Author/s:
To, TP;Dunnachie, G;Brien, JA;Story, DA

Title:
Surgical nurses' perceptions and experiences of a medications and oral restrictions policy change: A focus group study

Date:
2019-01-01

Citation:
To, T. P., Dunnachie, G., Brien, J. A. & Story, D. A. (2019). Surgical nurses' perceptions and experiences of a medications and oral restrictions policy change: A focus group study. Journal of Clinical Nursing, 28 (17-18), pp.3242-3251. https://doi.org/10.1111/jocn.14898.

Persistent Link:
https://hdl.handle.net/11343/285887

TITLE PAGE

Full title:

Surgical nurses' perceptions and experiences of a medications and oral restrictions policy change: a focus group study

Running title:

Medications and Oral Restrictions focus group

Author details:

Ms The-Phung TO[1,5] BPharm, MClinPharm, Quality Use of Medicines Pharmacist

Ms Gillian DUNNACHIE[2] RN, GradCertCritCare, Surgical Quality Coordinator*

Professor Jo-anne BRIEN[3,4] BPharm, PharmD, BSc, Chair in Clinical Pharmacy (St Vincent's Hospital), Conjoint Professor of Medicine at the St Vincent's Hospital Clinical School

Professor David A STORY[2] MBBS, MD, BMedSci, FANZCA, Professor and Foundation Chair of Anaesthesia, Head of Anaesthesia, Perioperative and Pain Medicine Unit (APPMU)

Author affiliations:

(1) Pharmacy Department, Austin Health, Melbourne, Australia

(2) Surgical Clinical Service Unit, Austin Health, Melbourne, Australia

(3) Faculty of Pharmacy, University of Sydney

(4) St Vincent's Hospital Clinical School, Faculty of Medicine, University of New South Wales

(5) Anaesthesia, Perioperative and Pain Medicine Unit, Melbourne Medical School, The University of Melbourne, Melbourne, Australia

* Present address is Recovery Unit, Austin Health, Heidelberg, Australia

Corresponding author:

The-Phung To

Pharmacy Department, Austin Health

PO Box 5555 Heidelberg

This is the author manuscript accepted for publication and has undergone full peer review but has not been through the copyediting, typesetting, pagination and proofreading process, which may lead to differences between this version and the Version of Record. Please cite this article as doi: 10.1111/JOCN.14898

Victoria Australia 3084
Ph +613 9496 5846
Fax +613 9496 4549
Email: phung.to@austin.org.au

Criteria	**Author Initials**
Made substantial contributions to conception and design, or acquisition of data, or analysis and interpretation of data;	TT, GD, JB, DS
Involved in drafting the manuscript or revising it critically for important intellectual content;	TT, GD, JB, DS
Given final approval of the version to be published. Each author should have participated sufficiently in the work to take public responsibility for appropriate portions of the content;	TT, GD, JB, DS
Agreed to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.	TT, GD, JB, DS

Key words:
Nurse, surgical nursing, medication, medication management, focus groups, policy

Conflict of interest statement:
No conflict of interest has been declared by the authors.

Funding statement:
This work was conducted during National Health Medical Research Council PhD Scholarship funding.

Acknowledgements:
This work was done as part of a National Health Medical Research Council PhD Scholarship funding.

MS. THE-PHUNG TO (Orcid ID : 0000-0003-4699-0495)

Article type : Original Article

Surgical nurses' perceptions and experiences of a medications and oral restrictions policy change: a focus group study

ABSTRACT

Aims and objectives: To explore the perceptions and experiences of surgical nurses before and after introducing the Medications and Oral Restrictions Policy (the Policy).

Background: The Policy was developed following extensive consultation, and evidence-based strategies were considered for its implementation. However, it is possible uptake did not meet expectations.

Design: Focus group interviews.

Methods: Three focus groups were conducted in November 2015 around 'what worked, what didn't and why, before and after hospital-wide implementation of the Policy. Data were coded and analysed using an inductive-deductive Thematic Analysis approach. The COREQ checklist guided reporting (see Supplementary File).

Results: The three groups consisted of 16, 14 and six surgical nurses. Before the Policy there was confusion, lack of clarity and guidance, and lack of experience and confidence in managing medications when patients had oral restrictions. After the Policy rollout there was a sense of 'knowing what to do' because of improved clarity and decision support; but there were also problems with: not everyone knowing about the policy, particularly due to staff movement and turnover; and, individual interpretation of the policy including use of its signs outside of context, and decision-making processes.

Conclusion: Exploration of nurses' perceptions of a medication-related policy change found that while the Policy provided clarity and decision support for some it made little difference

for others. Limited reach of the policy was an issue despite an effort to address this at the outset, as well as variations in interpretation of the policy and subsequent decision making. **Relevance to clinical practice:** How individuals interpret information and their understanding of the context behind the policy or guideline may affect implementation and should be considered alongside other barriers when implementing medication-related initiatives. Furthermore, implementation strategies that are independent of ongoing resources and/or key champions to sustain should be prioritised for all initiatives.

Key words: Nurse, surgical nursing, medication, medication management, focus groups, policy

IMPACT STATEMENT

What does this paper contribute to the wider global clinical community?

- Staff who understood the context of the Policy found it beneficial to their practice. Hence, more innovative and time/resource effective ways to provide context for staff and/or to educate staff about the Policy need to be found.
- Strategies to minimise the variations in how staff may interpret information presented in medication-related policies or guidelines and the subsequent individual decision-making process should also be considered for all future initiatives.
- Continuous staff movement, turnover and insufficient ongoing resources are the reality of many organisations. Therefore, strategies that are largely independent of ongoing key staff/champions to drive need to be prioritised for all implementation initiatives.

