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# **HCCA Submission on the ratio of private rooms to shared rooms at the University of Canberra Public Hospital**

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The **Health Care Consumers' Association (HCCA) of the ACT**, incorporated in 1978, provides a voice for consumers on local health issues as well as opportunities for health care consumers in the ACT to participate in all levels of health service planning, policy development and decision making.

HCCA involves consumers through:

- consumer representation
- consultations
- training in health rights and navigating the health system
- community forums
- information sessions about health services
- advocating for issues of concern to consumers

## 1. Introduction

The current trend in health facility design is towards private rooms. The shift towards single/private rooms is influenced by a number of compelling factors, including infection control; error reduction and patient safety; privacy; patient flow; and cost concerns. A good visual representation of these issues can be found in the diagram provided at **Appendix 1**.

France has had single-patient rooms as a standard for all new hospital constructions for the past 20 years, with small numbers of double rooms available for patients who prefer to share rooms.<sup>1</sup>

Norway, the Netherlands and Britain are moving towards increasing the proportion of private rooms, with the NHS advising that 50-100% of all patient rooms should be single occupancy in new hospitals.<sup>2</sup>

According to the 2006 American Institute of Architects Academy of Architecture for Health facility design guidelines, single patient rooms are the minimum requirement for medical/surgical wards and obstetric units.<sup>3</sup> In Canada, "The Ward of the 21<sup>st</sup> Century", a research initiative, uses single patient rooms as a key feature.<sup>4</sup>

In an Australian context, the planning for the New Royal Adelaide Hospital is operating with the concept of 100% private rooms with separate ensuite bathrooms. The 100% private rooms figures are based around providing an environment which supports safe care, including a reduction in noise, support for infection control measures, improved falls management, maximum flexibility and efficiency of the inpatient areas, an acuity adaptable environment and the provision of maximum patient privacy and dignity. The relevant sections of the *Schedule 18 - Design Specifications Functional Brief* are provided in **Appendix 2**.

*The following sections outline the experiential and credentialed knowledge obtained by HCCA in connection to infection control; error reduction and patient safety; privacy; sharing a room with the opposite sex; patient flow; and cost concerns. While most of the academic literature relates to delivering care in acute-care contexts, HCCA believes that the core concepts are eminently applicable and translatable to the sub-acute context of the University of Canberra Public Hospital.*

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<sup>1</sup> Michael E Detsky and Edward Etchells, "Single-Patient Rooms for Safe Patient-Centred Hospitals", *Journal of the American Medical Association* 300:8 (27 August 2008) 956.

<sup>2</sup> Kate Fairhall, Laura Bache, Peter Dodd and Patricia Young, "Patient Safety: Single-bed versus multi-bed hospital rooms", *World Health Design* <<http://www.worldhealthdesign.com/Patient-Safety-Single-bed-versus-multi-bed-hospital-rooms.aspx>> (May 2010) accessed 6 May 2013.

<sup>3</sup> Detsky and Etchells, "Single-Patient Rooms for Safe Patient-Centred Hospitals", 956.

<sup>4</sup> *Ibid.*

## 2. Evidence to support private rooms in health facilities

### 2.1 Infection control

In the United States, hospital acquired infections (HAIs) kill 100 000 people per year, while in Australia it is estimated that there are 180 000 HAIs each year, resulting in almost 2 million bed days.<sup>5 6</sup>

There is evidence that rates of nosocomial (hospital-acquired) infections are rising, and that such infections contribute to increased mortality rates. In 2011, the Canberra Hospital experienced a more than 150% increase in cases of *Clostridium diff* (*C. diff*) associated diarrhea in both hospital inpatients and community patients.<sup>7</sup> A 2012 study of *C. diff* in an Australian context, conducted by researchers from the Australian Catholic University, found that *C. Diff* infection was associated with higher rates of mortality, after adjusting for comorbidities.<sup>8</sup>

Nosocomial infections don't just contribute to patient deaths, but also generate a significant financial impact. A 2011 study by Teltsch et al found that infections in US ICUs increased the patient length of stay for 8-9 days, at a cost of \$3.5 billion per year.<sup>9</sup> *C. diff*, vancomycin-resistant *Enterococcus* and methicillin-resistant *Staphylococcus aureus*, as well milder conditions, such as hospital acquired diarrhea, are easily transmissible when patients are sharing rooms and toilets (Chaudhury et al 2003).<sup>10</sup>

