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Anticipated advantages and disadvantages of a move to 100% single room hospital in Australia: a case study.

i. .Dear Editor

Thank you for your consideration of this manuscript.

There is an international policy direction for building government or public hospitals with greater proportions of *single-occupancy rooms*. A large hospital was built in South Australia with 100% single-occupancy rooms, vastly different to the environment that was being replaced, which had mixed single and multi-bedroom wards. The study aim was to identify the expected advantages and disadvantages for *patients and nursing staff* of a pending move to a new hospital with 100% single rooms, in anticipation of the challenges for nurse leaders of a new style of ward environment and model of nursing care delivery. This paper presents these *case study* findings, summarising potential advantages and disadvantages as well as comparison with findings from similar studies in England.

ii. **Running Title:** Case study: Move to 100% single room hospital

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The Authors declare that there is no conflict of interest.

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Ethics

Central Adelaide Local Health Network Human Research Ethics Committee
RAH Protocol No: R20160620 HREC/16/RAH/227

Abstract

Objectives: There is an international policy trend for building government hospitals with greater proportions of single-occupancy rooms. The study aim was to identify advantages and disadvantages for patients and nursing staff of a pending move to 100% single room hospital, in anticipation of the challenges for nurse managers of a different ward environment. This paper presents these findings, summarising potential advantages and disadvantages as well as comparison with findings from similar studies in England.

Methods: Mixed method case study design was undertaken in four wards of a large hospital with multi-bed rooms. Three components of a larger study are reported here: nurse surveys and interviews, patient interviews of their experiences of the current multi-bedroom environment and expectations of new single room environment. Integration was achieved via data transformation where results of the nursing staff survey and interviews and patient interviews were coded as narrative allowing for quantitative and qualitative data to be merged.

Results: Four constructs were derived: physical environment; patient safety and comfort; staff safety; and importance of interaction.

Conclusion: There are important factors that inform nurse managers when considering a move to an all single room design. These factors are important for nurses' and patients' well-being.

Implications for nursing management: This study identified for nurse managers key factors that should consider when contributing to the design of a 100% single room hospital. Nurses' voices are critically important to inform the design for a safe and efficient ward environment.

Key Words Single occupancy rooms, staff expectations, patient expectations, case study

Introduction

There is an international trend for building hospitals with an increased number of single-occupancy rooms (Maben et al., 2015; Maben et al., 2016). The range of patient benefits attributed to single room hospital accommodation include reduced medication errors, reduced infection rates and faster patient recovery (Maben et al., 2015; Maben et al., 2016).

Accordingly, a large hospital was recently built in Adelaide, South Australia with 100% single-occupancy rooms, a vastly different design to the hospital it was replacing, which had mixed single and multi-bed room wards. It was anticipated that a move to a new ward environment with increased access to technology would require changes to working practices particularly for nursing staff. The study aim was to identify the advantages and disadvantages for patients and nursing staff of a move to a new hospital with 100% single bedrooms, in anticipation of the challenges of a new ward environment and model of nursing care delivery.

This paper presents these study findings, summarising the potential advantages and disadvantages of the key aspects of nursing care delivery in all single room hospitals allowing comparison with a similar transition in England.

Background

A search of the literature identified that there is limited high level research to inform the design and care practices of single bed acute care facilities. A review of the available literature cited potential advantages for patients in all single room hospitals including greater privacy and confidentiality, better quality of communication between health professionals and patients and families, and enhanced family involvement in patient care (Ulrich et al., 2008; Maben et al., 2015; Wiechula, Conroy, Cheney & Or 2015). Increased family

involvement in care may lead to a reduction in nurse workloads and the regular family presence may reduce the prevalence of adverse events (Wiechula et al., 2015). Patients could improve control over their environment, such as noise and light, which enhanced sleep (Maben et al., 2015; Wiechula, Conroy, Cheney & Or, 2015). Potential advantages also included better infection control. Single rooms increase isolation capacity and facilitate air filtration and airflow control. They also increase the efficiency of cleaning and decontamination; all measures that reduce the spread of infection (Ulrich et al., 2004; Boardman & Forbes, 2007; Maben et al., 2015). The reduction of medication errors were examined by Ulrich et al., (2004); Boardman and Forbes (2007) and Maben et al (2015) and single rooms were identified to have some characteristics that have a potential to reduce medication errors, in particular less interruptions and distractions. Single rooms also result in less patient transfers which have been shown to reduce opportunities for the mistaken identification of patients (Ulrich et al., 2004; Boardman & Forbes, 2007).

