



OPEN ACCESS

Patient participation in inpatient ward rounds on acute inpatient medical wards: a descriptive study

Bernice Redley,^{1,2} Lauren McTier,¹ Mari Botti,^{1,3} Alison Hutchinson,^{1,2} Harvey Newnham,⁴ Donald Campbell,⁵ Tracey Bucknall^{1,6}

► Additional material is published online only. To view please visit the journal online (<http://dx.doi.org/10.1136/bmjqs-2017-007292>).

¹School of Nursing and Midwifery, Deakin University, Geelong Waterfront Campus, Geelong, Victoria, Australia

²Centre for Quality and Patient Safety Research- MonashHealth Partnership, Monash Health, Clayton, Victoria, Australia

³Centre for Quality and Patient Safety Research-Epworth Healthcare Partnership, Epworth HealthCare, Richmond, Victoria, Australia

⁴General Medicine, Alfred Health, Melbourne, Victoria, Australia

⁵General Medicine, Monash Health, Clayton, Victoria, Australia

⁶Centre for Quality and Patient Safety Research-Alfred Partnership, Alfred Health, Melbourne, Victoria, Australia

Correspondence to

Dr Bernice Redley, School of Nursing and Midwifery Deakin University, Geelong Waterfront Campus Geelong Victoria, 3220, Australia ; bernice.redley@deakin.edu.au

Received 14 August 2017

Revised 26 November 2017

Accepted 28 January 2018

Published Online First

23 February 2018



► <http://dx.doi.org/10.1136/bmjqs-2018-008216>



To cite: Redley B, McTier L, Botti M, et al. *BMJ Qual Saf* 2019;**28**:15–23.

ABSTRACT

Background Meaningful partnering with patients is advocated to enhance care delivery. Little is known about how this is operationalised at the point of care during hospital ward rounds, where decision-making concerning patient care frequently occurs.

Objective Describe participation of patients, with differing preferences for participation, during ward rounds in acute medical inpatient services.

Methods Naturalistic, multimethod design. Data were collected using surveys and observations of ward rounds at two hospitals in Melbourne, Australia. Using convenience sampling, a stratified sample of acute general medical patients were recruited. Prior to observation and interview, patient responses to the Control Preference Scale were used to stratify them into three groups representing diverse participation preferences: active control where the patient makes decisions; shared control where the patient prefers to make decisions jointly with clinicians; and passive control where the patient prefers clinicians make decisions.

Results Of the 52 patients observed over 133 ward rounds, 30.8% (n=16) reported an active control preference for participation in decision-making during ward rounds, 25% (n=13) expressed shared control preference and 44.2% (n=23) expressed low control preference. Patients' participation was observed in 75% (n=85) of ward rounds, but few rounds (18%, n=20) involved patient contribution to decisions about their care. Clinicians prompted patient participation in 54% of rounds; and in 15% patients initiated their own participation. Thematic analysis of qualitative observation and patient interview data revealed two themes, *supporting patient capability* and *clinician-led opportunity*, that contributed to patient participation or non-participation in ward rounds.

Conclusions Participation in ward rounds was similar for patients irrespective of control preference. This study demonstrates the need to better understand clinician roles in supporting strategies that promote patient participation in day-to-day hospital care.

INTRODUCTION

National and international policy and research recognise the positive influence of patient participation in advancing healthcare quality and patient safety,^{1–3} containing healthcare costs^{4 5} and improving population health outcomes.⁶

Meaningful partnering with consumers is advocated to enhance clinical care delivery^{7 8}; however, little is known about how this is operationalised at the point of care in acute hospital settings.

Ward rounds are a frequent, routine hospital activity where decision-making concerning patient care often occurs.^{8 9} Ward rounds provide an ideal opportunity to involve patients in decisions about their healthcare to ensure it meets their preferences and needs. Proposed benefits of patient participation in their healthcare decisions include improved patient-centred communication and teamwork, quality and safety of care delivery and increased patient and staff satisfaction (table 1).^{10–16} To date, examination of patient experiences of participation in acute hospital ward rounds is limited.

Patient participation research has predominantly focused on patient involvement in decision-making and consistently shows that patient preference for participation in care is highly variable.^{17–19} Patient preference for participation can be influenced by patient characteristics, the care context and type of decision to be made.^{20–22} Findings of associations between demographic variables, including age and gender, and preference for decision-making have been inconsistent; some studies report 'younger patients' are more active in their care,^{19 23–25} while others show no association between age and participation preference.²⁶ There is also evidence to suggest that in acute care environments when patients are acutely ill or fatigued, their ability to participate is reduced^{25 27} and clinicians may inaccurately interpret or judge patient participation preference.^{28 29} In addition, clinician factors can limit the extent to which patients can and do participate in their care, irrespective of

