSS Statistics for Windows, version 25.0. Armonk, NY: IBM Corp). For continuous outcomes (length of stay and Barthel scores), one-way analysis of variance was completed with one independent factor (site, with three levels).

The source of any significant differences between sites was explored with Tukey's test.

Falls were expressed as the number of falls, the number of injurious falls (ISR 1 and 2) and the number of fallers. The rate of falls was expressed per 1000 patient days at each site, and the incidence rate ratio was calculated using binomial regression [22]. Other measures expressed in categories were analysed using Pearson's chi-square analysis. To account for multiple comparison for each main outcome, the level of statistical significance was set at $P = 0.006$, based on Bonferroni adjustment.

Results

Participants' demographics

A total of 1546 clients were discharged from the Transition Care Program bed-based service during the 2-year study period. The client group in the Transition Care Program was predominantly older with a mean age of 83 years. A total of 62% of clients were female, and the most common admission diagnosis was a fall resulting in fracture or other injury. The majority of clients came from a high socio-economic postcode. Client characteristics were similar across the three sites (Table 1), with the exception of a primary diagnosis of 'fall with fracture' with increased numbers at the internally managed Site 1 ($P = 0.003$).

Program effectiveness

Level of independence

There were no significant differences in the Barthel score between the sites on admission ($P = 0.553$). On discharge, Barthel scores were observed to improve by 1.9 and 1.3 at Sites 1 and 2, respectively, and decrease by 1.4 at Site 3 (outsourced), which was not statistically ($P = 0.059$) or clinically significant.

Table 1 Characteristics of participants

	Site 1—Internal (<i>n</i> = 625)	Site 2—External (<i>n</i> = 304)	Site 3—External (<i>n</i> = 617)	Total (<i>n</i> = 1546)	Analysis
Participants					
Age (years), mean (SD)	83.0 (8.1)	82.6 (8.8)	82.6 (8.5)	82.8 (8.4)	F(2, 1543) = 469, <i>P</i> = 0.626
Gender, <i>n</i> males (%)	223 (36)	123 (40)	248 (40)	594 (38)	χ^2 (2) = 3.339, <i>P</i> = 0.188
Socio-economic advantage, mean (SD)	8 (1.3)	8 (1.4)	8 (1.2)	8 (1.3)	
FRAT (score range 0–30)					
FRAT admission score, mean (SD)	16.3 (9.9) <i>n</i> = 476	16.3 (8.3) <i>n</i> = 245	17.2 (8.2) <i>n</i> = 465	16.6 (8.9)	F(2, 1183) = 2.692, <i>P</i> = 0.068
Subsequent FRAT score mean (SD)	16.6 (8.6) <i>n</i> = 458	16.2 (8.5) <i>n</i> = 221	17.3 (8.6) <i>n</i> = 418	16.8 (8.6)	F(2, 1094) = 1.757, <i>P</i> = 0.173
Barthel (score range 0–100)					
Barthel score admission, mean (SD)	57.6 (26.0) <i>n</i> = 594	56.9 (27.4) <i>n</i> = 241	55.9 (28.9) <i>n</i> = 449	56.9 (27.3)	F(2, 1281) = 0.593, <i>P</i> = 0.553
Barthel score discharge, mean (SD)	59.5 (33.7) <i>n</i> = 556	58.2 (33.8) <i>n</i> = 237	54.5 (35.4) <i>n</i> = 457	57.4 (34.4)	F(2, 1247) = 2.836, <i>P</i> = 0.059
Primary diagnosis					
Fall with fracture, <i>n</i> (%)	235 (38)	65 (21)	159 (26)	459 (30)	χ^2 (2) = 11.644, <i>P</i> = 0.003
Fall with other injury, <i>n</i>	66 (11)	36 (12)	56 (9)	158 (10)	χ^2 (2) = 2.363, <i>P</i> = 0.307
Neurology, <i>n</i>	57 (9)	32 (11)	65 (10)	154 (10)	χ^2 (2) = 5.658, <i>P</i> = 0.059
Other Gen med, <i>n</i>	267 (42)	120 (39)	203 (33)	590 (38)	χ^2 (2) = 2.160, <i>P</i> = 0.340
Not recorded	0	51 (17)	134 (22)	185 (12)	

FRAT: Falls Risk Assessment Tool; Gen med: general medicine; SD: standard deviation.