Potential disadvantages for staff and patients, included increased staff travelling time between patients, adverse events such as falls and a sense of isolation particularly for older patients (Maben, 2009; Maben et al., 2015). With respect to travel time, Detsky and Etchells (2008) pointed out that a number of ward design features can be used to counteract the need for additional staff movement including wireless IT, and the effective placement of supplies and satellite staff stations.

Maben et al. (2015) conducted an extensive evaluation of a move to a 100% single bed environment at Tunbridge Wells Hospital in England. Their evaluation explored how single-room occupancy impacted on staff working practices, safety and quality of care, nurse staffing and patient satisfaction (Maben et al., 2015). They found that staff felt unprepared and had to adapt their working practices significantly after the move, by using trial and error of new approaches of care. There was no impact on patient safety outcomes, although some

staff believed patient monitoring and surveillance were more difficult and fall risk increased.

Overall, patients preferred single rooms (Maben et al., 2015).

Method

Prior to the transition to the new hospital, a mixed method case study design with four nested case studies was used to describe care provision in the mixed single and multi-bed room hospital that was being replaced. Nursing staff (both registered (RN) and enrolled nurses (EN)) and patients from four selected wards (comprising surgical and medical specialties) were invited to participate. Each ward represented a nested case study and there were five concurrent methods of data collection: nurse activity observation, travel distances, nurse survey, and nurse and patient interviews. The nurse activity observation and travel distances are not reported in this paper; noise measurements have also been made (Coombs et al, submitted).

Recruitment of nurse and patient participants

The study was promoted using flyers and briefings of senior staff and nurses on the study wards. Staff emails, meetings and SMS messages (1 SMS per week for 3 weeks) were used to invite participants to take part in the study. Additionally, the survey allowed participants to consent to be contacted for a later interview.

Patients who received care on the study wards were invited to be interviewed. Research staff approached the nursing team leader from each study ward to identify approximately five patients per ward who were: aged over 18 years, English speakers, able to give informed

consent and well enough to be interviewed. Purposive sampling was used to ensure patients with a spread of ages and genders were interviewed.

Nursing staff survey

All nursing staff working on the selected four wards (n=150) were invited to participate in the survey. The survey tool (69 items) was adapted to the local environment from that used by Maben et al (2012) and was available in both electronic (Survey Monkey, Survey Monkey Inc, Palo Alto, CA, USA) and paper format. The survey comprised five sections: (i) current ward layout, (ii) move to 100% single rooms, (iii) most recent shift, (iv) job satisfaction, teamwork and safety and (v) demographics (Maben, Penfold, Robert, & Griffiths, 2012).

In piloting, the survey took approximately 30 minutes to complete. Completed paper surveys were placed in a sealed box in the staff room of each ward, which were regularly collected by research staff.

Nursing staff and patient interviews

Interviews (nurses and patients) were audio recorded, with participant permission, and transcribed verbatim. All transcripts were de-identified to ensure participant confidentiality and anonymity. Interviews were conducted until data saturation occurred.

Sixteen consenting nurses were interviewed for 25-60 minutes in a quiet location within the wards. Interview questions explored nurses' current model of care and work practices relating to the physical environment. This included communication/teamwork, documentation, medication tasks and staff and patient safety. Nurses were asked about what changes they

expected in an all single room environment, what preparation they needed and how they could be assisted with the transition to a single room environment.

Fifteen patient interviews of 30-60 minutes duration were conducted in the wards. Family or carers were welcome to participate in the interview. The interview schedule explored the role of the current physical environment in perceptions of comfort, safety, staff and visitor interaction, and their expectations of a single bed room.

Data analysis

The overall analytical strategy was to first analyse the quantitative and qualitative components separately using descriptive statistics and thematic analysis (Braun and Clarke, 2006). Data was then integrated using data transformation (Fetters, Curry and Creswell, 2013) where results of the nursing staff survey and interviews and the patient interviews were coded as a narrative allowing for quantitative and qualitative data to merge.

Ethics approval

Project governance involved a Project Advisory Group and Project Oversight Group. The Central Adelaide Local Health Network Human Research Ethics Committee (HREC) (Protocol No: R20160620 HREC/16/RAH/227) and the University of Adelaide HREC gave ethics approval.

