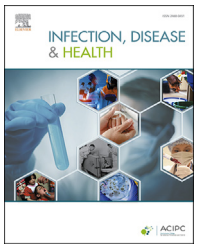
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Research paper

Nurses' experiences of providing oral care to hospitalised patients: A qualitative study

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KEYWORDS
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Abstract *Background:* Oral care has a critical role in hospital-acquired infection prevention, is part of fundamental nursing care, yet is poorly undertaken in hospital. The study's aim was to understand Australian nurses' perceptions of their role in oral care and their experience providing oral care in hospital, with the focus on enablers and barriers.
Methods: A qualitative exploratory descriptive design. Seven registered nurses working in acute adult in-patient hospitals in Australia participated in three semi-structured focus groups

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in October and November 2023. Data analysis followed thematic analysis procedures. The study is reported using Standards for Reporting Qualitative Research.

Results: Three themes were identified: nurses' perceptions of their role in oral care; barriers to providing oral care for hospitalised patients; and enablers to providing oral care for hospitalised patients. Nurses' experiences revealed expectations for different clinical settings. In the intensive care unit where patients required mechanical ventilation, oral care was inextricably linked to that care. In palliative care or oncology units, oral care was intrinsically linked to holistic care. Reported challenges include time and staffing constraints; limited resources; nurses' limited knowledge about the importance of oral care, and patient-related factors. Opportunities to promote oral care include empowering patients and educating nurses about the importance of oral care to health.

Conclusions: Nurses have a pivotal role in oral care and it is important that this is part of patient care in hospital. The findings will inform a comprehensive co-design process to develop an intervention to be examined in a multi-centre randomised control trial.

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Highlights

- Oral care has a vital role in preventing hospital-acquired infections and is a fundamental aspect of nursing care, yet is often inadequately performed in hospitals
- Qualitative exploration of Australian nurses' perceptions of their role in oral care and experience of providing oral care to hospitalised patients, revealed different expectations depending on the clinical speciality in hospital.
- Challenges to providing oral care in hospital include time and staffing constraints, lack of adequate resources, and nurses' lack of knowledge about the importance of oral care,
- Opportunities to promote oral care in hospital include empowering patients and educating nurses about the importance of oral care to health

Introduction

Oral care is a fundamental component of nursing care and a procedure that can have an impact on patient well-being and general health [1,2]. Oral care, broadly defined as cleaning the teeth, gums, tongue, dentures and lips [3,4] has a crucial yet often overlooked role in maintaining overall health and well-being. For hospitalised patients, good oral care promotes comfort and self-esteem but also contributes to preventing a range of complications, including infections such as hospital-acquired pneumonia, systemic diseases including cardiovascular disease [5] and respiratory infections [6].

Background

Pneumonia is one of the most common healthcare-acquired infections (HAI), accounting for approximately 30 % of all HAIs in Australian public hospitals [7,8]. Hospital-acquired pneumonia (HAP) is often described as being either ventilator-associated (VAP), or non-ventilator-associated (NV-HAP). NV-HAP accounts for most pneumonia cases which leads to increased antibiotic use and the likelihood of antimicrobial resistance, as well as prolonged length of stay in hospital, higher morbidity and mortality and increased hospital costs [9].

Antimicrobial resistance poses a catastrophic threat globally to both health and the community. Therefore, identifying non-pharmaceutical interventions to prevent infections such as HAP, rather than focus on treatment alone is critical and aligns with national priorities such as Australia's National Antimicrobial Resistance Strategy — 2020 (Commonwealth of Australia, 2019) and international priorities in Europe [10]. There are several multi-modal strategies that may help to prevent HAP in hospitals, including mobilisation, dysphagia screening and management and improvements to oral care [7,11]. Recent evidence highlights the benefit of high-quality oral care for hospitalised patients in reducing the incidence of NV-HAP [11]; with poor oral care being a major risk factor for NV-HAP [12].