The 2011 work of Teltsch et al compared infection rates between shared and private hospital rooms, finding that the adjusted rate of acquisition of *Clostridium difficile*, vancomycin-resistant *Enterococcus* and ethicillin-resistant *Staphylococcus aureus* decreased by 54% in private rooms.<sup>11</sup> Detsky and Etchells, and Ulrich et al, and Fairhall et al, found that single bed rooms have lower nosocomial infection rates, are easier to clean and decontaminate, and produce higher rates of hand-hygiene compliance among staff, as staff are more likely to rewash their hands when moving between patient rooms, rather than just between beds.<sup>12</sup>

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<sup>5</sup> Centers for Disease Control and Prevention, "National Center for Emerging and Zoonotic Infectious Diseases" <<http://www.cdc.gov/ncezid/>> (2013) accessed 6 May 2013,

<sup>6</sup> Productivity Commission, "Hospital-acquired infections" <[http://www.pc.gov.au/\\_\\_data/assets/pdf\\_file/0016/93040/09-chapter6.pdf](http://www.pc.gov.au/__data/assets/pdf_file/0016/93040/09-chapter6.pdf)> (10 December 2009) accessed 7 May 2013.

<sup>7</sup> Karina Kennedy, "Rising rates of *Clostridium difficile* associated diarrhoea at Canberra Hospital", *ACT Pathology Newsletter* (June 2012).

<sup>8</sup> Brett G. Mitchell, Anne Gardner and Janet E. Hiller, "Mortality and *Clostridium difficile* infection in an Australian setting", *Journal of Advanced Nursing* 00:0 (2012) 8.

<sup>9</sup> Dana Y. Teltsch, James Hanley, Vivian Loo, Peter Goldberg, Ash Gursahaney, David L. Buckeridge, "Infection Acquisition Following Intensive Care Unit Room Privatization", *Journal of the American Medical Association* 171:1 (10 January 2011) 35.

<sup>10</sup> Habib Chaudhury, Atiya Mahmood and Maria Valente, "The Use of Single Patient Rooms vs. Multiple Occupancy Rooms in Acute Care Environments", *The Coalition of Health Environments Research* (20 November 2003) 41.

<sup>11</sup> Teltsch et al, "Infection Acquisition Following Intensive Care Unit Room Privatization", 35.

<sup>12</sup> Anjali Joseph, "The Role of the Physical and Social Environment in Promoting Health, Safety, and Effectiveness in the Healthcare Workplace", *The Center for Health Design* (2006) 3.

## 2.2 Error reduction and patient safety

A study in the Canadian Medical Association Journal demonstrated that patients are less likely to get the wrong medication, or experience other errors in private rooms, in comparison to shared rooms.<sup>13</sup>

There is also positive evidence around acuity-adaptable rooms, that is, “high-technology rooms [that] provide a means of keeping patients in the same room from admission until discharge, regardless of the patient’s acuity level”.<sup>14</sup> In her 2006 article “The Role of the Physical and Social Environment in Promoting Health, Safety, and Effectiveness in the Healthcare Workplace”, Anjali Joseph asserts that single rooms, especially acuity-adaptable rooms reduce patient transfers and wastage of staff time, in turn cutting down on operating costs and improving the quality of care and patient safety.<sup>15</sup> These results were echoed by 2004 research by Hendrich, Fay and Sorrells, who found that acuity-adaptable rooms contributed to a 90% decrease in patient transfers and a 70% decrease in medication errors.<sup>16</sup>

## 2.3 Privacy

A 2009 survey of patients at the Washington DC Veterans Affairs Medical Center by Ehrlander et al found that 79% of respondents preferred a private room, despite predictions that veterans’ common military experience would produce substantial demand for sharing. Respondents preferred private rooms for reasons of personal privacy, peace and quiet, avoiding germs, and having space for family.<sup>17</sup>

In HCCA’s discussions with members, privacy during examination and procedures is of high importance in terms of the preservation of human dignity and concerns around sharing personal information. A 2006 study of nursing homes by Calkins and Casella found that private rooms have strong positive impacts on psychosocial issues around satisfaction with care/treatment, privacy and dignity.<sup>18</sup>

Privacy is an issue driving the adoption of single rooms, demonstrated through academic research and also anecdotal evidence collected by HCCA. Privacy is not just important for patient peace of mind, but can actually actively contribute to the healing process through reduced noise levels and creating a safe environment for interaction with clinicians. Detsky and Etchells, among others, found that in some

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<sup>13</sup> “Private rooms: the fiscal advantage”, *Canadian Medical Association Journal* 184:1 (10 January 2012) E48.