Results

Participants

A total of 61 staff survey responses were collected from 150 staff of all four participating wards (41% response rate). Forty-three fully completed surveys were available for analysis (29% response rate). The demographics of the sample of 43 survey participants are summarised in (Table 1) Thirty participants (73%) were RNs, while the remainder were ENs. Table 1 shows that most participants were female (88%), aged between 41-50 (43%), worked 30 hours or more (63%), were educated in Australia (80%), and had a Bachelor degree (for RNs – 70%) or a Diploma (for ENs – 100%). Staff had over 15 years' experience as RNs and over 7 years' experience as ENs (Table 1).

Of the 15 patients interviewed, 5 patients were in single bed rooms, 5 patients were in 4 bed rooms and 5 patients were in 6 bed rooms. Their ages ranged from 40-90 years.

Integrating the results of the staff survey with staff and patient interviews derived four constructs: the physical environment; patient safety and comfort; staff safety; and the importance of interaction. Although each is reported separately there are clear links between the four constructs.

Physical environment

The nurses general view of the physical environment of the hospital to be replaced was comparatively poor. The staff survey indicated that the sub-scale '6. Physical environment' received the lowest mean score 2.4 ± 0.7 (mean $\pm$ SD). The sub-scale contained statements such as "The supplies, consumables and equipment needed to care for patients are always

available on the ward”. A score of 2 indicated disagreement. Nurse interviews and open-ended questions from the staff survey reported a lack of space creating inefficiencies.

The current environment was considered too crowded for nurses to carry out their work activities in the nurses station and when providing care at the patient’s bedside. Common points made by most participants related to the length of time to locate and access working equipment (staff survey).

Same in the nurses' station; there's not enough bench space for nurses to sit and write notes. We're always trying to find somewhere (nurse interviews ID 14)

Sometimes you spend 20 minutes looking for a set of notes. It's frustrating (nurse interviews ID 12)

The current environment was thought to create additional work due to constantly moving patient beds around the ward, which staff anticipated may be mitigated in a single bed room hospital.

The bonus is hopefully we won't have to do bed moves like we do now for infection control purposes. (nurse interviews ID 02)

In considering the move to the new hospital the staff survey asked participants to rate if they would be better or worse off in 23 different aspects of care. The results were mixed; more than 70% of staff felt that the new design would be worse or much worse for six aspects; whilst more than 70% of staff felt that the new design would be better or much better for seven aspects (Table 2). For example, walking distances (aspect 17) were identified as an aspect of the physical environment that would be worse in all single room hospitals (Table 2).

Nursing staff were also asked their preference in relation to the proportion of beds in single rooms and small bays. Across RNs and ENs, 43% of participants nominated half beds in single rooms and half in bays as their preferred allocation, while 38% nominated more beds

in single rooms than in bays (Table 1). Clearly the majority did not favour an all single bed room configuration. The positive comments from staff about the new environment related to what it would mean to patients and their visitors.

They can open a window and just new equipment as well. New and fresh. I think just having a little bit more room and brightness will be a benefit. (nurse interviews ID 15)

Improving patient sleep and rest was also identified as a physical environment benefit to patients, as was more privacy for patients and their relatives (aspects 8 and 11, respectively, (Table2). In contrast when the patients were interviewed, although they did feel the physical environment looked ‘old and tired’ they were not as concerned about the impact of the current environment on their stay in hospital including the lack of privacy.

Patient safety and comfort

Issues around patient safety and comfort were prominent in all data sources. The ability to see patients and be seen by patients was considered paramount (aspects 23 and 14, respectively, Table 2). Nurses preferred working in bays as opposed to the single rooms as this allowed nurses to continually observe patients. This was particularly for patients with cognitive impairment, at risk of falls, acutely unwell or unable to use the call-bell. Poorer visibility of patients in a single bed room ward was a concern.

The only concern is about attending the patients because in the six bays it's very easy to look at the patients. Sometimes ... you are going to see one patient but you can also see the other five patients at the same time, what they are doing or how they look - nobody is having any problems or nobody has a fall.... So that's the only concern about a single room. (nurse interviews ID 10)

Working in the open plan areas with the six beds can be fabulous. It's - obviously the benefit of that layout is you can do a very quick scan and prioritise your time based on that initial assessment. Who's well? Who's safe? Who looks a bit different? Who is waving at you madly or not breathing? So that really instant assessment can help at times. The same in the pods of four [beds]. (nurse interviews ID 01)

Patients who were being cared for in 6 bed bays expressed the need to have close proximity to staff:

It's good. Because you might want one of them, you want a bedpan or you can't reach your buzzer, so you just call out to them and they come. (patient interviews 07 6 bed bay).