Oral care has a critical role in HAP prevention and is a part of fundamental nursing care, yet is often poorly undertaken within hospitals [13]. Understanding the barriers and opportunities to improve oral care is important to facilitate better practice in hospital settings. Although previous studies have examined nurses' experience providing oral care to patients in hospital, these have focused on specific patient groups (older patients, patients post-stroke and patients in intensive care unit) and/or adopted a quantitative approach [1,2,14—18]. A recent cross-sectional study exploring oral care practices was conducted with nurses from different hospitals, working

with different patient groups [18]. The results highlighted barriers to and solutions for improving oral care. Whilst providing some important quantitative information, an opportunity to further explore oral care practices using a different methodological approach remains.

The study

This qualitative study aimed to understand nurses' perceptions of their role in oral care and their experience of providing oral care to hospitalised patients, with the focus on barriers and enablers to care. This study is part of a wider multi-centre randomised control trial (The HAPPEN study) to prevent non-ventilator HAP in the acute hospital setting (www.happenstudy.com).

Methods

Design

A qualitative exploratory descriptive design [19] was used to enable in-depth descriptions of the participants perceptions and experiences of the topic. This approach is suitable for understanding registered nurses' perspectives on providing oral care to patients in the acute care setting. The reporting of this qualitative study is aligned with the Standards for Reporting Qualitative Research (SRQR) [20].

Population and setting

Registered Nurses currently working in adult in-patient settings within public and private metropolitan and regional hospitals in Australia, including the hospitals that will participate in the HAPPEN randomised control trial.

Recruitment

Inclusion criteria were: (i) currently registered as a nurse with the Australian Health Practitioner Regulation Authority (AHPRA), (ii) aged 18 years and older, and (iii) currently working in a patient-facing role (i.e., not management or education/administration roles). At the end of a survey as part of the HAPPEN study, participants could provide their email address if they wished to participate in a focus group. Those who provided their email address were contacted by a research team member with further information about the focus group. We sought to recruit a representative sample of approximately 12 nurses from various clinical backgrounds and experience levels for up to a maximum of three focus groups. Recruitment was based on the concept of information power to determine when a sufficient sample size had been achieved [21]. Nurses who agreed to participate were asked to provide informed written consent prior to participating in the focus group. After completing the focus group, participants were offered a $50 Australian dollar gift card in acknowledgement of volunteering their time. This reimbursement approach aligns with the ethical principles of the National Statement on Ethical Conduct in Human Research in Australia [22].

Data collection

Data collection occurred in October and November 2023 through semi-structured focus groups via the Zoom® platform using a semi-structured focus group guide. Focus groups were facilitated by four of the authors HR, SD, AM, KB, who are PhD prepared registered nurses and researchers, with combined extensive clinical and qualitative research experience. The focus groups were audio recorded and were approximately 60 min in duration. The semi-structured interview guide was developed to validate the broad responses and themes received in the survey and provided the opportunity for a deeper understanding not otherwise possible from an online survey. Each focus group commenced with an exploration of the nurses' experience of barriers and enablers to providing oral care to hospitalised patients. The participants were asked to write a brief statement about their general experience providing oral care to patients and any challenges they experienced. Participants were then invited to read out loud their statement. The participants were then asked to write a brief statement about what educational aides might be useful to help them and patients with oral care in hospital. Once each participant had verbally shared their statement, comments and discussion commenced. The semi-structured interview guide details other pre-determined questions explored in the focus group interview (Table 1).

Data analysis

The audio recorded focus groups were professionally transcribed verbatim and the transcripts checked for accuracy prior to analysis. The transcripts were labelled with the relevant focus group number (e.g. FG1) for ease of identification. The data analysis process sought to examine predetermined themes, such as points relevant to the open questions from the survey, as well as identify related themes in the transcripts, guided by Braun and Clarke's thematic analysis procedures [23]. Analysis began by critically reading the transcripts for familiarisation with the content and coding. Initial themes were then generated from patterns identified among the codes. Data analysis was undertaken independently by authors HR and SD, before collaborating to review and refine the initial themes into final themes. To ensure the participants' anonymity, exemplar verbatim quotes are presented with a code in brackets to indicate the focus group where the quote was stated and a participant number to indicate the participant who stated the quote; e.g. (FG3, P2) for focus group 3, participant 2.