INTRODUCTION

Guidelines, policies, procedures and other evidence-based initiatives are often implemented with the expectation they will be taken up by staff. However, research shows evidence-based guidelines are not implemented effectively and health outcomes are therefore not achieved (Michie et al., 2005). Although evidence-based strategies were considered for the implementation of the Medications and Oral Restrictions Policy (the Policy) it is possible uptake of the Policy did not meet expectations. Previous research suggests that even theoretically informed implementation may not go according to plan (Curran et al., 2013). An understanding of factors that contribute to variations in practice is needed to develop

implementation interventions to increase the uptake of evidence into practice and so reduce variability in the delivery of recommended practices (Tavender et al., 2014). Understanding the issues from the perspective of staff who are most affected by the Policy will guide further improvement attempts and future implementation initiatives.

BACKGROUND

The Policy was developed in response to adverse medication-related incidents occurring when patients had restrictions on oral intake and strategies such as simplification and standardisation, decision support at the point of care, Opinion Leaders and Clinical Champions (Australian Commission on Safety and Quality in Health Care, 2008; Grol, Wensing, & Eccles, 2004; Kohn, Corrigan, & Donaldson, 2000; Schneider, 2002) were considered in its development and implementation. The Policy aimed to simplify and standardise oral restriction terminology and medication administration instructions to reduce confusion and unwanted practice variations: Fasting meant give patients' regular oral medications up to one hour prior to surgery unless advised; nil by mouth meant absolutely nothing by mouth, including sips of water and oral medications; restricted oral intake meant check medical orders before giving anything by mouth, including medications. The Policy is supported by coloured-coded bedside signs, which explains each category and provides decision support at the point of care; green for fasting, amber for restricted oral intake, and red for nil by mouth. The Policy was approved at numerous forums hospital wide and had the backing of key Opinion Leaders, including those from medical, nursing, pharmacy and speech pathology.

Implementation for the surgical wards occurred in February 2015 and included: Opinion Leaders, engagement with stakeholders including consultation with key senior staff from each ward to seek support for the Policy and assignation of Clinical Champions, and six information sessions over two weeks; these sessions included case studies highlighting the need and context behind the Policy. The sessions were open to all staff in the area and were scheduled during nursing education times. The Policy was discussed at surgical unit meetings to capture doctors. Key staff representing graduate nurse education, medical education, casual (supplemental) nursing staff, speech pathology, food services and patient service assistants were consulted about the Policy. A summary of the Policy, the Policy document, and a link to the Policy's intranet site were sent to these contacts for distribution to their group. The email was also sent to Pharmacy and surgical ward staff. A reminder email was sent to nursing staff

on the morning of the rollout and all signs previously used for oral restrictions were removed and replaced with the Policy's bedside signs.

AIM

The purpose of this study was to explore the perceptions and experiences of surgical nurses to understand whether the Policy addressed the relevant issues encountered before the Policy was introduced and to understand factors that may contribute to variations in practice after Policy implementation.

METHODS

Design

Focus group interviews.

Sample/Participants

Purposeful sampling, which is the identification and selection of individuals or groups of individuals that are especially knowledgeable about or experienced with a phenomenon of interest for the most effective use of limited resource (Palinkas et al., 2015), was used in this study. Surgical nurses from the Surgical Clinical Service Unit of the hospital (which covers most surgeries except oncology and paediatrics) were targeted because they were most likely to be affected by the Policy.

Data collection

The study was conducted at an acute campus of a tertiary teaching hospital in Australia and was approved by the Austin Health Research Ethics Committee (LNR/15/AUSTIN/403).

An email about the study and that sought assistance with identifying participants was sent to the four Nurse Unit Managers. The Managers were asked to forward the Participant Information Sheet – which specified demographic data will not be requested to encourage participation – to potential participants. This information sheet also detailed the researchers' personal goals and reasons for doing the research.

The number of participants per focus group should not be too large or too small to allow meaningful discussion as well as diversity of discussion; many researchers aim for at least six participants per group (Guest, Namey, & McKenna, 2016; Morgan, 1997; Rabiee, 2007; Wong,

2008). The determining factor for the number of focus groups needed depends on whether new information may be obtained with each new group (Jamieson & Williams, 2003), that is, when the data become saturated and further focus groups become unnecessary (Jayasekara, 2012); some researchers suggest only three to four focus groups may be necessary for a simple research question (Guest et al., 2016; Morgan, 1997; O.Nyumba, Wilson, Derrick, & Mukherjee, 2018; Rabiee, 2007). We therefore aimed for at least three focus groups, with at least six participants per group. Consent was assumed if the participant attended the focus group session.

Focus group format

Two researchers, TT and GD, conducted the sessions with TT moderating and GD observing. No other observers were present. Each session ran for approximately 45 minutes and was audio-recorded using the 'voice memo' application on two iPhones (Apple, Cupertino, California).

Two broad-based questions provided the setting for the sessions:

1. What worked well, what didn't, and why, before the Policy was implemented?
2. What worked well, what didn't, and why, after the Policy was implemented?

These two questions had been piloted prior to the study and were included in the Participant Information Sheet.

If further prompting was needed, the Theoretical Domains Framework (Cane, O'Connor, & Michie, 2012) was used to guide discussion. Brief field notes were made during and immediately after the interview sessions. These notes were used, where required, to assist with reflection of data during analysis.

