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Title: Indwelling catheter care: Areas for improvement

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Objectives: To describe perioperative nurses' current attitude and indwelling catheter management practices, To analyse and identify areas of indwelling catheter care practice that require improvement in the light of existing evidence-based guidelines.

Research Question: What areas of indwelling catheter care experience of perioperative nurses in a tertiary public hospital require improvement in the light of existing evidence-based guidelines?

Design: A qualitative research design using focus group discussions was utilised to answer the research question. The focus group discussions explored the perioperative staff nurses' attitude and indwelling catheter care experience and facilitated the identification of areas of practice that can be further improved in the light of existing evidence.

Setting: Two perioperative wards of a public tertiary hospital located in Auckland, New Zealand.

Participants: A convenience sample of staff nurses (n=13) from two perioperative wards were invited to participate in the focus group discussions. Study participation was voluntary, with utmost respect for human dignity and autonomy.

Methods: A qualitative approach utilising focused group discussions was done to gain insight into the nurses' attitude and indwelling catheter care experience. Thirteen (n = 13) nurses participated in the focus groups. Two focus groups were formed to facilitate the management of interviews. Seven nurses participated in the first focus group, whereas six participated in the second. The focus group discussions were organised on different dates to accommodate as many participants as possible without compromising patient care or safety. An interview prompt sheet was utilised as a guide in the focus group discussions which took approximately 45 minutes to complete. The proceedings were audio-recorded, transcribed and made accessible only to the researcher with due respect to confidentiality of information.

Results: The results of the two focus groups discussions were combined and four key themes were established, namely: preparation for catheter management, Nursing skills and knowledge, current clinical practice and catheter management resources. The focus groups revealed that the nurses did not always feel confident towards indwelling catheter management due to their lack of preparation or catheter care training. There was evidence of diversity in training and feelings of not being prepared properly during their undergraduate training due to the teaching method utilised, the time allotted for the training, the focus of the training itself and the lack of

opportunity to practice catheter management skills to prevent CAUTI. These relate to feelings of insufficiency with regard to catheter care knowledge and lack of confidence with regard to catheter management skills. Diversity and deficiency in undergraduate education can be one of the reasons why nurses' practices vary thereby affecting the quality of patient care. Despite these challenges, nurses cope with the task by being resourceful and by asking colleagues for support. There are also recommendations to standardise in-service training programmes and organisational policies and procedures; and, to revisit undergraduate nursing programmes to emphasise infection prevention and control. The findings also suggest that nurses perceive catheter management as task-oriented, with the decision to insert, re-insert and remove a catheter being heavily reliant on doctors. There is, however, a growing recognition among nurses that they also make important patient care decisions. The existence of organisational protocols such as those related to catheter removal empowers nurses to make important nursing decisions. Revisiting organisational protocols also help nurses feel more confident in performing procedures. Nurses want to advocate for their patients' safety, thus increased confidence and empowerment facilitates nurses' assertion of evidence-based practices to minimise risks and improve their patient's condition. Finally, nurses also expressed awareness of the importance of catheter care documentation. However, there is an apparent discrepancy in what the nurses expressed as recognition of the importance of documentation and actual documentation of patient care as evidenced by variability in actual documentation and failure to relate assessment findings with the patient's health status. Standardised documentation of patient assessment and catheter status is recommended to improve the quality of documentation in relation to nursing assessment. Current clinical practice is characterised by collaborative care. While nurses were perceived to be mainly responsible for catheter insertion, maintenance and removal, doctors also need support in terms of recognising the unnecessary presence of a patient's catheter. Nurses expressed that cognitively able patients play a role in catheter care. This makes patient care in the current research setting unique because of nurses' perception of patient involvement. Nurses perceive that they are responsible for educating and empowering patients to actively participate in their care. Catheter care also involves advocating for the patient's interests. Nurses feel vulnerable and fear going against their patient's preference when faced with circumstances that require ethical decision-making. Nurses are aware that in patient centred care, the patient's moral, cultural and religious values need to be considered. Thus, nurses overcome this feeling of concern by maintaining an open communication with the patient. Nurses also identified their gender as a barrier to catheter care due to unwritten, agreed rules of behaviour that guide clinical practice. To remove this barrier without compromising patient preference, a standardised organisational policy on catheterisation has been recommended. Nurses also reported clinical practises that puts patient's safety at risk and indicated poor knowledge and hence clinical practice. A multi-pronged approach in educating and addressing practice discrepancies has been recommended to improve nurses' knowledge and practise. Overall, clinical practice related to catheter care requires nursing skills, decision-making, critical thinking and a complete grasp of ethical principles. Finally, with regard to catheter management resources, nurses are aware that organisational policies on catheter management are available intranet, although some have concerns with locating it. Ease of access to policies and consistency with day to day workflow can potentially enhance nursing care. Support from colleagues also proves to be valuable when nurses cannot access policies. The nurses also reported that the existence of policies on catheter removal helped standardise the process itself and guided nurses in their decisions. For those who found the organisational policy not suitable for various types of patients, their expertise in the

use of the nursing process and collaborative care helped them arrive at important decisions and interventions. Decision-support tools were recommended to be utilised as these facilitate decisions regarding deviations from specific organisational guidelines. While organisational policies facilitate decisions and nursing care, these do not replace nurses' knowledge and skills in providing quality patient care.

Conclusion: There are various areas in catheter care that can be improved further. These include: diversity in catheter care practise of which some may be of concern to patient safety; variability in actual documentation of care and failure to relate assessment findings with the patient's health status; heavy reliance on doctors for the decision to insert, re-insert and remove a catheter; gender as a barrier to catheter care due to unwritten, agreed rules of behaviour that guide clinical practice; and difficulty in accessing organisational policies. Nurses have identified recommendations to address these concerns. These include: standardisation of in-service training programmes and organisational policies and procedures without compromising patient preference; standardisation of documentation of patient assessment and catheter status; empowerment of nurses through evidence-based protocols; multi-pronged approach in the delivery of in-service education; creation of policies that are consistent with day to day workflow and are easy to access; and utilisation of decision-support tools that address deviations from specific organisational guidelines.

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