Ethics

Ethical approval was received from the Hunter New England Human Research Ethics Committee (2023/ETH01380) and was conducted in accordance with the National Statement on Ethical Conduct in Human Research in Australia [22]. Participation was voluntary and written informed consent was obtained from enrolled participants prior to their participation in the focus group. Digital data files are securely stored on a password-protected university Cloud

Table 1 Semi-structured focus group guide.

Questions
Write down a brief statement regarding their general experience with providing oral care to patients and any challenges they have
How easy is it for you to perform oral care?
How difficult is it for you to perform oral care?
What would help you perform oral care for your patients?
Write down a brief statement about what educational things you might find useful to help you and your patients with oral care
How helpful would any of the following educational support or approaches be to you?
• A phone app or website with basic information about oral care and oral care
• Conditions
• Posters
• In-service education
• Games
What other educational support approaches would be helpful?
How helpful would any of the following educational support or approaches be to patients?
• A phone app or website with basic information about oral care and its importance for pneumonia prevention
• Posters or leaflets
• Bathroom reminders
• The provision of a good quality toothbrush, toothpaste and other equipment
• Reminders or prompts to brush their teeth
What other educational support approaches would be helpful to patients? How and when should these be given to patients?

and only available to the researchers involved in this qualitative study.

Rigour

In this study, rigour was achieved by adhering to the principles of credibility, auditability, fittingness, and confirmability [19] used for conducting qualitative research and to ensure consistency in data collection, analysis and interpretation of the findings. Independent analysis of the transcripts was undertaken by authors BLINDED and BLINDED with ongoing collaboration to discuss the interpretation of the findings and generated themes. The findings are supported by verbatim quotes from participants.

Findings

Thirty-two registered nurses initially agreed to participate in a focus group interview, but only seven (female n = 6; male n = 1) provided a signed consent form and attended a focus group. We interviewed seven nurses in three groups. Participants represented seven hospitals across the three focus group interviews. Their experience working as a registered nurse ranged from 1 to 30 years; six worked in a public hospital, and one worked in a private hospital. Information on the nurses' current clinical speciality was not collected since the focus was on their overall perceptions and experiences of providing oral care to hospitalised patients.

From analysis of the focus group data, three main themes were derived: i) Nurses' perceptions of their role in oral care; ii) Barriers to providing oral care for hospitalised patients; and iii) Enablers to providing oral care for hospitalised patients. Each theme consisted of various subthemes, as illustrated in Table 2.

Nurses' perceptions of their role in oral care

This theme focused on oral care as a key component of the nurse's role in patient care.

Table 2 Identified themes and sub-themes.

Themes	Sub-themes
Nurses' perceptions of their role in oral care	Oral care as a core nursing role/responsibility
Barriers to providing oral care for hospitalised patients	Nurses' awareness of the consequences of suboptimal oral care
	Increased workload competing priorities and the lack of resources for oral care
	Patient-related challenges
Enablers to providing oral care for hospitalised patients	Consumer empowerment through education
	Nursing workforce education and leadership

Oral care as a core nursing role/responsibility

Participants highlighted the role of the nurse in supporting oral care for patients in hospital settings. Nurses' perception of their role in providing oral care for hospitalised patients were influenced by the context of the clinical setting and patients' ability to provide care themselves. Most participants discussed that oral care was a core nurses' role and they perceived this role as part of providing care to patients in hospitals and part of overall hygiene care. Oral care was intrinsically linked to caring holistically for patients requiring that support.

> *My own experience of oral care, primarily, has always been part of my, um, core nursing, um, skills and practice, ah, basic care of — of a patient includes oral care and it's included in hygiene, um, in my practice … you also made sure their teeth that [sic] were clean and their mouth was clean and their dentures were fitted and those sorts of things.* (FG1, P2)

Nurses had different views in regards to their responsibility for providing oral care. While in some clinical settings, such as ICU, an oncology unit, and other high dependency units, they believed oral care was nurses' responsibility, in other settings, such as general medical wards, they believed oral care was patients' sole responsibility.