Table 1 Ward round goals and key elements

Goals	Key elements
Promote patient participation and engagement in their care delivery.	A standard routine, structure and process: this promotes shared understanding and expectations by the patient and the multidisciplinary team.
Support timely, patient-centred interprofessional communication and teamwork, problem solving and decision-making.	Facilitated patient (and carer/companion) participation and input into decision-making and care planning: a key nursing role is to preidentify any patient or companion concerns/problems/questions and support them to raise these during the round. Cross-checking the diagnosis, treatment and progress at regular intervals with the patient and the care team: this promotes a shared understanding of care.
Detect and mitigate patient safety risks early.	Use of a quality and safety checklist to prevent predictable hospital complications. Interdisciplinary input into shared problem solving
Use time and resources efficiently.	Verbalising a synthesised plan and clear responsibility for action Real-time recording and documentation of the care plan

patient preference for participation. Information and respect from the healthcare team are important prerequisites for participation.^{30 31} The literature reflects ongoing uncertainty about links between patient preference and factors related to the patient, interactions with clinicians and the extent of patient participation in care. For the purpose of this study, patient participation in ward rounds was operationalised as encompassing the range of interactions between the patient, their care providers and the healthcare environment that impacts their involvement in ward rounds.

Despite recommendations that patient and companion participation in hospital ward rounds is best practice,⁸ the role of the patient during ward rounds is poorly understood. Structured interprofessional bedside rounds have been proposed as a way to promote patient participation, patient-centred interprofessional teamwork, patient safety and workflow efficiency.^{11 12 32 33} In Australia, to meet a number of patient safety and efficiency goals (table 1), several hospitals have locally adapted variations of standardised inpatient team ward round practices^{34–37} in their acute medicine units. Complex acute general medical patients provide an ideal group to explore patient perceptions and experiences of participation in ward rounds because they often need tailored, interprofessional decisions about their care.

In this study we sought to describe participation of patients, with differing preferences for participation, during ward rounds in acute medical inpatient services. The purpose was to identify clinical practice strategies that may enhance patient experiences of participation during inpatient ward rounds in patients with differing preferences, inform ongoing service improvement and

scaffold further research to promote patient participation in acute care contexts.

Aim

Guided by the question ‘What are patients’ experiences of participation in ward rounds in acute general medical inpatient services?’ the specific objectives were to:

- ▶ examine patient preferences for participation in acute general medicine ward rounds using the Control Preference Scale (CPS) and Patient Activation Measure (PAM), respectively;
- ▶ describe patient participation in inpatient ward rounds; across different ward round practices and different patient preferences for participation;
- ▶ elicit patient self-reports of their experiences of ward rounds;
- ▶ identify clinician factors proposed to hinder or facilitate patient participation.

METHODS

A naturalistic, multimethod study design was used to describe patient participation during ward rounds in acute medical inpatient services at two tertiary hospitals in Melbourne, Australia. Data were collected using surveys and naturalistic observations over two phases. A survey was used in a structured face-to-face interview to identify the patient’s activation level and preference for participation in ward rounds. This was followed by naturalistic non-participant observation to capture objective data on patient participation in up to three consecutive inpatient ward rounds; each observation was immediately followed by a short semistructured interview to elicit qualitative data about patients’ perspectives of their experience.

Patients provided verbal consent for the survey and written consent for observation and interviews; all staff were informed about observations and given the opportunity to ‘opt out’ at each round.

Setting

Two tertiary hospital sites provided some heterogeneity in terms of ward round practices, stages of local improvement, patient profiles and models for service delivery within a general medical cohort.

Participants

Convenience sampling was used to screen consecutive patients to recruit a stratified sample of acute general medical patients representing each of three patient participation preference categories (passive, shared, active) elicited by the CPS. At least 12 participants were recruited into each of the three control preference groups to examine data for patterns of interactions in analyses. Data collection was to cease when a minimum of 12 participants was obtained in each of the three groups; however, as data collection occurred

concurrently across two sites, between 13 and 23 participants were recruited into each group.

Data collection

Over 3 months in late 2015, screening of 160 patients admitted to the participating general medicine wards resulted in recruitment of 52 participants. All patients provided verbal consent, and were interviewed within 24 hours of arrival to the ward to collect survey data; up to three consecutive daily ward rounds were observed using a semistructured data collection tool (see online supplementary file).

Observation data were collected by local clinicians recruited and trained, using videos of ward rounds, in observation methods and use of the data collection tool (online supplementary file). Training concluded when interobserver agreement between the researcher (BR) and the clinician observer was 100% when examining the same video.

Data collection instruments

To ensure the study sample was heterogeneous in their preferences for participation in medical ward rounds, participants were assessed using the CPS³⁸ to stratify them into one of three preference groups. In addition, the short PAM^{39 40} was used as a complementary measure to examine patient motivation to be engaged in their care. Previous use of the CPS^{27 38} and PAM^{33 40–42} has demonstrated acceptable reliability, validity and usability with a range of older adult study populations and in acute care. Patients' preferred level of involvement in medical ward round decision-making was assessed using five CPS statements that ranged from a completely passive role (only the doctor makes the decision) to a completely active role (only the patient makes the decision).³⁸

Non-participant observation data were collected using a semistructured data collection tool that prompted the observer to collect data related to the patient, clinician and the environment over three stages of ward round interactions (online supplementary file).