A number of nurses mentioned the potential for an increase in critical incidents from unobserved, rapidly deteriorating patients and particularly from patient falls in the new hospital (staff interviews). To counter this they felt there may be an additional cost of providing extra staff on a one-to-one basis to stay in a room with a patient who is medically unstable or at risk of harming themselves (nurse interviews).

Patients too voiced their concern about being isolated from the nursing staff.

... They'd be busy because there would be a lot of patients, but you wouldn't get to see them as often [in an all single room environment]. They'd probably come in once or twice a day or if you rang your bell, but you wouldn't see the activity that you see here. (patient interviews, ID 06 6 bed bay)

The nurses also suggested companionship and support available in a bay would be lost in single bedded rooms.

I also think sometimes when you get older patients they actually like the company of other people. They like to chat across to each other. So I think that that might impact on patients a lot, ... especially the older patients. They like to chat. (nurse interviews ID 05)

There was recognition that the new hospital would bring a number of benefits to patients. As shown in Table 2, more than 70% of nurses felt that the new design would be better or much better than the existing wards in minimising the need to move patients (aspect 2), hospital acquired infections (aspect 7), taking patients to the bathroom (aspect 9), maintaining patient confidentiality (aspect 11), and the overall comfort of patients (staff survey) (aspect 20). The nurse interviews echoed the survey in terms of better patient confidentiality and also issues of noise.

We do the bedside handover ... we try to be sensitive about it and not bring up anything that may - You know intimate things in front of other people. So, that would be better I suppose if there's single rooms (nurse interviews ID 15)

Some other patients' noise. When we put a confused patient in a bay, they may be intrusive to other patients. ... It won't happen anymore I think there [in single rooms] (nurse interviews ID 04.)

Staff safety

Staff safety was raised as an issue for both the old and the new hospital. The existing 6 bed bay configuration was described as being cramped and cluttered impacting on work practices and staff safety.

The six-bed bay is really, really cluttered, so a lot of trip hazards. Just physically trying to ... find the space to get in the right position to help a patient up can be a challenge (nurse interviews, ID 05)

A particular concern was raised that nurses may be physically isolated in an all single bed room configuration. If they need help either due to a volatile patient/visitor or a deteriorating patient would other staff hear them and know where they are?

No, the main thing should be about the nurses team work. I would like to say that one nurse should not be left for one located room or something but should be a group nursing. All the nurses should be working together. (nurse interviews ID 10)

We kind of work in teams - ... - like for pressure area care and that kind of thing, if you need help with that then you are teamed up with a buddy. (nurse interviews ID 12)

More than 70% of respondents felt that the new design would be worse or much worse than the existing wards in regard to knowing when other staff need help (aspect 13, Table 2).

Importance of interaction

Although the previous three constructs all included some element of contact between staff and patients, the need for, and importance of, both professional and patient interaction was clearly articulated, as was the impact of the environment on this contact. Amongst the nurses this was reflected through a very strong sense of the value of teamwork. The sub-scale for 'teamwork and training' included items such as "Obtaining advice from colleagues relating to a skill or clinical knowledge" and was the highest ranked sub-scale (3.2 ± 0.7 , mean score out of $5 \pm \text{SD}$). The existing environment however, often made professional communication difficult.

But I guess communication is also a problem here, with our nursing stations are so small and you can have almost 10 people in there on some occasions. Trying to have a conversation on the phone or have a conversation with another staff member can be problematic, because of the noise level (nurse interviews ID 05).

Both staff and patients recognized the need for patients to interact with others and the risk that single bed rooms may result in isolation. The majority of staff indicated in the survey that the new design would be worse or much worse in terms of the social contact between patients (aspect 19, Table 2). They recognized that there were differences in patient preference for a 'private' room but were concerned about patients being left for long periods.

Some patients really enjoy being in the side rooms, others find it quite isolating and don't like it. They quite often feel a little bit more neglected (nurse interviews ID 05).

The camaraderie experienced in a shared room was valued by patients.