> *It's definitely the nurse's role in areas like ICU and HDU [high dependency unit], …where the [patients'] capacity is less or low or, you know, they're ventilated. So that is an expectation.* (FG3, P1)

Nurses' perceptions of their responsibility for oral care was based upon patients' capacity to provide oral care themselves. Nurses acknowledged that it is important to provide oral care support for patients who were unable to do so, such as those with limited physical or cognitive capacity. *"In certain cases where, you know, the patient hasn't got the capacity or is in the state to attend mouth care, well of course it's - it's our responsibility, and that's exactly right"*. (FG3, P2). A few nurses indicated that providing oral care to patients in hospital was not their responsibility. This was discussed in relation to time and staffing constraints, requiring nurses to prioritise care, and also a patient's ability to make choices about care. There was the expectation that patients should manage their own oral care as one of the participants stated "… it's basic care and the nurses feel that the patient should just do it [themselves]" (FG3, P2) and reiterated that *"they [patients] need to take ownership and they need to be involved and - and manage it themselves"*. (FG3, P2).

Barriers to providing oral care for hospitalised patients

All participants discussed barriers to providing oral care for hospitalised patients. We grouped the discussed barriers into three sub-themes: 1) nurses' awareness of the consequences of suboptimal oral care; 2) increased workload, competing priorities, and the lack of resources for oral care; and 3) patient-related challenges to oral care.

Nurses' awareness about the importance of oral care

Unlike the critical care areas where it was discussed that nurses had high awareness about oral care and its importance, in clinical areas such as general medicine, oral care was not thought to be a high priority and nurses were not aware about the importance of providing oral care.

> *I agree with you completely about the [nurses'] awareness in your area [high dependency units] was probably quite high, whereas in other areas, for example, that I'm working in [general medicine], it's not that [nurses are] aware, if that makes sense.* (FG3, P1)

The participants stated that oral care for patients with dentures was also important, but often denture care was forgotten. *"Dentures also need to be cleaned and freshened, that's a beautiful spot for bacteria to build and infections to grow … this needs to be done as a part of the oral care as well"*. (FG2, P2).

The link between oral care and respiratory health was also discussed as a reason why oral care is an important part of the nurses' role in hospital "… *you know, in ICU they do, I say, encourage you more so to do the oral care, 'cause [sic] obviously pneumonia is prevalent [in this setting]*" (FG2, P2). However, there was also discussion that not all nurses are aware about the link between oral health and respiratory health. Some nurses did question the link between oral care and pneumonia.

> *And it's only later that I started to realise that there was a link between oral hygiene and respiratory health, and it's a fairly strong link … — and it's interesting that when I mention it to nurses who were quite experienced, they — they're quite surprised by this.* (FG1, P2)

Most participants emphasised the need for increased education about the importance of oral care and the impact oral care can have on overall health, including respiratory infections. Although there was general agreement that "… *oral care is really important nursing care*" and nurses "… *should be proud of doing it*" (FG1, P2), there was also the perception that the relationship between oral health and overall health was not widely understood by nurses.

> *I think there's need for more awareness. Yes, we know it's important, but …, as healthcare individuals, we don't link the importance of oral care and respiratory infections … So, I think more awareness is needed … so that will be a way, like, "Oh, there's a link between oral pain and respiratory infections". (FG1, P1)*

Although mouth care was covered in the first year of the university program for nursing students and it was '…*actually a competency*' (FG3, P2), a graduate nurse participant (up to 12 months post qualification), shared that oral care was mentioned very briefly in the pre-registration nursing program. They felt that nurses should receive education about oral care especially in clinical areas where oral care is part of overall care.

Increased workload, competing priorities, and the lack of resources

All participants discussed how nurses' increased workload due to time and staff shortages impacted their ability to provide overall care to patients in hospital. Consequently,

nurses prioritised the most important care tasks, such as medication management, and oral care was not seen as a priority.

> *Obviously from a nursing point of view, time, staffing, we're in a chronic, you know, shortfall with high vacancies…is the priority for the nurse to give the S8 [prescription-only] medication on time, or is it to make sure that staff have their mouth care done?* (FG3, P2)

Providing oral care was also thought to take time, and when time was limited, "… s*taff don't see it necessarily as important as other interventions with patients.* (FG1, P3), and oral care is omitted in preference for other perceived more important patient care. A nurse explained that the current workforce challenges meant nurses were often working in understaffed shifts and the impact is that it is not possible for them (including newly qualified nurses) to do everything well, and oral care is not seen as a priority.