Data analysis

Survey data to examine the CPS and PAM were scored using authors' instructions^{38–40 43} and analysed using descriptive statistics. During analysis of the CPS, the first two and last two response levels were respectively collapsed into one, resulting in three categories: passive, shared and active roles.⁴³ Descriptive statistics were used to analyse CPS and PAM data as well as frequencies of specific observed behaviours.

Consistent with qualitative descriptive enquiry methods,^{44 45} naturalistic observation and interview data were transcribed and analysed together. Two steps of analyses were used. In the first step, observation data were coded to capture specific behaviours that reflected (1) patient participation in their care

delivery, (2) patient-centred care, and (3) patient involvement in teamwork. Content analysis was used to capture frequencies of specific behaviours during ward rounds⁴⁵ (table 1). In the second stage, thematic analyses of the interview data using the framework method⁴⁶ captured patterns in perceived clinician–patient interactions that reflected barriers and facilitators to patient participation. Illustrative quotes from the transcripts were used to support interpretation.

Three forms of triangulation⁴⁷ were used to enhance rigour: source triangulation involved participant recruitment from two hospital sites and analysis of data for consistency; method triangulation involved analyses of data collected using multiple methods (survey, observation and interview); and analyst triangulation involved independent coding of transcript sections by at least two members of the research team, followed by comparison and resolution of any differences with an additional researcher. The emerging findings and propositions were discussed and possible alternative interpretations considered and used to build preliminary propositions about patient and clinician factors influencing participation in ward rounds.

RESULTS

Participant characteristics and preference for participation in ward rounds

Most of the 52 patient participants were over 65 years of age ($M=73$; $SD=14.2$; 95% CI 79 to 77 years); 58% ($n=30$) were from hospital site 1; 52% ($n=27$) were female; 70% ($n=36$) were Australian born and almost half (46%, $n=24$) were living at home with others (table 2). Most ($n=42$, 78%) had been hospitalised within the previous 2 years. Consistent with the intent to capture a heterogeneous sample in relation to control preference on arrival to hospital, 30.8% ($n=16$) of patients reported a control preference for active participation in decision-making during ward rounds, 25% ($n=13$) expressed shared control preference and 44.2% ($n=23$) expressed low control preference when screened within 24 hours of arrival on the ward (table 2). In relation to PAM scores, 28% ($n=14$) reported low scores and 28.8% ($n=15$) reported high scores, suggestive of high engagement in their care⁴⁸ (table 2). In each of the CPS groups, all PAM scores were represented, and the proportion of participants with a high PAM score (score 4) was similar across the three CPS groups (table 2).

Patient participation in ward rounds

Patients were observed to participate in 75% ($n=85$) of the 113 ward rounds observed, with similar proportions of participating patients observed across all control preference groups. Patient contributions included asking questions, answering or responding to questions, and conversing with clinician(s) during ward rounds.

Table 2 Participant characteristics

	Overall n (%)	CPS active n (%)	CPS shared n (%)	CPS passive n (%)
Participants	52 (100)	16 (30.8)	13 (25.0)	23 (44.3)
Age, years, M (SD)	73 (14.2)	67.1 (18.6)	76.5 (10.1)	75.6 (12.0)
Site 1	29 (56)	9 (31)	9 (31)	11 (38)
Site 2	23 (44)	7 (30)	4 (17)	12 (52)
Female, site 1	19 (66)	6 (31.6)	5 (26.3)	8 (42)
Female, site 2	8 (35)	5 (62.5)	2 (25)	1 (12.5)
PAM level				
1		6 (37.5)	3 (23.1)	4 (17.4)
2		1 (6.3)	2 (15.4)	6 (26.1)
3		4 (25)	3 (23.1)	6 (26.1)
4		5 (31.3)	5 (38.5)	7 (30.4)
Living situation	At home with others	9 (56.3)	7 (53.8)	8 (34.8)
	Living alone	6 (37.5)	6 (46.2)	14 (60.9)
Hospitalised in the last 2 years	41 (79)	13 (81.3)	13 (100)	15 (68.2)*
Identified someone they thought it was important to have with them during ward rounds		11 (68)†	4 (37.1)†	9 (39.1)†

*Excluded missing data.

†Excludes those who did not identify someone they would like to have with them during ward rounds.

CPS, Control Preference Scale; PAM, Patient Activation Measure.

In just over half (54%) of the 113 ward rounds, clinicians were observed to prompt patient participation and in 15% (n=17) of rounds, 13 patients were observed to initiate their own participation. Interestingly, the proportions of clinician and patient initiated participation were similar across the three control preference groups (table 2). Both medical (61%) and nursing staff (39%) prompted patient participation in the ward round. Patient introduction to clinicians attending the ward round was observed in only 15% of rounds.