Analysis

The audio recordings were transcribed 'verbatim' by one researcher (TT). Another researcher (GD) checked the transcriptions against the audio content for accuracy. The transcriptions were read and re-read by TT and GD to allow for immersion of data. One researcher (TT) coded the data (NVivo 11 for Windows, QSR International Pty Ltd.) inductively, and deductively using the Theoretical Domains Framework (Cane et al., 2012), while another (GD) independently coded the data inductively and then discussed the coding with the first coder. Coding was also discussed with DS and JB. Data were analysed using the Thematic Analysis approach. Thematic analysis is a method for identifying, analysing and reporting patterns within data (Braun & Clarke, 2006, 2012). As thematic analysis does not require the

detailed theoretical and technological knowledge of approaches, it can offer a more accessible form of analysis, particularly for those early in a qualitative research career (Braun & Clarke, 2012). It also offers a useful approach for those doing more applied research, or when doing research that steps outside of academia, such as into the policy or practice areas (Braun & Clarke, 2014). Focus group data is suitable for thematic analysis (Joffe, 2012). The inductive/deductive approach allows the data to be analysed with certain preconceived templates derived from theories, but also allowing for the emergence of new concepts (Joffe, 2012). Subtheme and theme development were discussed by all researchers. The whole process, from coding to themes, was iterative.

Researcher experience and potential influence on results

Three researchers, TT, DS and JB, have prior experience with qualitative research.

One researcher (TT) was the project officer for the Policy and may have been known to some participants. Another researcher (GD) was the Surgical Quality Coordinator and was known to some participants. It is possible participants' responses were influenced by this. Data coding, analysis and the subsequent report may reflect the authors' involvement with the Policy.

The 32–item Consolidated Criteria for Reporting Qualitative Studies (COREQ) was used to guide reporting (Tong, Sainsbury, & Craig, 2007). (See Supplementary File).

RESULTS

Three focus groups, consisting of 16, 14 and six surgical nurses respectively, were conducted over two weeks in November 2015, approximately eight months post Policy rollout. The focus group sessions occurred during nursing education times.

Participants were female and had worked at the hospital for at least 12 months; none were recent (less than 12 months) graduates. Although demographic data were not elicited, based on discussions during the sessions all four surgical wards were represented. Two sessions contained participants from different wards. Participants in the third focus group were from the pilot ward, which had been operating the Policy since mid-2012.

Some participants from the first two groups stated they did not know about the Policy; however, once discussion occurred all indicated they had seen and/or used the Policy signs. Participants from the third session knew about the Policy and were aware of its aims.

Before Policy rollout

Prior to the Policy there was no hospital-wide guidance for giving oral medications when patients had oral intake restrictions. Discussions relating to pre Policy focussed on what didn't work well. (Refer to Appendix for Coding Tree)

Not knowing what to do

Confusion about fasting and nil by mouth

There was confusion about what fasting or nil by mouth meant. One participant said, "You would be confused about patient's fasting status; were they going to theatre, were they not?" Another participant said, "Or nil by mouth might have been used inappropriately when they are not." One nurse summed it with, "I think there was confusion with nil orally and fasting – there was no difference." Sometimes fasting meant patients were not allowed to have anything orally, while nil by mouth, on the other hand, may mean oral medications or sips were allowed. One participant commented, "But even sometimes with just the plain fasting sign you're like, 'ooh, can they have sips of water?'" and another said, "…when it said nil orally I was like, 'oh, can they swallow, can they not?'" This confusion has the potential to affect patient safety; for example, the risk of giving oral medication to a patient with swallowing difficulties or the withholding of essential medications from patients who are safe to swallow. One nurse said, "So there was no clear distinction and, you know, sometimes they would be nil orally but you could still give meds or, you know, so there was (sic) compromises being made…" Another nurse, referring to a particular incident, said, "...then they've ended up (in ICU)…so ICU are like, going well, 'it's because you've been withholding the medication'…Patients were getting compromised…"

Lack of clarity and guidance

There was a sense of lack of clarity and guidance. One participant talked about the need to get an understanding of what to do when coming onto a shift, "you'd have to, before you can do anything, just work out…..are they fasting or not?" Another participant commented about not knowing if patients are allowed to have their medications and needing to get that clarified. The lack of clarity and guidance meant it was open to interpretation as to whether

medications were given or withheld. One nurse said, "Because they didn't have a guideline or anything to sort of follow, so they were sort of making the decisions themselves." Another stated, "So it could be quite random as to who got what medication and who didn't." A further consequence of this issue was some staff were giving or receiving inconsistent information; as one nurse stated, "...someone tell you one thing and someone else would tell you something else."

The lack of clarity and guidance also impacted on staff time and resources with nurses having to spend time trying to contact doctors to clarify what was intended – what exactly did they mean by fasting or nil by mouth, and should oral medications be given or withheld? Participants agreed there were "lots of phone calls, pages", and "paging units then units saying call someone else…."

Without structured guidance, it appears that, often decisions were made at the 'nurses' discretion'. These decisions can tend towards, from one participant's point of view, erring on the side of caution; "I think we tend to withhold rather than give something thinking that, 'oh, that's OK.' We'd rather, we'd be a little bit more reserved."