<sup>14</sup> *Agency for Healthcare Research and Quality*, “Acuity-Adaptable Inpatient Rooms Eliminate Most Patient Transfers, Leading to Enhanced Safety, Satisfaction, and Efficiency”, <<http://www.innovations.ahrq.gov/content.aspx?id=1701>> (12 May 2008) accessed 9 May 2013.

<sup>15</sup> Joseph, “The Role of the Physical and Social Environment in Promoting Health, Safety, and Effectiveness in the Healthcare Workplace”, 7.

<sup>16</sup> Jaynelle F. Stichler, “Is your hospital hospitable?: How physical environment influences patient safety”, *Nursing for Women’s Health* 11:5 (October/November 2007) 509.

<sup>17</sup> Wyatt Ehrlander, Fazalit Ali and Cathering Chang Chretien, “Multioccupancy Hospital Rooms: Veterans’ Experiences and Preferences”, *Journal of Hospital Medicine* 4:8 (October 2009) E24.

<sup>18</sup> Margaret P. Calkins and Christine Cassella, “Exploring the cost and value of private versus shared bedrooms in nursing homes”, *IDEAS Institute* (2006) 7-8.

cases patients may not share sensitive information in a room where strangers can listen in.<sup>19</sup>

Private rooms also provide a better environment for recovery in terms of noise control. Excessive noise can cause ventricular arrhythmias (irregular heartbeat most commonly associated with heart attacks), disrupt sleep, elevate heart rate, increase the need for pain medication, slow wound healing, encourage abnormal gastric myoelectrical activity (a precursor to nausea and vomiting) and alter autonomic nervous function (including heart rate, digestion, respiratory rate, salivation, perspiration and urination). The WHO guideline values for continuous background noise in hospital patient rooms are 35 dB(A) during the day, and 30 dB(A) at night.

In their 2005 research, Busch-Vishniac et al found that not one study of noise in hospitals from the last 45 years reported noise levels that complied with the WHO guidelines.<sup>20</sup> Most noises in hospital rooms stem from the presence of another patient – staff talking/caring for another patient, equipment, visitor, coughing, crying out, etc (Yinnon et al 1992; Southwell and Wistow 1995; Baker 1984; Bailey and Timmons 2005).<sup>21</sup> Patients in private rooms are much more satisfied with the noise levels in and around their rooms (Press Ganey 2006).<sup>22</sup>

It is important to have space for families so as to include them in the care process. Chaudhury, Mahmood, and Valente 2006; Ulrich et al agree that private rooms allow for increased privacy for patient-family interactions and can encourage increased frequency of visits.<sup>23</sup>

## 2.4 Sharing a room with the opposite sex

According to the ACT Health Directorate's Healthcare Survey results for January-June 2011, between 22.2% and 38.2% of respondents shared rooms with members of the opposite sex.<sup>24</sup> Between 13% and 25% of respondents who shared rooms with the opposite sex expressed concerns about this arrangement.<sup>25</sup> The relevant sections are attached in **Appendix 3**.

The Health Consumers Alliance of South Australia is currently undertaking research into consumer experiences of sharing hospital rooms with members of the opposite sex. This research project is the result of consumer concerns around this issue.

Sharing a room with the opposite sex is an area of key concern to many members of the multicultural community, an issue which is further expanded in **section 3.2**.

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<sup>19</sup> Detsky and Etchells, "Single-Patient Rooms for Safe Patient-Centred Hospitals", 956.

<sup>20</sup> Anjali Joseph and Roger Ulrich, "Sound Control for Improved Outcomes in Healthcare Settings", *The Center for Health Design* (January 2007) 2.

<sup>21</sup> *Ibid.*

<sup>22</sup> *Ibid.*

<sup>23</sup> Joseph, "The Role of the Physical and Social Environment in Promoting Health, Safety, and Effectiveness in the Healthcare Workplace", 11.