Discharge destinations

Discharge destinations across the three sites are shown in Table 2. Discharge destinations were different across the three sites for rehabilitation (*P* = 0.003). Site 2 (outsourced) discharged a smaller proportion of clients to rehabilitation (9%) compared to Sites 1 (14%) and 3 (17%) and a larger proportion of clients to residential care (60%) compared to Sites 1 (52%) and 3 (49%).

Length of stay

The mean length of stay of 33.6 days at the internally managed site (Site 1) was 4.8 days less than the mean length of stay at Site 2 (95% Confidence Interval (CI) 0.5 to 9.1) and 4.7 days less than Site 3 (95% CI 1.2 to 8.1) (Table 2). For clients discharged to permanent residential care, there was a mean difference of 9.3 days between Sites 1 and 2 (95% CI 3.5 to 15.2) and 7.0 days between Sites 1 and 3 (95% CI 1.9 to 12.0). Client diagnosis did not impact length of stay.

Program safety

The outcome measures addressing safety and patient experience are shown in Table 3. The percentage of clients who fell in the outsourced sites (48 of 304, 16% at Site 2 and 152 of 617, 25% at Site 3) was higher than the internally managed site (85 of 625, 14%). There were no falls resulting in death at any of the three sites (ISR 1 = 0). There was no significant difference in the number of serious (ISR 2) falls per 1000 bed days across the sites (*P* > 0.05). Participants in Site 3 had a significantly higher rate of falls with minor or no injury (ISR 3/4) than either of the other two sites (*P* < 0.006). There were no other serious incidents (ISR 1 or 2) reported at any of the sites. The

number of incidents related to skin tears, behavioural issues and incorrect diet were similar across the sites.

Patient experience

There were three formal complaints lodged in the internally managed site compared to no complaints at Site 2 and six complaints at Site 3. No statistical analysis was undertaken due to the small number reported.

Discussion

Statement of principle findings

To our knowledge, this is the first study that compares the quality of care of clients from an internally managed site and outsourced clinical services for a Transition Care Program in Australia. The main finding from this study is that the length of stay was significantly reduced at the internally managed Transition Care Program site at a public health network, compared to the two outsourced residential aged care sites. Furthermore, there were a higher rate of non-injurious falls at one outsourced site and a relatively higher number of clients discharged to aged care from outsourced services. These results suggest that there was no clear benefit to outsourcing health-care services in this setting. In fact, the observation of reduced length of stay with similar or possibly increased quality of care outcomes suggests that there may be health service benefits associated with providing Transition Care Program services in-house.

These observations support some existing literature from within the health-care sector as well as broader areas such as manufacturing, where decisions have been made to insource based on negative outsourcing experiences [23, 24].