Lack of experience and confidence

An issue discussed as problematic was the lack of experience and confidence of the doctor or the nurse to make a decision about giving or withholding medications; for instance, one participant offered, "I think sometimes with the doctors they were….some were confident to tell you which ones to withhold and some were not as confident so they would, maybe, withhold everything just to be sure." In terms of nurses, one participant said, "I think it's a confidence thing too, that you don't feel confident to make a decision and sort of think outside the square a little bit."

A consequence of the lack of experience and confidence is the effect on communication; particularly when junior nurses need to communicate with doctors. As one participant said, "it came down to how long you've been on the ward and how comfortable you felt having those conversations [about whether to give or withhold oral medications]. So the more experienced nurses were more confident….broaching that subject or that discussion with the doctors than the junior nurses." Another participant added, "Often they [junior nurses] don't even go to the doctors first, they'll come to the nurse in charge…" There was also the issue of

unwillingness to challenge a medical decision; one participant said, "…some people wouldn't necessarily felt comfortable dealing, you know, going, 'oh but the doctor said they [the patient] can have their medication', but then you're like, 'they're nil orally….!'"

Post Policy rollout

Post Policy, there was a sense of knowing what to do but also a perception of limited impact of the Policy.

Knowing what to do

Improving clarity

Many participants agreed there was better clarity, particularly with the difference between fasting and nil by mouth, what needs to be done for each category and whether or not medications should be given. One participant, who was confused pre Policy about whether a patient was able to swallow when classified as 'nil orally', said, "now, if it's a red sign I know definitely not." Another participant added, "We know if a patient is fasting, nil oral or restricted so we know exactly what to do. When it's right there, they [the doctors] can see it and it's simple." One participant summed it with, "[It's a] conversation that you don't need to really have."

Having a clear understanding of what to do has reduced the amount of time wasted following things up; one participant reported, "It's cut out a lot of time as well trying to contact the doctors to find out what they are happy for them [the patients] to have and what they're not happy."

Visible decision aid at point of care

Many participants felt the bedside signs provide a decision aid at the point of care. One participant remarked, "….it's there in front of you. You don't have to have your own sort of definition or double check with anyone else exactly what that means." The signs seem to also assist other professions including doctors, food monitors and patient service assistants. For example, one participant said, "I've noticed a few times they'd [the doctors] go 'oh yep they're *fasting'* or 'oh wait what's that sign? Oh that's OK, they're not infectious, and they're,' you know, 'restricted'." Another admitted, "…I've come back [from annual leave] and this was already being rolled out and I didn't even notice they were there but food monitor and patient service assistants are constantly been, like, 'are you sure they're fasting?'

They're not….but I forgot it was there so yeah they're noticing it more." One nurse remarked on the merits of the A4 sized signs and the associated colour of each category, "I think, well, it's more obvious. Bright, big. Like, before the rollout it was this little, you know, magnetic strip, you know, with half-faded, crossed out orally and you put what you want sort of thing. So this is obvious, it's right there; stop, you know, go….it's right there in your face."

Some participants felt the Policy signs have led to improved communication between professions. One participant observed, "I feel it's put a bridge between Speech Pathology and the doctors", while another said, "…the doctors go and see the patients they need to review; when it's right there they can see it and it's simple."

Policy providing support for clinical decisions

Some participants concurred the Policy gave them the backup needed when their decisions were challenged. Having a visual reminder and reference to backup clinical decision-making seems to provide some participants with confidence; particularly when justifying their decisions or actions to doctors. As one participant puts it, "whereas now....this is what we're doing and …if the doctors do question we're like, 'well you said that that's what this patient is'…" Similarly, "If the doctor is questioning you then you can say, 'well does it fill this criteria, then we can't use this sign, we have to use that sign then that means no oral medications'." Another participant added, "It's like a bit of leverage for a nurse to go… 'well, actually, you [the doctor] need to make it really clear' ….when it [the Policy] first came out and the doctors were still a bit wishy washy with it you would, you know, take them back to that policy and it's like, 'they're fasting so they can have orals or are they nil by mouth so nothing goes into their mouth at all?'"

<u>Limited impact of Policy</u>

The implementation of the Policy did not change practice across the board.

Already practicing in line with Policy

Some participants held they already distinguished between fasting and nil by mouth. Consequently, the advent of the Policy did not affect their previous conception of what fasting and nil by mouth meant nor did it change their practice. These participants reasoned it was because of the area of practice. For instance, one participant said, "I've never thought if someone was fasting they would be not, like, nil orally completely because of the ward, like

the environment we work whereas other wards may be completely different." Another elaborated, "It's got more to do with patient care, like, you know what [procedure] your patient is going for…so if we know they going for …they can have their medications and can still have sips of water."

Individual experience and interpretation

According to some, the terminology and instructions on the Policy bedside signs are open to interpretation. One concerned participant expressed, "To me I still worry though because there are still people who read that [the bedside sign] and still go 'do I give it [the medication]?' Oh my goodness, how much more can you say…?! It tells you what to do and they're still questioning!" Another participant commented, "They've definitely highlighted the fact that stop is red sign, nothing orally but I don't know if our whole team understands why yet." One participant reasoned that, "…it comes back to the skills of that nurse whether or not they're gonna click withheld, patient going to surgery [and not give oral medications]. So that comes down to own experience."