<sup>24</sup> ACT Health Directorate, "Healthcare Survey Reports" <<http://health.act.gov.au/publications-reports/reports/act-healthcare-survey>> (2011) accessed 9 May 2013.

<sup>25</sup> *Ibid.*

## 2.5 Patient flow

An adoption of a higher proportion of private rooms can actually assist in improving the efficiency of patient flow. While increasing the proportion of private rooms may reduce the total number of beds in a facility, it can actually improve patient flow – gender divisions do not need to be considered, and isolation due to infection can be achieved more effectively. Estimates suggest that shared room facilities can only operate at up to 85% capacity (due to infection-control related isolation and single-sex shared rooms requirements), while private room facilities are freed from such restrictions and can operate at 100% capacity.<sup>26</sup>

## 2.6 Cost concerns

While there is an increased initial financial outlay associated with private rooms, it is actually more cost efficient, not to mention safer, in the long run. According to Chaudhury et al, private rooms result in cost reductions through lower transfer costs higher bed occupancy and a reduction in labour costs, when this initiative is paired with other healing environment design principles. Representatives of the Bronson Methodist Hospital in the US say that while private rooms cost more to build, the saving in operational costs from reduced infection rates and shorter length of stay for patients offsets the initial capital expenditure.<sup>27</sup> Another report found that implementation of single room design features in the construction of a new facility would add 5.3% to initial construction costs, but that these costs would be recouped within 1 year through “improved efficiencies associated with single-patient rooms” (Detsky and Etchells 2008). Ulrich et al claims that building private rooms will increase capital costs by 5-10% but that this will be recouped in 3-5 years, “at the very most, in a very conservative scenario”.<sup>28</sup>

## 3. Other considerations

### 3.1 Potential positives

However, despite this trend, there remains some evidence that shared rooms can be beneficial for some patients in relation to social factors and inter-patient assistance. Some patients simply prefer to be in shared rooms – some respondents in the survey at Washington DC Veterans Affairs Medical Center cited a desire for companionship as influencing their preference for shared rooms. Patients over 65 were more likely to prefer shared rooms than patients under 65.<sup>29</sup> This preference for shared rooms is also reflected in the French context, where despite private rooms being the norm,

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<sup>26</sup> Detsky and Etchells, “Single-Patient Rooms for Safe Patient-Centred Hospitals”, 955.

Chaudhury et al, “The Use of Single Patient Rooms vs. Multiple Occupancy Rooms in Acute Care Environments”, 39.

<sup>27</sup> Laura Landro, “New Standards for Hospitals Call For Patients to Get Private Rooms”, *Wall Street Journal* <online.wsj.com/article/SB114298897540904723.html> (22 March 2006) accessed 6 May 2013.

<sup>28</sup> “Private rooms: the fiscal advantage”, 48.

<sup>29</sup> Ehrlander et al., “Multioccupancy Hospital Rooms”, 24.

some double rooms are retained for those patients who prefer it.<sup>30</sup> Anecdotal evidence from the ACT also supports this preference among older people in the longer stay stream.

There is also evidence that single rooms reduce the frequency of patient observation by care staff, while shared rooms allow for inter-patient observation, which may impact on occurrences of falls.<sup>31</sup> A study of nursing homes by Calkins and Cassella found that there is some evidence that shared rooms present a decrease in the occurrence of falls, as roommates are available to provide assistance.<sup>32</sup> However, the absence of a roommate in a private room may be offset by more frequent visits from friends and family, who can be more easily accommodated in a private room.<sup>33</sup> Current evidence regarding an increase/decrease in the incidences of falls in shared/private rooms is inconclusive.

### **3.2 Culturally and linguistically diverse consumer issues**

Due to the short timeframe, HCCA's Multicultural Liaison Officer has only been able to conduct limited consultation around this issue with representatives of multicultural communities in the ACT. There are universal issues of concern, regardless of cultural background, such as infection control, the best environment for recovery, noise levels and medication errors. These consultations also found that shared rooms may be preferable for social interaction, depending on the preference/needs of the patient. In some CALD contexts, people are used to sharing with large numbers of family members, so private rooms could potentially be daunting and unfamiliar for some CALD consumers in this situation.

However, there were a number of particular CALD concerns including access to translator services, the language barrier between patients in shared rooms and mixed-sex rooms. In particular, many women with CALD backgrounds, and those who have recently arrived in Australia, are concerned about sharing hospital rooms with men, a factor which would need to be taken into account when allocating rooms.