Patients most often engaged at the beginning of the ward round (67%), but in 3.5% (n=4) of rounds patients were engaged only near the conclusion of the round. More than half of the patients (50.9%) in the low CPS group participated in all three stages of the ward round (entry, process, exit), while less than 20% of patients in the shared and active CPS groups were observed to participate at all stages of the ward round.

Patients contributed information in 68% of rounds. Surprisingly, this was most frequent for patients expressing passive control preference (75.5%) compared with the shared preference group (65.4%) and the active control preference group (59%). Patients were given specific information by clinicians in two-thirds (64%) of rounds and, in 42%, potentially sensitive information was shared. However, observers indicated technical language was used in over 60% of rounds. Patients were asked if they had any questions in less than half (43%) of rounds, and patient preferences about their care were elicited infrequently (6.7%). Patients were observed to contribute to care decisions in 23% of rounds where a decision was made (n=87).

Factors influencing patient participation

Qualitative thematic analyses of observations and patient interviews undertaken immediately following the observed ward rounds identified two overarching themes in clinician interactions that appeared to contribute to patient participation or non-participation in ward rounds: supporting patient capability and facilitating opportunity. Online supplementary table 4 provides illustrative extracts from the qualitative data for each theme and the subthemes.

Supporting patient capability for participation

The first theme captured factors that supported or hindered patients' ability to participate in ward rounds. Three subthemes emerged: (1) providing clear and understandable information; (2) building patient confidence; and (3) empowering patients to participate. Patients who received information they could understand expressed feeling more equipped and involved, while some patients who experienced clinicians' use of medical terminology felt excluded. Patients also described an increase in their confidence to participate when clinicians listened respectfully to their questions and concerns. Having these questions addressed and their opinions about their healthcare sought empowered patients to participate meaningfully (see online supplementary table 4).

Facilitating opportunities for patient participation

Clinician behaviours and environmental factors that appeared to promote or discourage opportunities for patient participation in ward rounds were also captured. Two subthemes were: (1) intentionally inviting patient participation; and (2) creating a

participatory environment. Some patients described feeling specifically invited by clinicians to participate through introductions of staff members or direct questions, while others relayed frustrations about being excluded or, commonly, unable to hear the conversation. During 30% (n=34) of ward rounds, environmental factors such as an interruption or distraction appeared to hinder the opportunity for patient participation. However, some patients described the benefits to their participation when clinicians made a deliberate effort to enter the room and engage with them rather than speaking from outside of the room, discussing other patients or answering pagers during the ward round.

DISCUSSION

This study demonstrates the need to better understand how to implement strategies to promote patient participation in day-to-day hospital care such as ward rounds. Despite recognition of patient participation as an indicator of quality care, and more recently as a method of improving the safety of care delivery, there is little consensus on how patient participation can be operationalised during daily practice in acute care settings.^{49–52}

Daily ward rounds are a key point for decision-making and provide an ideal opportunity for patient participation; however, this study showed few rounds (18%) involved patient participation in decisions about their care. Surprisingly, most of those who contributed information to ward rounds had, on arrival at hospital, expressed a low control preference for participation in decision-making during ward rounds. Several plausible explanations for this finding warrant further investigation. First, patient preference for participation may change throughout their hospital stay; in this study, patient preference data were collected within 3 days prior to the observation data but were not collected again on the day of observation. Second, it may be the opportunities for patient participation, rather than patient preferences themselves that drive patient participation. The data suggest clinicians more often provided specific information, important for patients' ability to participate, to those with a passive control preference than to those with active or shared preference. Similar to previous research, patient participation in ward rounds appeared to be influenced by factors related to the clinician, patient and environmental situation.⁵³

Patient preferences for participation and actual participation in inpatient ward rounds

Consistent with the intention of the recruitment strategy, participants in each of three control preference groups (passive, shared, active) were recruited using consecutive recruitment to reach the minimum sample size in all groups. This resulted in a higher proportion of participants in the passive control

preference group (44%, n=22) than the active (30.8%, n=16) and shared control preference groups (25%, n=13). In this study, the proportion of patients with passive control preference for participation in medical decision-making was higher than previously reported in samples of acute medical patients (30%–34%)³³ and postoperative cardiac surgery patients (preference for decisions about postoperative exercises) (22%).²⁰ Alternatively, higher proportions of patients with acute cancer (58%)²⁷ and infectious diseases (61%)²⁹ have reported passive control preference for participation in decisions about symptom management and medical care, respectively. The role of patient condition and the type of involvement preferred remains relatively underexplored and warrants consideration in future research.