Some participants did not feel the Policy applied to them because of the area worked or the type of patients on their ward. For example, they felt their patient type meant it was appropriate to use nil by mouth to include exemptions such as sips of water and oral medications because as one participant argued, "it's mostly from a surgical point of view… you know, being a gastrointestinal ward…. A sip or ice or…..it's not to do with swallowing…." Another stated, "…we have more the digestive reason [for being nil by mouth] rather than swallowing reasons." Another added, "…they aren't nil by mouth because of swallowing. They [the doctors] just want their [the patients'], you know, bowel rested or something like that….but still let them have their tablets; we just don't want them to eat." These participants acknowledged they had not attended the Policy information session.

Sign fatigue

One focus group discussed the green fasting sign failing to make an impact due to the similarity in size and colour to another sign on their ward. "I didn't notice it because….it's really rare for us to have 'nil by mouth'. They're mostly green 'fasting' but our bed cards…..they're bright green as well, about the same size." This issue is currently ward specific but may become problematic if more signage of similar size and/or colour is used.

Insufficient reach of policy

Not all participants were aware of the Policy. One participant said, "I work two days a week and I haven't heard about any of that." Similarly, another commented she had not noticed the signs after coming back from annual leave. Some participants were concerned certain groups of staff had not been targeted, or insufficiently targeted – one participant asked, "Did the doctors have much education about [the Policy] ….?" Another participant declared, "I don't know if it's necessarily the nurses – the doctors, I don't think, even notice that sign even though it's right next to their head. They don't even realise that nil by mouth and fasting are different."

Participants from all focus groups suggested mandatory training is needed to improve awareness of the Policy. One participant, thought the Policy was more relevant to practice than the yearly compulsory Fire, Hand Hygiene, and Bullying, Harassment and Aggression Management training and remarked, "I just think it should be, like, a mandatory training thing….for everyone."

Inter-professional friction

Some participants were frustrated doctors did not seem to conform to practice nor take on a more proactive role with carrying out the Policy. One exasperated participant said, "Well doctors would write in the notes 'nil by mouth for theatre'. Do they mean fasting for theatre or do they mean keep nil by mouth until theatre? That wouldn't really change with the signs, 'cos if they are gonna write that they are gonna write that anyway. They're not gonna….look at the signs." Another participant said, "They'll [the doctors] say 'nil by mouth except for meds'….that means fasting because obviously they can have water and medications. So the doctors, they don't even notice the signs on our ward." Another grievance was about doctors not being pre-emptive, "If they [the doctors] have their own restrictions on they won't write them up and let you know. You find out later after you've already done everything else." One of the participants described a situation where conflict arose when the surgeon tried to override the speech pathologist's categorisation of the patient's oral intake status. One nurse confessed that when there is disagreement between the doctor and speech pathologist, nurses would side with the latter, "…a unit [doctor] might say… [the patient] can start fluids but…we are completely guided by Speech."

DISCUSSION

The perceptions and experiences of surgical nurses prior to the Medications and Oral Restrictions Policy suggest there was confusion and lack of guidance with giving oral medications to patients who have restrictions on oral intake. There was a feeling of not knowing what to do and much time wasted with lots of phone calls and 'chasing up' of doctors to clarify what needed to be done. Staff were sometimes left to their own interpretation of what is and is not appropriate, and whether or not patients were given oral medications can depend on the individual staff member's experience and interpretation and confidence. This was sometimes fraught with risk as decisions may not have been appropriate and had the potential to compromise the patient.

The advent of the Policy provided a unified structure for staff to work with when giving oral medications in the context of restrictions on oral intake. For many this was perceived to improve communication, provide a timely decision aid at the point of care, and gave some staff more clarity and confidence when problem-solving medication administration issues. The Policy also appears to provide a backup for clinical decisions; some participants use the Policy to justify their decision if challenged by doctors. For some, the Policy was 'leverage', especially when dealing with doctors.

For other participants the Policy made little impact – either for them directly or for others around them.

Limited reach of Policy

It seems the implementation process was insufficient to ensure information about the Policy reached all staff. It is possible knowledge of why the Policy was needed – the reasons behind all the bedside signs and categories – may improve the impact of the Policy; it seems those who attended the information sessions had a better understanding, were supportive of the Policy and even found it beneficial to their practice. Six face-to-face information sessions were conducted, as well as presentations at surgical unit meetings to capture doctors. Unfortunately, more sessions could not be scheduled because they were time, resource and labour intensive for all concerned.

Staff movement and turnover makes it challenging to reach all staff when rolling out a new Policy. A number of participants commented they didn't know about the Policy or did not attend the information sessions due to, for example, being on leave or working part-time. We

had anticipated staff movement and had instigated strategies such as consultation with numerous stakeholders, engaging Opinion Leaders and Clinical Champions, and removing/replacing all old signage with the Policy bedside signs that simplify and standardise medication instructions to provide decision support at the point of care to manage longevity beyond the implementation phase. However, these strategies appeared to be inadequate, and others have similarly reported on difficulties with providing education processes when faced with higher than expected staff turnover, the number of part-time and night shift positions among nursing staff and job share positions (Babl et al., 2006; Brand et al., 2005; King, Hibbs, Saville, & Swales, 2018; Lloyd-Smith, Curtin, Gilbart, & Romney, 2014). A possible solution to alleviate the time, availability of staff to attend and labour commitments of face-to-face education sessions may be the use of a Webinar and/or eLearning module, which can be accessed by staff when they choose. Future work is required to assess whether these resources are effective; anecdotal experience suggests the availability of these will be of limited use unless: individual and hospital barriers to accessing them are addressed; or, the hospital makes it mandatory – in this era of information overload, this will be a challenge.