Over the next six months, HCCA's Multicultural Liaison Officer will continue to talk to CALD groups about their preferences to build up our knowledge in this area.

## **4. ACT Aged Care Consumer Reference Group**

HCCA has recently set up an Aged Care Reference Group, which aims to bring together consumers who have an interest in aged health care services to discuss issues of concern and share knowledge.

At the ACT Aged Care Reference Group Meeting held on 7 May 2013, the issue of private and shared rooms at the University of Canberra Public Hospital was discussed.

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<sup>30</sup> Detsky and Etchells, "Single-Patient Rooms for Safe Patient-Centred Hospitals", 956.

<sup>31</sup> Fairhall et al., "Patient Safety: Single-bed versus multi-bed hospital rooms".

<sup>32</sup> Calkins et al., "Exploring the cost and value of private versus shared bedrooms in nursing homes", 49.

<sup>33</sup> *Ibid.*



Attendees echoed the findings of the academic literature outlined above, and also discussed the importance of private rooms for the effective storage and management of enabling equipment such as wheelchairs, commodes and patient hoists.

## 5. Conclusions

The evidence outlined above and the international trends identified most definitely support claims around the myriad benefits of private rooms. While some (older) patients may prefer shared rooms for reasons of companionship, the trend should always be upwards in terms of the ratio of private to shared rooms. It is also important to note that the adoption of single rooms needs to be paired with reformulated models of care and other innovative health facility design principles to ensure care delivery efficiency and patient safety.

HCCA's position is that new facilities should be designed with 80% private rooms and 20% shared rooms in order to make infection control more effective, reduce preventable errors, increase privacy, increase the efficiency of patient flow and maximise the capacity of the facility, all of which contribute to reduced health care costs and increased patient safety. We are confident that this position is supported by both experiential and credentialed knowledge.

HCCA believes that it would be short-sighted to make financial decisions regarding the University of Canberra Public Hospital design without regard for long term financial return, not to mention patient safety.

We strongly encourage the development of an options paper to set out the implications of the following three ratios in terms of cost, patient safety factors and the cultural and other needs of consumers:

- 80% private rooms – 20% shared rooms
- 60% private rooms – 40% shared rooms
- 40% private rooms – 60% shared rooms

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*ACT Health Directorate*. "Healthcare Survey Reports"  
<<http://health.act.gov.au/publications-reports/reports/act-healthcare-survey>> (2011)  
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*Agency for Healthcare Research and Quality*. "Acuity-Adaptable Inpatient Rooms Eliminate Most Patient Transfers, Leading to Enhanced Safety, Satisfaction, and Efficiency" <<http://www.innovations.ahrq.gov/content.aspx?id=1701>> (12 May 2008)  
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## Appendix 1

TABLE 1: Categories, issues, and findings related to single vs. multiple occupancy patient rooms based on the literature review

Category	Room Occupancy	Issues & Findings
<u>COST</u>	Single-Occupancy Room	<ul style="list-style-type: none"> <li>▪ Operating costs ↓</li> <li>▪ First costs ↑</li> <li>▪ Occupancy rates ↑</li> <li>▪ Length of stay ↓</li> <li>▪ Medication errors &amp; costs ↓</li> </ul>
	Multi-Occupancy Room	<ul style="list-style-type: none"> <li>▪ Operating costs (inconclusive)</li> <li>▪ First costs ↓</li> <li>▪ Occupancy rates ↓</li> <li>▪ Length of stay ↑</li> <li>▪ Medication errors &amp; costs ↑</li> </ul>
<u>INFECTION CONTROL AND FALLS</u>	Single-Occupancy Room	<ul style="list-style-type: none"> <li>▪ Rate of nosocomial infection ↓</li> <li>▪ Patient transfers ↓</li> <li>▪ Patient length of stay ↓</li> <li>▪ Infections in burn patients ↓</li> <li>▪ HCV transmission between patients ↓</li> <li>▪ Transmission of hospital-acquired diarrhea ↓</li> <li>▪ Falls in patients requiring supervision ↑</li> <li>▪ Falls in elderly when provisions are taken ↓</li> </ul>
	Multi-Occupancy Room	<ul style="list-style-type: none"> <li>▪ Isolation for infected patients (inconclusive)</li> <li>▪ Infections when patients are transferred ↑</li> <li>▪ Transmission of hospital-acquired diarrhea ↑</li> <li>▪ Patient length of stay ↑</li> <li>▪ Access to bathrooms ↓</li> <li>▪ Falls in patients requiring supervision ↓</li> <li>▪ Falls in elderly when provisions are taken ↓</li> </ul>

In Chaudhury, Habib, Atiya Mahmood and Maria Valente. "The Use of Single Patient Rooms vs. Multiple Occupancy Rooms in Acute Care Environments". *The Coalition of Health Environments Research* (20 November 2003).