> *I just think in our current staffing crisis, … nationwide, it's not just in my health centre, the nurses are - it's a norm to run minus two [nurses] a shift. And when you talk about ratios … theoretically with nursing hours, that equates to four to one in a general ward, not ICU, with maternity and so forth, you know, nurses are working six and eight to one [patient]. So there's just not that time availability to do everything well. And something has to give. And unfortunately, this [oral care] is one aspect that in a general ward setting where the priority isn't there, it's - it's not getting attended.* (FG3, P2)

All participants had experienced a lack of resources to support oral care in hospital and discussed this in relation to the volume and variety of products, although some nurses insisted that patients need to provide their own oral care products.

> *… sometimes you find like patients, they don't have a toothbrush, then you have to compromise maybe using those sponges that we find in hospital. (FG1, P1)*

> *We do have oral care equipment, but it's probably not enough. Like, we get tiny little miniature toothpastes for basically one teeth [sic] clean and that's it.* (FG3, P1)

Another aspect of availability of resources to promote oral care in hospital was the lack of dentists available to see patients. Having patients assessed by a dentist whilst in hospital was thought to support oral care.

> *… in hospitals we got doctors, nurses, and allied health professionals, but how come [a] dentist is not part of the allied health? … I think if they can get involved, if they assess a patient [sic] oral health, when a patient got admitted and give us a care plan, that's probably - even like, give us the kit, all the things that we need to just to attend to that individualised care for that patient, that would be pretty useful.* (FG2, P1)

Patient-related challenges to oral care

Patient-related factors were identified as barriers to providing oral care in hospital. Patients' physical impairments such as inability to go to the bathroom, was thought to be a barrier to oral care. *Ah, mobility can be a problem for patients as well if they can't get up to the bathroom.* (FG1, P3). The perceived challenges posed by patients with a cognitive impairment were discussed in every focus group, and this was often framed in the context of "*… a patient who's unable to follow instructions*" (FG1, P1). For example, in relation to oral care in hospital, dementia was described as "*… hard to like navigate*". Terms such as *'not cooperative'*, *'not really compliant' and 'resistant'*, suggested that the nurses thought oral care was a collaborative engagement between the nurse and patient, and this was not always possible if the patient had a cognitive impairment. They also discussed approaches to overcoming patient-related barriers; for example, patients with dementia who refused oral care can be asked again in a short period of time.

> *I guess, um, like if you look around dementia, it can be sort of an issue that is hard to like navigate, but I think as nurses we can find a way … Sometimes, you can come back to it maybe after five, 10 minutes, they've forgotten that they've refused. (FG1, P1)*

Some participants also discussed challenges with patients who despite no physical or cognitive impairment, will not engage in oral care. Some patients may simply choose not to attend to their oral care, prioritising other aspects of their care: "patients have also said to me 'Oh, there are more important things going on'". Other patients simply are not aware about the link of suboptimal oral care with respiratory health.

> *They're [some patients] fully conscious and capable, but they are so stubborn, and they don't want to - and it's hard because it's often the situation where they're the ones with the worst dental health and consequently like a very high risk of, you know, poor health, and pneumonia.* (FG2, P2)

Enablers to providing oral care in hospitalised patients

Consumer empowerment through education

Nurses discussed that consumer empowerment increases patients' engagement in oral care in hospital. They suggested that patients' empowerment could be achieved through better education of patients and their family members about the importance of oral care and the link between oral care and general health. Patients' increased awareness of the benefits of oral care was thought to empower their engagement in oral care.

> *… if they are capable of walking to the toilet, generally they can walk and clean their teeth, but they're not doing it. So, I think to be honest, it's education. So, if we actually empower the patient to turn around and say, let's prevent for example, pneumonia …, then they will do it.* (FG3, P1)

Participants in one focus group discussed that educating patients should involve providing a rationale for why oral care was important, and inherent in empowering patients,

whilst accepting that after providing a rationale for oral care, patients can then decide whether this is a priority for them. The patient's family was also thought to be a good support for empowering patients about oral care, and as such, patients' families also require education about oral care. Some participants acknowledged that even though some patients may refuse nurses' requests for oral care, they may follow their partner's suggestions.