Table 2 Discharge destination outcomes and length of stay

	Site 1—Internal (<i>n</i> = 625)	Site 2—Outsourced (<i>n</i> = 304)	Site 3—Outsourced (<i>n</i> = 617)	Total (<i>n</i> = 1546)	
Discharge destination, <i>n</i> (%)					
Residential care	325 (52)	182 (60)	305 (49)	812 (53)	$\chi^2(2) = 9.009$, <i>P</i> = 0.011
Home with/without services	85 (14)	41 (13)	71 (12)	199 (13)	$\chi^2(2) = 1.411$, <i>P</i> = 0.494
Return to hospital (ED)	100 (16)	40 (13)	95 (15)	235 (15)	$\chi^2(2) = 1.312$, <i>p</i> = 0.519
Rehabilitation	91 (14)	26 (9)	104 (17)	221 (14)	$\chi^2(2) = 11.520$, <i>P</i> = 0.003
Other (death, discharge at risk)	24 (4)	15 (5)	42 (7)	79 (5)	$\chi^2(2) = 5.577$, <i>P</i> = 0.062
Length of stay in days, <i>m</i> (SD)	33.6 (23.3)	38.4 (29.5)	38.3 (27.2)	36.4 (26.3)	<i>F</i> (2, 1543) = 5.929, <i>P</i> = 0.003
Length of stay in days according to discharge destination, <i>m</i> (SD)					
Residential aged care (<i>n</i> = 812)	33.2 (22.8)	42.5 (31.8)	40.2 (1.58)	37.9 (27.1)	<i>F</i> (2, 809) = 8.79, <i>P</i> < 0.001
Home with/without services (<i>n</i> = 199)	37.3 (17.4)	38.0 (25.5)	47.0 (30.2)	40.9 (24.7)	<i>F</i> (2, 194) = 3.435, <i>P</i> = 0.034
Return to hospital (ED) (<i>n</i> = 235)	27.1 (24.2)	31.3 (24.8)	27.8 (25.3)	28.1 (24.7)	<i>F</i> (2, 232) = 0.416, <i>P</i> = 0.660
Rehabilitation (<i>n</i> = 221)	41.1 (25.4)	38.7 (20.1)	42.6 (23.7)	41.5 (23.9)	<i>F</i> (2, 218) = 0.291, <i>P</i> = 0.748
Length of stay in days according to diagnosis, <i>m</i> (SD)					
Fall with fracture (<i>n</i> = 459)	37.6 (24)	41.0 (23.9)	41.8 (27.9)	39.5 (25.5)	<i>F</i> (2, 456) = 1.42, <i>P</i> = 0.243
Fall with other injury (<i>n</i> = 158)	31.9 (23.4)	30.8 (29.2)	37.5 (24.3)	33.6 (25.2)	<i>F</i> (2, 155) = 1.05, <i>P</i> = 0.352
Neurological (<i>n</i> = 154)	30.4 (21.2)	35.5 (28.4)	39.9 (27.3)	35.5 (25.6)	<i>F</i> (2, 151) = 2.11, <i>P</i> = 0.125
Other (<i>n</i> = 590)	31.3 (22.7)	35.7 (28.5)	35.3 (26.4)	33.6 (25.3)	<i>F</i> (2, 587) = 1.99, <i>P</i> = 0.138

ED Emergency department; *m*: mean; SD: standard deviation. .

There is a dearth of literature on the rationale for insourcing at the end of a contractual arrangement, but particularly in the public sector, challenges have included quality of service delivery and co-ordination, accountability and a knowledge base to support the complex contractual obligations [25].

There are many contributing factors to the reduced length of stay at the internally managed site compared to the outsourced sites. Whereas the health network provides all governance for the internally managed site and all staff employed in the program its employees, governance of the outsourced sites is shared by the contracted facility and the health network. The majority of the day-to-day oversight and management, particularly for nursing care, is provided by the contracted residential aged care facility. Systemic deficits have been found across the residential aged care sector within Australia. A recent Royal Commission into Aged Care found that it is a flawed system with multiple examples of substandard care. Systemic problems were identified including poor or absent leadership and governance, inadequate funding and reduced access to health care [26]. With differences in governance and care expectations, it is difficult to outsource successfully.

The difference in length of stay has a significant economic impact for the health network and implications for how services are managed and organized [27]. It is critical that there is a consistent flow through the network for patients/clients moving between the acute, subacute and Transition Care

Program settings to ensure the optimum quality of care and avoid bottlenecks in high-acuity areas such as the emergency department. Lack of available Transition Care Program beds can result in significant bed blockages across the network, and it is therefore imperative that the Transition Care Program maintains an efficient length of stay. Staff employed in a primary health-care network are focussed on discharge, and returning the patient to their home as soon as is safely possible. The model employed in an aged care facility is quite different to a primary health-care network, with care staff focussed on the long-term care for their patients/clients. Residential aged care facilities are considered 'homes'. Staff working within residential aged care settings are not exposed to the same time pressures and emphasis on patient flow, with staggered admissions and discharges.

Interpretation within the context of the wider literature

With its focus on clinical services, direct patient care in a Transition Care Program, our study adds to the literature questioning the benefits of outsourcing. Previous studies of outsourcing have included non-clinical services such as business and IT support, plus clinical support services, such as laboratory services. In addition, our study adds to the literature by providing empirical data in the Australian health-care setting, where much of the available evidence on outsourcing is from countries with different health-care systems such as China [28] and the UK [29].