Most patients in each of the control preference groups were observed to participate in some way during the ward round, with the proportions of patient that initiated participation similar across the three control preference groups (11.8%–19.2%) (table 3). However, those in the passive control preference group were least often observed to participate (77%); but most often observed to contribute specific information during the ward round (75.5% vs 59%–65.4%). These findings are consistent with previous reports that suggest patients may enact a different role from their initially preferred control preference.²⁹ Similar to previous research, these findings suggest clinicians may inaccurately interpret or judge patient preference for participation in care^{28 29}; hence, strategies for sharing information and creating opportunities for patients to participate may not be effective.

Patient factors contributing to participation

Patient self-initiated contribution was observed in only 15% of ward rounds, but included patients in all preference groups. The variable patient participation in ward rounds can, in part, be attributed to patients' ability to participate. To participate in decision-making about their healthcare, patients require knowledge of relevant facts, communication skills and confidence⁴⁸ as well as personal and social resources. This requires clinicians to use non-technical language to impart relevant information and ensure patients understand risks, benefits and characteristics of treatments to support informed decision-making.⁵⁴ In addition, clinician engagement when listening to patients is essential for individualised, person-centred care, and can have a therapeutic effect⁵³ as was evidenced by participants' comments about feeling respected and empowered when they were listened to.

In this study, where the participants were acutely unwell, vulnerable, distracted by multiple events and sometimes overwhelmed by the volume of stimuli, only verbal communication by clinicians was observed; and patient contributions to decisions were seldom observed. These findings support previous research

Table 3 Ward round characteristics and observed participation

Behaviour observed	Category	CPS active n (%)	CPS shared n (%)	CPS passive n (%)
Number of WR	(n=113)	34 (30)	26 (23)	53 (46.9)
Site 1	(n=70)	21 (30)	19 (27.1)	30 (42.8)
Site 2	(n=43)	13 (30.2)	7 (16.3)	23 (53.4)
Number of WRs observed per patient	One ward round	4 (25)	5 (38.4)	5 (22.7)
	Two ward rounds	7 (43.8)	3 (23.1)	7 (31.8)
	Three ward rounds	5 (31.25)	5 (38.5)	11 (50)
Number of staff present for WRs	Range	2–12	2–11	2–11
Patient participation				
Patient participation observed during WR	Yes	25 (83.3)	19 (82.6)	41 (77.4)
Patient participation observed in all stages of WR	Yes	6 (17.6)	5 (19.2)	27 (50.9)
Teamwork				
Patient contributed information during WR.	Yes	20 (59)	17 (65.4)	40 (75.5)
Patient was given specific information by clinicians.	Yes	16 (47.1)	14 (53.8)	34 (64.2)
Plain (non-technical) language used	No	22 (64.7)	12 (46.2)	32 (60.4)
Potentially sensitive information was shared with patient.	Yes	15 (44.1)	13 (50)	19 (35.8)
A decision was made/care planned during WR.	Yes	26 (76.5)	20 (76.9)	41 (77.4)
Patient-centred care				
Timing of engagement	Beginning (entry)	16 (47.1)	11 (42.3)	41 (77.4)
	Middle (process)	7 (20.6)	6 (23.1)	4 (7.5)*
	Near end (exit)	3 (8.8)*	1 (3.8)*	
Initial patient participation prompted by	Patient (self)	4 (11.8)	5 (19.2)	8 (15.1)
	Clinician	18 (52.9)	13 (50)	30 (56.6)
	Both	3 (8.8)	1 (3.8)	3 (5.7)
Clinician observed to prompt patient contribution	Medical	21 (61.8)	12 (46.2)	28 (52.8)
	Nurse	8 (23.5)	11 (42.3)	22 (41.5)
Patient preference was elicited.	Yes	3 (8.8)		4 (7.5)
Patients asked if they had any questions.	Yes	15 (44.1)	11 (42.3)	19 (35.8)
Patient contributed to decisions during WR.	Yes	7 (20.6)	2 (7.7)	11 (20.8)

*Excludes missing data.

CPS, Control Preference Scale; WR, ward round.

suggesting physician decisions often take place in isolation of input from other professions or their patients.⁵⁵ This approach may fail complex acute general medical patients who often need tailored, interprofessional decisions made about their care.⁵⁵ Decision aids, visual and written information, considered useful to enhance patient understanding and retention of information in acute settings,^{56–58} could be adapted for use on ward rounds and warrant further investigation.

Patients who indicated they received information delivered in a way they could understand, as well as feeling respected and supported by clinicians, reported they felt they could meaningfully contribute to ward rounds. Alternatively, others reported they did not understand information provided, know how to be involved or feel able to contribute during the round. Barriers to patient participation included not hearing or understanding clinicians, use of technical language and events or clinician behaviours perceived as unhelpful to their participation; findings consistent across both observation and interview data.