Individualised oral care messages and the rationale for oral care provided by nurses to patients were suggested as a way to increase patients' awareness and uptake of oral care. The participants acknowledged that this approach would require nurses to know the patient's 'normal' [routine] hygiene practices and use time for care interactions as opportunities to oral care prompts.

> *… It's a very simple discussion with a patient as you're discussing their vitals … So, in that process, you can definitely suggest, have you got a toothbrush? We don't have to do it for them, but you can actually discuss that with them … If they don't know why you are encouraging them, give them the rationale. And if it is associated with pneumonia, then they're gonna [sic] do it.* (FG3, P1)

A key point from most participants was to avoid the use of the usual patient information brochures since most of the patient information brochures remained unread on their bedside table. They believed that a simple verbal reminder by a nurse or a televised message were more effective.

> *Every answer, every forum that you go to, it's like, "patient education", oh, "put a brochure together" and give them a brochure and then they end up with a pile of, you know, six brochures on their bedside. So, thinking innovative ways to get to the patient, whether it be through their TV channel, that it's a free reminder, um, you know, just thinking outside the box, not just another brochure for the patient.* (FG3, P1)

Suggestions to promote oral care to patients included using prompts and cues through hospital television and information monitors, advertising prompts on meal trays, and visual cues in bathrooms. However, some thought people might have a 'sign fatigue' in hospitals. There was a suggestion to provide oral care packs for patients on admission, stressing that patients' oral care is an expectation in hospital.

> *… a product pack, having it available on admission whether you get it on arrival to the ward, but having, you know, a little toothpaste and - and washer and a something there, it's instant, that they have to do it. It's an expectation if it's there and - and all ready for them.* (FG3, P1)

There was a suggestion that oral care packs include a QR code with information on how to perform oral care correctly. The health services could collaborate with an oral care company and request to provide information on oral care packs.

Nursing workforce education and leadership

Almost all participants agreed that ongoing education for nurses was necessary to ensure oral care remained part of fundamental nursing care, especially in clinical areas where oral care was not inherently linked to clinical care, such as ICU and palliative care. Ongoing oral care education was also thought to be important especially when there is high turnover of nurses.

> *… I think maybe increased education for nurses … I definitely wouldn't have associated HAP with the oral care. So, my awareness has definitely increased, and once I think, okay, let's prevent something, then you've got fair reason to be doing it …* (FG2, P1)

Similar to having a multi-strategy approach for promoting oral care education to patients, a number of suggestions were used to engage nurses in oral care including, using education sessions with incentives to engage staff.

> *So, you know … everyone loves freebies, so free lunch, once you get them in the room, half the battle's done … then you can train them.* FG2, P2)

Other suggested opportunities to educate and engage nurses in oral care included audits with feedback, dissemination of evidence-based oral care information and reminders during staff huddles, reminders from unit managers and having an oral care nurse champion in the unit. Disseminating research evidence, including on the link between oral care and HAP, was suggested as important strategy to improving nurses' awareness about the importance of oral care for hospitalised patients.

> *I did think that, by showing, you know, high level links and data … linking pneumonia and then personalising it once again to the nurse saying, in your unit there is X number of patients that have pneumonia [which was] not diagnosed [documented] on their admission. That we've got evidence that it links to mouth care. Let's look at our, rates in our unit … you know, increasing awareness.* (FG1, P1)

Clinical leadership at the ward/unit level, such as nurse unit managers' (NUM), clinical nurse consultants' (CNC) and clinical nurse educators' (CNE) involvement in oral care education planning and delivery, was identified as a key enabler to ensuring oral care was seen as a priority, evidence-based information disseminated and oral care strategies adopted.