Table 3 Clinical incidents/patient experience

	Site 1—Internal (<i>n</i> = 625)	Site 2—External (<i>n</i> = 304)	Site 3—External (<i>n</i> = 617)	Incidence rate ratio (95% CI), <i>P</i> value	Total (<i>n</i> = 1546)
Clinical incidents, <i>n</i>					
Falls/injurious falls/fallers (<i>n</i>)	124/6/85	82/1/48	280/9/152		
Falls per 1000 bed days (ISR 1)	0	0	0		0
Falls per 1000 bed days (ISR 2)	0.3	0.1	0.4	Site 1v2 2.81 (0.65 to 12.10), 0.164 Site 1v3 0.79 (0.23 to 2.78), 0.716 Site 3v2 4.40 (0.56 to 34.74), 0.160	0.3
Falls per 1000 bed days (ISR 3/ISR 4)	6.1	7.5	12.6	Site 1v2 0.89 0.73 to 1.09, 0.275 Site 1v3 0.44 (0.32 to 0.60), <0.001 Site 3 v2 1.82 (1.24 to 2.68), 0.002	9.1
Other incident (ISR 1 or 2)	0	0	0		0
Skin tears/pressure injuries per 1000 bed days (ISR 3/4)	2.5	1.0	1.6		1.7
Behavioural issues per 1000 bed days (ISR 3/4)	0.9	0.5	0.9		0.8
Incorrect diet provided per 1000 bed days (ISR 3/4)	0.2	0.4	0.2		0.2
Formal complaints lodged	3	0	6		9

ISR Incident severity rating; m: mean; SD: standard deviation.

A recent study found that outsourced services including non-clinical services performed worse in quality than the public health services [28], findings consistent with our observation that outsourced Site 3 had a longer length of stay to achieve a likely decrease in functional independence, compared with the internally managed site. They explained their findings by the restraints in budget from the government that prioritizes cost reduction over quality of care. Another recent study published by Goodair *et al*, 2021 also found that outsourcing services to private providers was associated with higher mortality rates in NHS UK. The authors reported a significant increase in outsourcing through the private sectors which also corresponded with decrease in quality of the service and increased mortality rates in the outsourced services [29]. The current study suggests that within the Transition Care Program settings outsourcing may be failing to provide optimal outcomes, but the disadvantages of outsourcing are in efficiency rather than service quality.

Moreover, addressing the high stakes associated with outsourcing in health care highlighted the importance of carefully sourcing services for public health services as they do not necessarily result in cost reduction [30]. Effective outsourcing requires a significant oversight of the overall performance of the outsourced services. Detailed contracts between the outsourced services and the contractor should include indicators of clinical quality, business efficiency, patient satisfaction and professionalism [30].

Strengths and limitations

The results obtained from this study represent only one health service and may not be generalizable to other health services. As an observational study, the findings do not indicate the cause of the observed differences in length of stay, or in non-injurious falls rate, but the size of the effect leads us to hypothesize that there are differences in length of stay for

clients in internally managed compared to outsourced sites. However, its strengths lie in the outcome measures chosen for the study as it includes a variety of measure of quality of care.

Implications for policy, practice and research

Our study suggests that there are benefits for health networks in keeping their Transition Care Program beds in-house, rather than outsourcing them to externally managed aged care providers. Where this is not possible due to the on-site demand for acute and subacute beds, appropriate governance and operational control needs to be in place at the outsourced sites to monitor and maintain standards of care. This could include measures such as mandating minimum levels of workforce skill-mix as part of contractual arrangements and increasing expectations for continuous evaluation and improvement models through more rigorous benchmarking [31]. Developing quality monitors for health services requiring outsourcing has the potential to improve quality of care of clients involved and reduce costs to the health service.

Further research is required to undertake studies addressing quality of care with models of outsourced care. It is also important to understand the factors associated with lower quality of care in outsourced services compared to internally managed services. Furthermore, research addressing quality monitors for outsourced services is needed to ensure public hospitals have the correct indicators when outsourcing services to ensure not only cost benefit but also high quality of care.

Conclusion

An internally managed Transition Care Program in a public health network was associated with better quality of care outcomes including reduction in length of stay and number of falls compared to outsourced services.

Data sharing statement

Data are available from first author A.H.T. on reasonable request.

Contributorship

A.H.T. contributed to project conception, data collection, writing first full draft.

N.T. contributed to support with project conception, data analysis, co-writer, expert advice.

H.K. contributed to co-writer, expert advice.

R.K. and K.H. contributed to review of drafts, expert advice.

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Ethics and other permissions

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