Clinician factors influencing patient participation

Complementing patient capability, clinician-led opportunities for participation emerged as an important contributor to patient involvement in ward rounds. Clinician behaviours such as introducing themselves to the patient, prompting by asking a question or explicitly inviting patients' contribution were observed to facilitate patient contribution to ward rounds. Interestingly, those in the passive control preference group were most often observed to be prompted by clinicians to participate in the ward round (table 3). However, these behaviours were not consistently observed across all ward rounds suggesting patient opportunity for participation was often limited. In 18% of the observed rounds, patients were not engaged at the commencement of the round and in 3.5% (n=4) of rounds, patients were engaged only at the conclusion of the round.

Variation in behaviours observed in this study is consistent with international research suggesting structured ward rounds alone may have little or no impact on patients' perceptions of shared decision-making,

activation or satisfaction with care.³³ This study provides an illustration of how, despite clinicians' best intentions, aspects of hospital care such as ward rounds are socially organised to overlook the subjectivities of patients and families.⁵⁹ This study highlights the key role of clinician behaviours in supporting capability and providing opportunity for patient participation and the many opportunities for research to contribute to the understanding and improvement of patient participation in treatment decision-making during acute hospital care.

Study limitations

The potential for response bias through convenience sampling was minimised by screening and recruiting consecutive patients. The purpose of this study was to explore variables of interest to patient participation across a diverse sample, rather than report specific site findings. However, differences between sites may have influenced the findings. Exploration of differences between site and care models is worthy of consideration in future research. This study did not specifically examine clinician perspectives of patient participation in ward rounds, rather data captured were interactions between the patient and the clinicians during ward rounds. Research shows that clinician and patient perspectives can differ and this is also worthy of future exploration.

It is possible the semistructured guide used for patient interviews may have influenced participant responses. Similarly, as clinicians were aware of the study and collection of observation data, they may have altered their behaviour. Rather than a limitation, it is possible that clinician awareness of the study purpose and data collection may have prompted them to behave in ways they perceived to be socially desirable and this enhanced the opportunity to collect data on effective patient–clinician interactions during ward rounds. The current study did not measure change in patients' control preference across their hospital stay. Finally, observers were aware of the preference group patients belonged to, which may have introduced potential for observer bias. The use of a semistructured observation tool, observer training, collection of observation data over a period of time, clinician familiarity with observers and collection of data only on selected patients all assisted to mitigate risk for bias.

CONCLUSION

Observed patient participation was similar across the three control preference groups. Differences in control preference and activation did not appear to influence patients' level of participation in ward rounds. Rather, observations suggest participation in decision-making about their care was limited by patients' ability and the opportunities provided. Clinician behaviours were varied and appeared to both hinder and facilitate

patient participation in ward rounds. Future research should focus on better understanding clinician roles in supporting patient capability and opportunity for participation in ward rounds.

Contributors All authors had full access to all of the data (including reports and tables) in the study. BR, MB, TB, AH, HN, DC and LM conceptualised the study and obtained funding. Data were collected by BR, HN and DC, and analysed by BR and LM. BR and LM drafted the paper. BR edited the manuscript. All authors approved the final manuscript.

Funding This research was funded by the Quality and Patient Safety Strategic Research Centre at Deakin University.

Competing interests None declared.

Patient consent Obtained.

Ethics approval Ethics approval was obtained from both hospitals (Monash Health and Alfred Health) and the affiliated university (Deakin University).

Provenance and peer review Not commissioned; externally peer reviewed.

Open access This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited and the use is non-commercial. See: <http://creativecommons.org/licenses/by-nc/4.0/>

© Article author(s) (or their employer(s) unless otherwise stated in the text of the article) 2019. All rights reserved. No commercial use is permitted unless otherwise expressly granted.

REFERENCES

- 1 World Health Organization. Exploring patient participation in reducing health-care-related safety risks. 2013. <http://www.euro.who.int/en/publications/abstracts/exploring-patient-participation-in-reducing-health-care-related-safety-risks> (accessed 13 Oct 2016).
- 2 Victorian Auditor-General. Consumer participation in the health system Melbourne. 2012. <http://www.audit.vic.gov.au/publications/20121010-Consumer-Health/20121010-Consumer-Health.pdf> (accessed 13 Oct 2016).
- 3 Australian Commission on Safety and Quality in Health Care. *National consensus statement: essential elements for safe and high-quality end-of-life care*. Sydney, 2015.
- 4 Slawomirski L, Aaraaen A, Klazinga N; OECD. The economics of patient safety. Strengthening a value-based approach to reducing patient harm at national level. 2017. https://www.bundesgesundheitsministerium.de/fileadmin/Dateien/3_Downloads/P/Patientensicherheit/The_Economics_of_patient_safety_Web.pdf (accessed Apr 2017).
- 5 Charmel PA, Frampton SB. Building the business case for patient-centered care. *Healthc Financ Manage* 2008;62:80–5.
- 6 Conklin A, Morris ZS, Nolte E. *Involving the public in healthcare policy. An update of the research evidence and proposed evaluation framework*. Santa Monica, CA, 2010.
- 7 Australian Commission on Safety and Quality in Health Care. *National safety and quality health service standards*. Sydney, 2012.
- 8 Royal College of Physicians, Royal College of Nursing. *Ward rounds in medicine. Principles for best practice*. London, 2012.
- 9 O'Hare JA. Anatomy of the ward round. *Eur J Intern Med* 2008;19:309–13.