Discussion

In this qualitative study we sought to understand nurses' perception of their role in oral care and their experience of providing oral care to hospitalised patients with the focus on barriers and enablers to care. Supporting patients with oral care is a key aspect of the nurse's role [2,15], and whilst the nurses' role in this regard was highlighted by participants in our study, a unique finding was that providing oral care to patients in hospital was not always thought to be a fundamental part of the nurses' role given competing priorities for care provision. The concept of rationing nursing care (nurses' inability to support patient care activities because of time and resource challenges) was explored in a systematic review, which identified oral care as one of the hygiene activities consistently rationed

or missed by nurses [24]. A recent literature review examined the association of missed nursing care (care partially or wholly delayed or omitted) and hospital-acquired infections [25] and identified that missed oral care specifically increased the incidence of NV-HAP. Both reviews identified staffing and resources as key causes of missed care. The nurses in our study contextualised oral care to the overall care provided in some clinical settings, such as ICU and oncology. This aligns with Mandal et al.'s [24] review which found that the least rationed nursing care were for activities prescribed and related to physical, physiological, treatment and technology-focused tasks, for example, medication administration and pain relief. With nurses' decision-making and prioritising of care in times of staffing, time and resource challenges, it must be considered whether oral care should be prescribed preventative treatment to ensure this remains a fundamental component of patient care, instead of in the domain of individual or organisational clinical judgement.

In our study, we found that providing oral care required cooperation from patients, and patient cognition, for example, patients with dementia, was a challenge which was attributed to 'non-compliance' with care. Two recent cross-sectional surveys of oral care practices also reported patient compliance as a barrier to providing oral care [15,18]. Caring for patients with dementia in hospital can be complex and challenging for nurses due to responsive behaviours, such as agitation apathy, and communication challenges [26]. These can be exacerbated during an acute hospital admission. The challenges nurses experience caring for patients with dementia in hospital including with an acute medical condition has been explored in current literature [26,27]. In a qualitative study with nurses working in medical and surgical wards, although the nurses strived towards person-centred care for patients with dementia, the challenges of clinical environment, staff shortages and the increased time required to address responsive behaviours, meant nurses prioritised acute care needs [26]. Similarly, nurses in an orthopaedic ward caring for orthopaedic patients with dementia described the complexity of navigating patients' acute (orthopaedic) and chronic (dementia) care needs, where in the context of a busy acute hospital environment, acute physical care needs were prioritised [27]. Providing oral care for people with dementia in hospital must be considered within the context of the challenges caring for patients experiencing responsive behaviours in the acute setting. As repeatedly identified in other studies [14,15] and confirmed in our study, patient engagement and time constraints are two commonly reported barriers to providing oral care in hospital. This is important since people with dementia experience poorer oral hygiene outcomes and the associated overall health risks [28]. A recent integrated literature review also highlighted similar poor oral health issues and associated health outcomes for people with intellectual disabilities [29].

Empowering patients to engage in oral care in hospital was identified in our study, including educating patients and family in oral care. Nurses have been identified as key facilitators to patient empowerment through opportunities for sharing information [30]. An exploration of older patients' perspective and experiences with autonomy for oral hygiene in a continuing care hospital [31] revealed that the importance of oral care varied among patients, and most felt that their oral health and mouthcare routine had deteriorated in hospital. Using care interactions as opportunities to prompt patients about oral care was suggested by nurses in our study and aligns with Australia's' National Safety and Quality Health Service Standard Partnering with patients in their own care [32]. Patient and family engagement in healthcare is well discussed in the literature and relates to patients and families working in partnership with healthcare providers for better patient outcomes. Such partnerships involve collaboration, sharing information and supporting patients to participate in their care to the extent that they choose (ACSQHC, 32). Knowledge has been identified as key to supporting patient participation in healthcare, and patients adopt various strategies to gain knowledge, including engagement with nurses, and family as the conduit between patients and nurses [30]. Patients in Coker et al.'s study [31] indicated they would welcome reminders from staff to brush their teeth and nurses should not hesitate to ask patients to brush their teeth. These patients indicated that staff did not remind them about oral care, or checked if they were able to brush their teeth. Empowering patients to engage in oral care will require nurses to be knowledgeable on appropriate strategies for engaging patients and family in healthcare.