Well, it gives you a bit of a lift and you start telling everyone stories and exchange stories and happenings in your lives and - yeah. Makes it very interesting. (patient interview ID 07 6 bed bay)

Discussion

This study has documented a number of potential disadvantages to a move to all single rooms for staff and patient, such as the potential for increased walking and travelling time between patients, adverse events and missed early signs of deteriorating patients, and staff safety should nurses need assistance. Patients identified perceived disadvantages as reduced regular contact with staff and other patients and a sense of isolation particularly for older people.

Potential advantages included minimising the need to move patients' beds around the ward, reduced hospital acquired infections, improved sleep and rest, ease of assisting patients to the bathroom and maintaining patient confidentiality and privacy.

These identified advantages and disadvantages of a single room environment showed remarkable congruency when compared to the English study by Maben et al (2016). The main advantages identified in both the Australian and English studies (Maben et al., 2016) related to improvements in the physical environment for both the staff and patients. The new environment for nursing staff would reduce patient bed moves, provide more space in the nurses station and around the patients bed and be a lighter and quieter environment to work

in. Access for patients to their own bathroom was a distinct advantage of a single room as identified in Maben et al study (Maben et al., 2015).

In both studies nurse participants agreed that the single room environment would potentially improve infection control, patient privacy, dignity and confidentiality. The English study identified that further improvements in ward design enabled easier access for nurses to utility areas, storage and staff facilities (Maben et al., 2015).

The main disadvantage identified in both studies was the potential increased walking distances for nurses within an all single room ward. This is an important factor particularly for Australia as the nursing workforce is aging. About 2 in 5 nurses were aged 50 years and over in 2015. Their average age was 44 years. There is a projected nursing shortages by 2025 (Australian Institute of Health and Welfare, 2016). The increased distances and time walking on all single room wards may be an important consideration for nurses to choose to leave the workforce earlier or to reduce their hours. The potential for increased staff turnover because of the additional physical demand from walking, may need to be monitored and factored into staffing strategies at all single room hospitals.

There was strong agreement across both studies that the risks to patient safety through reduced direct observation and monitoring may increase falls and the number of undetected deteriorating patients (Maben et al., 2015; Maben et al., 2016). This required changes to the way that nurses adapted practices to accommodate this, such as more scheduled patient rounds “rounding”. The nursing staff in the English study considered that a single room environment would potentially enable more personalised patient care (Maben et al., 2016).

The English study reports additional costs for ‘specialling’ (one to one supervision) of patients who have a cognitive impairment (Maben et al., 2015). Single rooms did however enable more frequent access by visitors, who may in turn become the additional set of eyes for nurses (Maben et al., 2015).

Both patients and nurses across the two studies recognised that a single room environment would allow for privacy but reduce visibility by patients of the nursing staff and of other patients’ resulting in a potential feeling of isolation. Maben et al.’s (2016) study further noted that reduced visibility of nursing staff influenced a patient’s sense of decreased personal safety. In particular it was noted by Maben et al (2016) that feeling isolated may result in reduced patient satisfaction with their hospital stay and their emotional wellbeing and recovery.

Issues related to staff safety was also congruent across both studies, in particular the lack of visibility of nurses to each other should immediate assistance be required. Maben et al (2016) reported that some staff had cordless phones made available to them, however these had not been adopted by all nursing staff into their work routine. The poor adoption of a simple strategy has highlighted the importance of managing the process of change to encourage nurses to adapt to new equipment and ways of working (Maben et al., 2015).

In both studies the importance of staff interaction was highlighted. This is in relation to being part of a team, for example, being able to request assistance when needed and obtaining advice from colleagues. In the English study the nurses also identified the missed opportunities of informal learning from each other, because of the professional isolation of

the single room environment (Maben et al., 2016). Our Australian study noted that the preferred staffing model included both a RN and an EN working together (team nursing) and whilst team nursing may reduce nurses' feelings of isolation following the move to the single room hospital, it might not address the lack of opportunities for informal peer learning identified as reduced in the English study by Donetto et al (2017).

Limitations

This is an Australian study which may affect the generalizability of the findings. However the comparison of our findings with those from the English studies identified some very strong similarities with the advantages and disadvantages for nurses and patients in an all single room ward design, that are relevant for nurse managers to consider.

Conclusion

Nurses are the largest part of the healthcare workforce and changes to the work environment are likely to have a significant impact on the way nurses work and deliver patient care safely.