Individual decision making process

It appears the experience, confidence and interpretation of individual staff were likely to affect whether the Policy was followed appropriately: there was the mistaken interpretation by some that, because of their patient type, the Policy did not apply to them; and, it seems some staff were still uncertain and/or still sought advice despite the instructions on the Policy bedside signs. It is possible understanding the context of the Policy may help with the experience, confidence and individual interpretation of staff when making a decision about giving medications in patients with restrictions on oral intake. However, it may also be the solution is not that simple; as summed up by one participant, "Oh my goodness, how much more can you say…?! It tells you what to do and they're still questioning!" – there may be other elements affecting each individual's clinical decision process. Nurse decision making is a complex process (Bjørk & Hamilton, 2011; Nibbelink & Brewer, 2018) is influenced by many factors including experience and intuition, context of the situation, knowing the patient, interpretation and reflection (Nibbelink & Brewer, 2018). A systematic review of the effectiveness of education interventions found that clinical decision making involves cognition, judgement, and socially located behaviour and does not always respond as expected to educational interventions or variables such as clinical experience (Thompson & Stapley, 2011). So while the information presented on the bedside signs may seem self-explanatory and serve as a decision aid to

some, others interpreted the signs differently or did not find the same instructions helpful to practice. It has been suggested theories that address judgements and decisions themselves are needed (Thompson & Stapley, 2011) to guide appropriate methods for educational interventions. For example, two decision making theories described in the literature are the 'intuitive' and 'analytic' models; research suggests experienced nurses tend to favour intuitive clinical decision making whereas inexperienced nurses tend to employ a more analytic approach (Bjørk & Hamilton, 2011; Croskerry, 2013; Gladstone, 2012; Nibbelink & Brewer, 2018). Therefore, considering these clinical decision making perspectives during the development phase may improve the design of educational aids or interventions. Future implementation attempts need to consider clinical decision making factors in tandem with the other barriers to implementation.

Inter-professional friction

There seemed to be some inter-professional friction with operationalising the Policy. Some participants were frustrated doctors were not following the Policy; others described conflict between medical staff and speech pathologists. Doctors not following the Policy could be a consequence of lack of knowledge/limited reach of the Policy. Nonetheless, inter-professional conflict in healthcare is well recognised (Brown et al., 2011; Caldwell & Atwal, 2003; Khalili, 2014; Leever et al., 2010; Patton, 2014; Thomson, Outram, Gilligan, & Levett-Jones, 2015; Zwarenstein & Reeves, 2002) and it is possible the basis of the conflicts is not exclusive to this Policy and needs to be addressed at the (hospital and professional) institution level. Strategies such as inter-professional competency framework (Hepp et al., 2015), conflict resolution protocols (Brown et al., 2011) and inter-professional education (Bridges, Davidson, Odegard, Maki, & Tomkowiak, 2011; World Health Organisation, 2010) at the undergraduate level have been recommended.

Limitations

We had not collected demographic data to emphasise anonymity to encourage participation and discussions without fear of judgement; this meant we were also unable to use methods such as member checking to improve the rigour of the study. Ideally, focus group sessions should be conducted until saturation is reached for all concepts (Jamieson & Williams, 2003; Jayasekara, 2012; O.Nyumba et al., 2018; Rabiee, 2007; Wong, 2008); however, the constraints of the field situation must also be taken into account (Morgan, 1997) and in our situation it was the imposition on staff time. We therefore sought to tap into the existing arrangements of a busy clinical setting and worked with what was allocated to us. Nevertheless, many of the

themes highlighted were discussed by all three focus groups; exceptions were 'lack of experience and confidence' (not discussed by first group, but discussed at length by the second and third) and sign fatigue (relevant to only one ward). Additional focus group sessions may have provided more data but not necessarily more scope, and would have been an unnecessary burden on precious staff resources. One group only had participants from the pilot ward. This was beyond our control though an observation from this inadvertent outcome was all participants from this group were familiar with the Policy and appeared to be comfortable with it. In contrast, some participants from the other two focus groups did not know about the Policy and/or its context. Possible explanations include a scaling up issue (from the pilot) or perhaps more time was needed to allow the intervention to become 'culture' – this requires exploration beyond this current work. The study only examined the views of surgical nurses from one institution in the implementation of one policy and may not be applicable to other settings.

CONCLUSION

From surgical nurses' perspectives, the Medications and Oral Restrictions Policy provided a unified structure to work with when giving oral medications when patients have restrictions on oral intake where previously there was confusion and a lack of guidance – those who understood the context of the Policy found it relevant and beneficial to their practice. However, despite a considered implementation process, which included simplification and standardisation of medication administration instructions on the Policy's bedside signs, many of the issues highlighted post Policy implementation could be attributed to inadequate reach and a lack of understanding of the context of the Policy; how medication-related information was interpreted and the resulting clinical decision-making process seemed to vary between individuals and impacted on the appropriate uptake of the Policy.

RELEVANCE TO CLINICAL PRACTICE

The understanding of the context behind a policy or guideline and how individuals interpret information or instruction about medication and the subsequent decision-making process can affect the implementation of medication-related initiatives. This concept should be considered alongside other barriers in future implementation initiatives. Furthermore, continuous staff movement and turnover and resource issues seem to be the reality of any large organisation and therefore strategies that are independent of ongoing resources and/or key champions to sustain need to be prioritised for all implementation.

REFERENCES

Australian Commission on Safety and Quality in Health Care. (2008). Windows into safety and quality in health care 2008. Sydney: Australian Commision on Safety and Quality in Health Care.