Almost all participants in our study agreed that ongoing oral care education is necessary for nurses to ensure effective care practice in hospital, especially in clinical areas where oral care is not part of routine clinical care. In a cross-sectional survey involving 1576 nursing staff (1249 nurses) from 33 hospital Trusts across England [15], 86 % reported wanting further oral health training. The authors concluded that oral care training would be beneficial for nurses and improve patients' oral health during their hospital stay. In contrast to the concern raised by a participant in our study that providing nurses with ongoing oral care education could be 'disrespectful' to nurses, Doshi et al., [15] postulated that not including oral care training in pre-registration nursing programs and hospital inductions, could result in oral care practice being devalued and not considered a fundamental aspect of nursing care.

Strengths and limitations

This study provides a unique insight into nurses' experiences of providing oral care to different types of patients in various acute hospital settings, and suggests opportunities to promote oral care practice in hospital.

Our study has potential limitations that must be acknowledged. The recruitment process yielded 32 interested participants however, seven nurses attended the focus groups. Our decisions about a sufficient sample size was guided by information power [21]. Although we sought to understand the experience of nurses providing oral care to hospitalised patients, and the participants were from across seven public and private hospitals, we acknowledge that the views of these participants may not represent the views and experience of registered nurses across all hospital settings. The perceptions and experiences of oral care from the perspective of hospitalised patients were not examined in this study.

Recommendations for further research

Oral care is an important component of the holistic care nurses provide to patients. Barriers and enablers to oral care for hospitalised patients should be examined and nurses' perceptions of their role and responsibilities in these settings explored. Oral care across non-acute clinical settings from the perspectives of nurses and patients should also be examined. Future research should identify hospital-based educational resources available for nurses and patients and determine their effectiveness. Patients' experiences and perceptions of oral care in hospital, and their views of a shared responsibility for oral care also requires future exploration.

Implications for policy and practice

Evidence-based oral care provided by nurses as part of holistic care is important for hospitalised patients since this can have an impact on their overall health. Nurses must be provided with the latest evidence on the link between oral care and respiratory health, and the importance of prioritising this care for all patients. Visual oral care reminders available in busy clinical settings may be of benefit to nurses. Knowledge of appropriate strategies for patient and family engagement in oral care may support nurses to support oral care. Healthcare policies must include guidelines and protocols on oral care across all clinical areas as improved oral care will lead to improved patient outcomes and reduced rates of HAP.

Conclusion

In this study of nurses' perceptions of their role in oral care and experiences providing oral care to hospitalised patients, we identified barriers and enablers for oral care practices in hospitals. Nurses have a pivotal role in oral care in hospital, especially as oral care is an impactor factor in preventing HAP. However, despite the impact of oral care to patients' overall health, this care is not always prioritised by nurses, particularly in clinical settings where oral care is an inherent part of the care patients received, such as in ICU and the oncology unit. Our study highlighted that staffing, time, resources and patient engagement challenges were the main barriers to oral care experienced by nurses. The main enablers to oral care discussed by nurses include patient and family empowerment though education and educating the nursing workforce about the importance of oral care to health. These findings will inform a comprehensive co-design process to develop an intervention to be examined in a multi-centre randomised control trial (the HAPPEN study).

Ethics approval and consent to participate

Ethical approval was received from the Hunter New England Human Research Ethics Committee (2023/ETH01380). All participants provided informed written consent prior to participating in the focus group.

Authorship statement

H.R., P.R., M.K. and B.M. conceived this research. H.R., K.B. and B.M. developed the focus group guide. K.B. and B.M. were responsible for recruitment. H.R., S.D., A.M., J.M. and K.B. undertook the focus group and collected the data. H.R., S.D. were primarily responsible for data analysis and drafting the initial paper. All authors contributed to interpretation of the work, provided critical input, and reviewed the manuscript. B.M. is the Chief Investigator for the HAPPEN study.

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Abbreviations

HAP	hospital-acquired pneumonia
VAP	ventilator-associated
NV-HAP	non-ventilator-associated hospital-acquired pneumonia
COREQ	Consolidated Criteria for Reporting Qualitative Research
AHPRA	Australian Health Practitioner Regulation Authority
ICU	intensive care unit
NUM	nurse unit managers

CNC clinical nurse consultants
CNE clinical nurse educators

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