## Appendix 2

Extract from *Implementation of the NRAH Model of Care*

### 18.5 Single bedrooms within the Facility

The design of the Inpatient Areas must facilitate the implementation of the following components of the NRAH Model of Care:

- a. to provide an environment which supports safe care including:
  - i. reduction in noise;
  - ii. support for the infection control measures through the appropriate separation of patients, individual patient ensuite access and improved hand washing provisions through the increased number of basins; and
  - iii. improved falls management through a larger space around each patient bed (than the traditional bed space) with direct ensuite access and direct line of sight to the ensuite from each patient bed;
- b. to facilitate treatment and therapy being undertaken in the patient bedroom and bathroom minimising the need for patient movement around the Facility. This requires adequate space and an appropriate environment for a comprehensive range of procedures and therapy aids and equipment;
- c. to provide maximum patient privacy and dignity;
- d. to provide an environment to facilitate communication between Clinical Staff and patient, including handover at the bedside, and takes full advantage of opportunities for patient's **involvement** in their own care;
- e. to give patients control over their environment including temperature control and fresh air;
- f. to provide views and natural light for all patients;
- g. to facilitate involvement by family and carers including the ability for them to stay overnight with the patient in appropriate situations;
- h. to support a dignified compassionate death;
- i. to provide maximum flexibility and efficiency of the Inpatient Areas in terms of bed management and occupancy. All beds may be utilised – for example there are no restrictions in bed availability in terms of gender mix, isolation requirements due to infection status. The single room also reduces the number of patient transfers to

manage gender mix, infection control, dying patients **and** “**disruptive**” patients. Each patient transfer incorporates a staff cost and risk of error; and

- j. to provide an acuity adaptable environment where patients can be cared for, as appropriate, without having to be moved to another location within the Facility to receive care, irrespective of the nature of their condition, that is infectious, critically ill, terminal or restorative care.

Evidence suggests that in order to deliver these fundamental elements of the NRAH Model of Care there is a direct and critical relationship between the size of the space around the bed and direct adjacent access to the ensuite from the patient’s **bed**.

While this Functional Brief has been prepared on the assumption that the Facility will contain 100% single bedrooms with separate ensuite bathrooms (with the exception of some ICU and cardiothoracic bedrooms which will not have separate ensuite bathrooms), the Facility may contain multi bed bay configurations if each of the individual bays satisfy the detailed design requirements for the relevant areas and otherwise satisfy the Design Objectives and the requirements of the NRAH Model of Care.

In *South Australian Department of Health*, “New Royal Adelaide Hospital Project: Schedule 18 - Design Specifications Functional Brief”,  
<<http://www.sahealth.sa.gov.au/wps/wcm/connect/e1466e00479780d68eb9fe2e504170d4/new+RAH+Functional+Brief+1.0.pdf?MOD=AJPERES&CACHEID=e1466e00479780d68eb9fe2e504170d4>> (2011).

### Appendix 3

TABLE 2: Scores for individual “supporting” questions requiring a “yes” or “no” answer, asked only of TCH consumers. Results show the proportion of respondents endorsing “yes”.

Report number	Did you share a room (sleeping area) with a patient of the opposite sex?	If YES, was this a concern for you?
1	38%	16%
2	37% (36.2% in report 3)*	13% (12.7% in report 3)*
3	22.2% (27.7% in report 4)*	17.6% (16% in report 4)*
4	35% (35.7% in report 5)*	16.7% (17.1% in report 5)*
5	38.2%	25%

\*There are unexplained inconsistencies in recorded figures between reports.

In *ACT Health Directorate*. “Healthcare Survey Reports”  
<<http://health.act.gov.au/publications-reports/reports/act-healthcare-survey>> (2011).