Babl, F., Priestley, S., Krieser, D., Miller, J., Tully, M., Spicer, M., . . . Dilla, N. (2006). Development and implementation of an education and credentialing programme to provide safe paediatric procedural sedation in emergency departments. Emerg Med Australas, 18(5-6), 489-497. doi:10.1111/j.1742-6723.2006.00904.x

Bjørk, I. T., & Hamilton, G. A. (2011). Clinical Decision Making of Nurses Working in Hospital Settings. Nursing Research and Practice, 2011, 8. doi:10.1155/2011/524918

Brand, C., Landgren, F., Hutchinson, A., Jones, C., MacGregor, L., & Campbell, D. (2005). Clinical practice guidelines: barriers to durability after effective early implementation. Internal Medicine Journal, 35(3), 162-169. doi:10.1111/j.1445-5994.2004.00763.x

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77-101. doi:10.1191/1478088706qp063oa

Braun, V., & Clarke, V. (2012). Thematic analysis. In H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, & K. J. Sher (Eds.), APA handbook of research methods in psychology, Vol 2: Research designs: Quantitative, qualitative, neuropsychological, and biological (Vol. 2, pp. 57-71). Washington DC: American Psychological Association.

Braun, V., & Clarke, V. (2014). What can ‘‘thematic analysis’’ offer health and wellbeing researchers? 2014. doi:10.3402/qhw.v9.26152

Bridges, D. R., Davidson, R. A., Odegard, P. S., Maki, I. V., & Tomkowiak, J. (2011). Interprofessional collaboration: three best practice models of interprofessional education. Med Educ Online, 16. doi:10.3402/meo.v16i0.6035

Brown, J., Lewis, L., Ellis, K., Stewart, M., Freeman, T. R., & Kasperski, M. J. (2011). Conflict on interprofessional primary health care teams--can it be resolved? J Interprof Care, 25(1), 4-10. doi:10.3109/13561820.2010.497750

Caldwell, K., & Atwal, A. (2003). The problems of interprofessional healthcare practice in hospitals. Br J Nurs, 12(20), 1212-1218. doi:10.12968/bjon.2003.12.20.11844

Cane, J., O’Connor, D., & Michie, S. (2012). Validation of the theoretical domains framework for use in behaviour change and implementation research. Implementation Science, 7. doi:10.1186/1748-5908-7-37

Croskerry, P. (2013). From Mindless to Mindful Practice — Cognitive Bias and Clinical Decision Making. New England Journal of Medicine, 368(26), 2445-2448. doi:10.1056/NEJMp1303712

Curran, J. A., Brehaut, J., Patey, A. M., Osmond, M., Stiell, I., & Grimshaw, J. M. (2013). Understanding the Canadian adult CT head rule trial: use of the theoretical domains framework for process evaluation. Implementation Science, 8, 25. doi:http://dx.doi.org/10.1186/1748-5908-8-25

Gladstone, N. (2012). Comparative Theories in Clinical Decision Making and their Application to Practice: a Reflective Case Study. British Journal of Anaesthetic and Recovery Nursing, 13(3-4), 65-71. doi:10.1017/S1742645612000435

Grol, R., Wensing, M., & Eccles, M. (2004). Improving patient care. The implementation of change in clinical practice. Philadelphia (PA): Elsevier.

Guest, G., Namey, E., & McKenna, K. (2016). How Many Focus Groups Are Enough? Building an Evidence Base for Nonprobability Sample Sizes. Field Methods, 29(1), 3-22. doi:10.1177/1525822X16639015

Hepp, S. L., Suter, E., Jackson, K., Deutschlander, S., Makwarimba, E., Jennings, J., & Birmingham, L. (2015). Using an interprofessional competency framework to examine collaborative practice. J Interprof Care, 29(2), 131-137. doi:10.3109/13561820.2014.955910

Jamieson, L., & Williams, L. M. (2003). Focus group methodology: Explanatory notes for the novice nurse researcher. Contemporary Nurse, 14(3), 271-280. doi:10.5172/conu.14.3.271

Jayasekara, R. (2012). Focus groups in nursing research: Methodological perspectives. Nursing Outlook, 60(6), 411-416.

Joffe, H. (2012). Thematic Analysis. In D. Harper & A. Thompson (Eds.), Qualitative Research Methods in Mental Health and Psychotherapy (pp. 209-223): John Wiley & Sons, Ltd.

Khalili, H. H., Jodi; DeLuc Sandra. (2014). Historical analysis of professionalism in western societies: implications for interprofessional education and collaborative practice. Journal of Interprofessional Care, 28(2), 92-97.

King, J. C., Hibbs, R., Saville, C. W. N., & Swales, M. A. (2018). The survivability of dialectical behaviour therapy programmes: a mixed methods analysis of barriers and facilitators to implementation within UK healthcare settings. BMC Psychiatry, 18(1), 302. doi:10.1186/s12888-018-1876-7

Kohn, L. T., Corrigan, J. M., & Donaldson, M. S. (2000). To err is human: building a safer health system. Washington DC: National Academy Press Retrieved from http://www.nap.edu/catalog/9728.html.