- 10 O'Leary KJ, Creden AJ, Slade ME, *et al.* Implementation of unit-based interventions to improve teamwork and patient safety on a medical service. *Am J Med Qual* 2015;30:409–16.
- 11 O'Leary KJ, Wayne DB, Haviley C, *et al.* Improving teamwork: impact of structured interdisciplinary rounds on a medical teaching unit. *J Gen Intern Med* 2010;25:826–32.
- 12 O'Leary KJ, Buck R, Fligel HM, *et al.* Structured interdisciplinary rounds in a medical teaching unit: improving patient safety. *Arch Intern Med* 2011;171:678–84.
- 13 Herring R, Desai T, Caldwell G. Quality and safety at the point of care: how long should a ward round take? *Clin Med* 2011;11:20–2.
- 14 Aronson PL, Yau J, Helfaer MA, *et al.* Impact of family presence during pediatric intensive care unit rounds on the family and medical team. *Pediatrics* 2009;124:1119–25.
- 15 Rotman-Pikielny P, Rabin B, Amoyal S, *et al.* Participation of family members in ward rounds: attitude of medical staff, patients and relatives. *Patient Educ Couns* 2007;65:166–70.
- 16 Amin Y, Grewcock D, Andrews S, *et al.* Why patients need leaders: introducing a ward safety checklist. *J R Soc Med* 2012;105:377–83.
- 17 Degner LF, Sloan JA. Decision making during serious illness: what role do patients really want to play? *J Clin Epidemiol* 1992;45:941–50.
- 18 Singh S, Butow P, Charles M, *et al.* Shared decision making in oncology: assessing oncologist behaviour in consultations in which adjuvant therapy is considered after primary surgical treatment. *Health Expect* 2010;13:244–57.
- 19 Florin J, Ehrenberg A, Ehnfors M. Patient participation in decision making in nursing. *Stud Health Technol Inform* 2006;122:54–7.
- 20 McTier L, Botti M, Duke M. Patient participation in pulmonary interventions to reduce postoperative pulmonary complications following cardiac surgery. *Aust Crit Care* 2016;29:35–40.
- 21 McTier L, Botti M, Duke M. Patient participation in medication safety during an acute care admission. *Health Expect* 2015;18:1744–56.
- 22 McTier LJ, Botti M, Duke M. Patient participation in quality pain management during an acute care admission. *Clin J Pain* 2014;30:316–23.
- 23 Degner L. Patient participation in treatment decision making. *Axone* 1992;14:13–14.
- 24 Foss C, Hofoss D. Elderly persons' experiences of participation in hospital discharge process. *Patient Educ Couns* 2011;85:68–73.
- 25 Sainio C, Lauri S. Cancer patients' decision-making regarding treatment and nursing care. *J Adv Nurs* 2003;41:250–60.
- 26 Hubbard G, Kidd L, Donaghy E. Preferences for involvement in treatment decision making of patients with cancer: a review of the literature. *Eur J Oncol Nurs* 2008;12:299–318.
- 27 Cohen E, Botti M. Cancer patients' perceptions of the barriers and facilitators to patient participation in symptom management during an episode of admission. *Cancer Nurs* 2015;38:458–65.
- 28 Hudak PL, Frankel RM, Braddock C, *et al.* Do patients' communication behaviors provide insight into their preferences for participation in decision making? *Med Decis Making* 2008;28:385–93.
- 29 Florin J, Ehrenberg A, Ehnfors M. Patient participation in clinical decision-making in nursing: A comparative study of nurses' and patients' perceptions. *J Clin Nurs* 2006;15:1498–508.
- 30 Flink M, Hesselink G, Pijnenborg L, *et al.* The key actor: a qualitative study of patient participation in the handover process in Europe. *BMJ Qual Saf* 2012;21(Suppl 1):i89–i96.
- 31 Buelow M. Noise level measurements in four Phoenix emergency departments. *J Emerg Nurs* 2001;27:23–6.
- 32 O'Leary KJ, Boudreau YN, Creden AJ, *et al.* Assessment of teamwork during structured interdisciplinary rounds on medical units. *J Hosp Med* 2012;7:679–83.
- 33 O'Leary KJ, Killarney A, Hansen LO, *et al.* Effect of patient-centred bedside rounds on hospitalised patients' decision control, activation and satisfaction with care. *BMJ Qual Saf* 2016;25:921–8.
- 34 NSW Department of Health. Multidisciplinary Ward Rounds. A Resource. 2011. http://www0.health.nsw.gov.au/pubs/2011/pdf/multidisciplinary_ward_rou.pdf (accessed 7 Jan 2015).
- 35 Bradfield OM. Ward rounds: the next focus for quality improvement? *Aust Health Rev* 2010;34:193–6.
- 36 Stein JA. Improving hospital outcomes through teamwork process in an accountable care unit. *Centre for Research Excellence in Patient Safety. Designing hospital units to optimise outcomes*. Melbourne, 2011. http://www.crepatientsafety.org.au/seminars/designing_hospital_units/designinghospitalunits-dec11-jasonsteinsession2.pdf (accessed 2 Nov 2015).
- 37 Wilson FE, Newman A, Ilari S. Innovative solutions: optimal patient outcomes as a result of multidisciplinary rounds. *Dimens Crit Care Nurs* 2009;28:171–3.
- 38 Degner LF, Sloan JA, Venkatesh P. The Control Preferences Scale. *Can J Nurs Res* 1997;29:21–43.
- 39 Hibbard JH, Stockard J, Mahoney ER, *et al.* Development of the Patient Activation Measure (PAM): conceptualizing and measuring activation in patients and consumers. *Health Serv Res* 2004;39(4 Pt 1):1005–26.
- 40 Hibbard JH, Mahoney ER, Stockard J, *et al.* Development and testing of a short form of the patient activation measure. *Health Serv Res* 2005;40(6 Pt 1):1918–30.
- 41 Hung M, Carter M, Hayden C, *et al.* Psychometric assessment of the patient activation measure short form (PAM-13) in rural settings. *Qual Life Res* 2013;22:521–9.
- 42 Skolasky RL, Mackenzie EJ, Riley LH, *et al.* Psychometric properties of the Patient Activation Measure among individuals presenting for elective lumbar spine surgery. *Qual Life Res* 2009;18:1357–66.
- 43 Perestelo-Perez L, Rivero-Santana A, Sanchez-Afonso JA, *et al.* Effectiveness of a decision aid for patients with depression: A randomized controlled trial. *Health Expect* 2017;20:1096–105.
- 44 Sandelowski M. Combining qualitative and quantitative sampling, data collection, and analysis techniques in mixed-method studies. *Res Nurs Health* 2000;23:246–55.
- 45 Sandelowski M. What's in a name? Qualitative description revisited. *Res Nurs Health* 2010;33:77–84.
- 46 Smith J, Firth J. Qualitative data analysis: the framework approach. *Nurse Res* 2011;18:52–62.
- 47 Morse JM. Approaches to qualitative-quantitative methodological triangulation. *Nurs Res* 1991;40:120??123–3.
- 48 Hibbard JH, Greene J. What the evidence shows about patient activation: better health outcomes and care experiences; fewer data on costs. *Health Aff* 2013;32:207–14.
- 49 Angel S, Frederiksen KN. Challenges in achieving patient participation: a review of how patient participation is addressed in empirical studies. *Int J Nurs Stud* 2015;52:1525–38.