This paper has highlighted key factors to inform nurse managers when considering a move to an all single room design. The comparison with a similar study in England adds strength to the evidence identifying the main factors. A key lesson from both studies was not to underestimate the need for good planning and preparation for changes to practice and the risk associated with an ongoing need to alter work patterns to reduce staff and patient safety risks in single room environments.

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Table 1 Demographics and preferences of 43 survey respondents.

Variable	Level	RNs		ENs		Total	
		n	%	n	%	n	%
Gender	Female	26	87	10	91	36	88
	Male	4	13	1	9	5	12
Age	16-20	0	0	0	0	0	0
	21-30	4	14	1	9	5	13
	31-40	6	21	4	36	10	25
	41-50	12	41	5	45	17	43
	51-65	7	24	1	9	8	20
	66+	0	0	0	0	0	0
Hours a week	Up to 29	11	37	4	37	15	37
	30 or more	19	63	7	63	26	63
Education	In Australia	22	73	10	100	32	80
	Outside Australia	8	27	0	0	8	20
Highest qualification	None	0	0	0	0	0	0
	Cert IV	0	0	1	3	1	3
	Diploma (inc Advanced Dipl)	3	10	10	100	13	33
	Bachelor	21	70	0	0	21	53
	Postgrad	4	13	0	0	4	10
Worked on a ward with all single rooms	Yes	11	37	2	18	13	32
	No	19	63	9	82	28	68
If you could choose the layout of the new RAH, what would be your preference in relation to the proportion of beds in single rooms and small (4-bed) bays)	All beds in single rooms	2	7	4	36	6	15
	More beds in single rooms than in bays	13	43	2	18	15	37
	Half beds in single rooms and half in bays	14	47	4	36	18	44
	More beds in bays than in single rooms	1	3	1	9	2	5
Years of experience		mean	SD	mean	SD	mean	SD
Occupation	Specialty	15.3	9.5	7.5	3.6	12.3	9.1
	In the RAH	9.3	7.4	6.3	4.5	8.3	6.7
	On the ward	12.1	8.8	6.8	4.2	10.3	8.1
		7.8	6.2	6.1	4.2	7.2	5.6

Table 2 Responses to whether participants thought that 100% single rooms would be better or worse than their current ward; 13 aspects of care (listed below) out of 23 were expected to be either worse (first group of six aspects) or better (second group of seven aspects) by more than 70% of respondents. The remaining 10 aspects are not listed here.

Aspects of care	n	Much worse		Worse		No different		Better		Much better		unsure	
		n	%	n	%	n	%	n	%	n	%	n	%
1. Minimising risk of falls/injury to patients[@]	48	21	43.8	19	39.6	5	10.4	0	0.0	3	6.3	0	0.0
13. Knowing when other staff might need a helping hand[@]	48	14	29.2	26	54.2	3	6.3	1	2.1	0	0.0	4	8.3
14. Ability of patient to see staff[@]	48	21	43.8	23	47.9	1	2.1	2	4.2	0	0.0	1	2.1
17. Minimizing staff walking distance on the ward[@]	47	17	36.2	16	34.0	7	14.9	1	2.1	1	2.1	5	10.6
19. Social contact between patients[@]	48	23	47.9	13	27.1	6	12.5	1	2.1	1	2.1	4	8.3
23. Monitoring (keeping an eye on) patients[@]	48	22	45.8	16	33.3	4	8.3	3	6.3	0	0.0	3	6.3
2. Minimising the need to move patients within the ward[§]	48	2	4.2	2	4.2	6	12.5	16	33.3	20	41.7	2	4.2
7. Preventing and controlling hospital acquired infections[§]	47	1	2.1	0	0.0	4	8.5	22	46.8	18	38.3	2	4.3
8. Patient sleep and rest[§]	48	1	2.1	0	0.0	2	4.2	25	52.1	20	41.7	0	0.0
9. Ease of taking patients to the toilet/bathroom[§]	48	0	0.0	0	0.0	6	12.5	24	50.0	15	31.3	3	6.3
11. Maintaining patient confidentiality[§]	48	0	0.0	1	2.1	6	12.5	25	52.1	16	33.3	0	0.0
15. Patient privacy[§]	47	0	0.0	1	2.1	2	4.3	28	59.6	16	34.0	0	0.0
20. Overall comfort of patients[§]	48	0	0.0	2	4.2	3	6.3	32	66.7	7	14.6	4	8.3

[@] (% worse + % much worse) exceeds 70%; [§] (% better + % much better) exceeds 70%