Leever, A. M., Hulst, M. V. D., Berendsen, A. J., Boendemaker, P. M., Roodenburg, J. L. N., & Pols, J. (2010). Conflicts and conflict management in the collaboration between nurses and physicians – A qualitative study. Journal of Interprofessional Care, 24(6), 612-624. doi:10.3109/13561820903550762

Lloyd-Smith, E., Curtin, J., Gilbart, W., & Romney, M. G. (2014). Qualitative evaluation and economic estimates of an infection control champions program. American Journal of Infection Control, 42(12), 1303-1307. doi:10.1016/j.ajic.2014.08.017

Michie, S., Johnston, M., Abraham, C., Lawton, R., Parker, D., & Walker, A. (2005). Making psychological theory useful for implementing evidence based practice: a consensus approach. Qual Saf Health Care, 14. doi:10.1136/qshc.2004.011155

Morgan, D. L. (1997). Focus Groups as Qualitative Research: Planning and research design for focus groups. Retrieved from https://us.sagepub.com/en-us/nam/sage-research-methods.

Nibbelink, C. W., & Brewer, B. B. (2018). Decision-making in nursing practice: An integrative literature review. Journal of Clinical Nursing, 27(5-6), 917-928. doi:doi:10.1111/jocn.14151

O.Nyumba, T., Wilson, K., Derrick, C. J., & Mukherjee, N. (2018). The use of focus group discussion methodology: Insights from two decades of application in conservation. Methods in Ecology and Evolution, 9(1), 20-32. doi:10.1111/2041-210X.12860

Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. Administration and policy in mental health, 42(5), 533-544. doi:10.1007/s10488-013-0528-y

Patton, C. (2014). Conflict in Health Care: A Literature Review. The Internet Journal of Healthcare Administration, 9(1).

Rabiee, F. (2007). Focus-group interview and data analysis. Proceedings of the Nutrition Society, 63(4), 655-660. doi:10.1079/PNS2004399

Schneider, P. (2002). Applying human factors in improving medication-use safety. American Journal of Health-System Pharmacy, 59(12), 1155-1159.

Tavender, E. J., Bosch, M., Gruen, R. L., Green, S. E., Knott, J., Francis, J. J., . . . O'Connor, D. A. (2014). Understanding practice: the factors that influence management of mild

traumatic brain injury in the emergency department-a qualitative study using the Theoretical Domains Framework. Implementation Science, 9, 8-8. doi:10.1186/1748-5908-9-8

Thompson, C., & Stapley, S. (2011). Do educational interventions improve nurses' clinical decision making and judgement? A systematic review. Int J Nurs Stud, 48(7), 881-893. doi:10.1016/j.ijnurstu.2010.12.005

Thomson, K., Outram, S., Gilligan, C., & Levett-Jones, T. (2015). Interprofessional experiences of recent healthcare graduates: A social psychology perspective on the barriers to effective communication, teamwork, and patient-centred care. Journal of Interprofessional Care, 29(6), 634-640. doi:10.3109/13561820.2015.1040873

Tong, A., Sainsbury, P., & Craig, J. (2007). Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. International Journal for Quality in Health Care, 19(6), 349-357. doi:10.1093/intqhc/mzm042

Wong, L. P. (2008). Focus group discussion: a tool for health and medical research. Singapore Med J, 49(3), 256-260; quiz 261.

World Health Organisation. (2010). Framework for action on interprofessional education and collaborative practice. Retrieved from http://apps.who.int/iris/bitstream/10665/70185/1/WHO_HRH_HPN_10.3_eng.pdf.

Zwarenstein, M., & Reeves, S. (2002). Working together but apart: barriers and routes to nurse--physician collaboration. Jt Comm J Qual Improv, 28(5), 242-247, 209.

Funding

One author received an NHMRC PhD scholarship.

Appendix

Coding Tree for Focus Group Study

Inductive Coding	Theoretical Domains Framework/Categories	Subtheme	Theme
Clarity; communication; confusion; environment; understanding; risk to patients	Knowledge; beliefs about consequences; environmental context and resources	Confusion	Not knowing what to do
Clarity; communication; confusion; environment; understanding; important medications; risk to patients	Knowledge; environmental context and resources; belief about consequences	Lack of clarity and guidance	
Confidence; experience; inter-professional relationships; professional role; understanding	Environmental context and resources; social professional role; belief about capabilities; skills; belief about consequences	Lack of experience and confidence	
Clarity; knowing what to do; understanding	Knowledge; reinforcement; memory, attention and decision process; environmental context and resources; social professional role	*Improved clarity*	Knowing what to do
Clarity; communication; environment; knowing what to do; understanding; visual prompt	Memory, attention & decision processes; environmental context and resources; knowledge; reinforcement; beliefs about capabilities; social professional role and identity	*Visible decision aid at point of care*	
Clarity; communication; confidence; inter-professional relationships; knowing what to do	Knowledge; beliefs about capabilities; reinforcement; social professional role and identity	*Policy providing support for clinical decisions*	
Confidence; did not change practice; environment; experience, knowing what to do; understanding	Environment context and resources; beliefs about capabilities; knowledge; skills	*Already practicing in line with Policy*	Limited impact of Policy
Clarity; confidence; did not change	Knowledge; beliefs about	*Individual*	

practice; environment; experience; issues with policy	consequences; environmental context and resources; beliefs about capabilities	*experience and interpretation*	
Communication; did not change practice; environment; information delivery; issues with policy	Environmental context and resources	*Sign fatigue*	
Communication; did not change practice; environment; information delivery; issues with policy	Knowledge; environmental context and resources	*Insufficient reach of policy*	
Communication; conflict; environment; experience; inter-professional relationships; professional role	Behavioural regulation; environmental context and resources; memory, attention and decision processes; intentions; knowledge; social professional role and identity		Inter-professional friction