- 50 Eldh AC, Ekman I, Ehnfors M. A comparison of the concept of patient participation and patients' descriptions as related to healthcare definitions. *Int J Nurs Terminol Classif* 2010;21:21–32.
- 51 Tobiano G, Bucknall T, Marshall A, *et al.* Patients' perceptions of participation in nursing care on medical wards. *Scand J Caring Sci* 2016;30:260–70.
- 52 Longtin Y, Sax H, Leape LL, *et al.* Patient participation: current knowledge and applicability to patient safety. *Mayo Clin Proc* 2010;85:53–62.
- 53 Fleischer S, Berg A, Zimmermann M, *et al.* Nurse-patient interaction and communication: a systematic literature review. *J Public Health* 2009;17:339–53.
- 54 Fagerlin A, Sepucha KR, Couper MB, *et al.* Patients' knowledge about 9 common health conditions: the DECISIONS survey. *Med Decis Making* 2010;30:35–52.
- 55 Zwarenstein M, Rice K, Gotlib-Conn L, *et al.* Disengaged: a qualitative study of communication and collaboration between physicians and other professions on general internal medicine wards. *BMC Health Serv Res* 2013;13:494.
- 56 McDonall J, de Steiger R, Reynolds J, *et al.* Patient participation in postoperative care activities in patients undergoing total knee replacement surgery: Multimedia Intervention for Managing patient Experience (MIME). Study protocol for a cluster randomised crossover trial. *BMC Musculoskelet Disord* 2016;17:294.
- 57 Ryan RE, Prictor MJ, McLaughlin KJ, *et al.* Audio-visual presentation of information for informed consent for participation in clinical trials. *Cochrane Database Syst Rev* 2008:CD003717.
- 58 Stacey D, Kryworuchko J, Belkora J, *et al.* Coaching and guidance with patient decision aids: A review of theoretical and empirical evidence. *BMC Med Inform Decis Mak* 2013;13(Suppl 2):S11.
- 59 Barnes L, Rudge T. Virtual reality or real virtuality: the space of flows and nursing practice. *Nurs Inq* 2005;12:306–15.