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A return to the basics; nurses' practices and knowledge about interventional patient hygiene in critical care units

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ABSTRACT

Background: The Nursing profession is struggling to return to basic nursing care to maintain patients' safety. "Interventional patient hygiene" (IPH) is a measurement model for reducing the bioburden of both the patient and health care worker, and its components are hand hygiene, oral care, skin care/antisepsis, and catheter site care.
Objectives: To identify the level of nurses' practice and knowledge about interventional patient hygiene and identify barriers for implementing interventional patient hygiene in critical care units.
Methodology: A descriptive research design was used and three tools were applied in this study: "The Interventional Patient Hygiene Observational Checklist", "The Interventional Patient Hygiene Knowledge Questionnaire" and "The Barriers for Implementing Interventional Patient Hygiene in Critical Care Units".
Results: The mean percentage nurses' knowledge score is higher than the mean percentage practice score in all items (hand hygiene (71.28 ± 25.46, compared with 46.15 ± 17.87), oral care (100.0 ± 0.0, compared with 25.32 ± 24.25), catheter care (75.76 ± 9.40, compared with 8.97 ± 24.14) and skin care (47.80 ± 6.79, compared with 26.28 ± 16.57). Barriers for implementing hand hygiene are workload (71.79%), insufficient resources (61.53%), and lack of knowledge (10.25%).
Conclusion: The mean percentage IPH knowledge score is higher than the mean percentage IPH practice score of all IPH items. Barriers for implementing IPH include workload, insufficient resources, and lack of knowledge/training.

Implications for clinical practice

- Policy concerning IPH components should be developed and all ICU staff should be orientated and trained to follow it.
- In-service training and education should be continuously done to improve nurses' IPH knowledge and skills.
- Organisational and individual support are required to overcome all barriers for implementing IPH.

Introduction

Critical care nurses are facing challenges to integrate interventions, sophisticated technologies and implement care based on current evidence, while simultaneously caring for the whole person by addressing the psychosocial challenges and ethical conflicts associated with critical illness (Morton and Fontaine, 2013). Watson (2009) defined nursing as the science of caring in which the primary goal is to assist the client reach the greatest level of personal potential. The nurse should hold certain beliefs for caring activities, which are values, and caring. In addition, the American Association of Critical-Care Nurses (AACN) has identified caring practices as "nursing activities that create a compassionate, supportive, and therapeutic environment for patients and staff, with the aim of promoting comfort and healing and preventing unnecessary suffering" (Morton and Fontaine, 2013). Thus, a positive movement within the profession of nursing to return to basic nursing care to maintain patients' safety is needed (Burns and Day, 2013).

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Basic nursing care aims to prevent the occurrence of health care related complications through providing proactive nursing interventions that focus on applying evidence-based mobility strategies and hygienic care. "Interventional patient hygiene" (IPH) is a model using evidence based nursing care interventions as a systematic approach for health care acquired conditions prevention. Hand hygiene, oral hygiene, catheter care and skin care are the major components of the IPH model (Vollman et al., 2005; Vollman, 2009).

Primarily the nursing action plan was focused on the strengthening of patients' host defenses concerning skin care, oral care and management of continence, then the IPH concept has been expanded to hand hygiene, catheter care and skin antisepsis (McGuckin et al., 2008). The provision of hygiene and of being hygienic, are the focus of IPH that should have an equal priority to all other nursing interventions (Vollman, 2013).

If basic nursing care is not performed as recommended, it is important to identify the barriers that hinder nurses from implementing it. Basic nursing care may be devalued or absent by narrow or restricted structures that support the importance of basic nursing care, failure to hold nurses accountable or reward/recognition for doing them. This may necessitate changing nursing culture with an emphasis on the significance of basic nursing care (Vollman, 2013; McGuckin et al., 2008).

Research questions

- Do nurses implement interventional patient hygiene (IPH) practices in critical care units?
- Do nurses have interventional patient hygiene (IPH) knowledge?
- What are the nurses' perceived barriers to implementing interventional patient hygiene in critical care units?

Materials and method

Materials

A descriptive design was used for this study.

Setting

This study was carried out in two general adult critical care units (CCUs) in a selected hospital in Alexandria- Egypt. Procedures & infection control policies and staff orientation programmes were the same in both CCUs.

Subjects

A convenience sample of 39 nurses involved in providing direct care to critically ill patients in the previously mentioned CCUs was included in this study. Nurses with less than a year of CCU experience and intern nurses were excluded from the study.

Tools

Three tools were used for this study to collect data which are "Interventional Patient Hygiene Observational Checklist", "Interventional Patient Hygiene Knowledge Questionnaire" and "Barriers for Implementing Interventional Patient Hygiene in Critical Care Units".

Tool 1: Interventional patient hygiene observational checklist

This tool contained several items describing the nursing interventions included in the IPH model, which are hand hygiene, oral care, catheter care and skin care. The Hand Hygiene checklist, was centered on the World Health Organization (WHO, 2009) "Five Moments for Hand Hygiene" before performing a septic/clean procedure, before patient contact, after touching a patient, after contact with patient surroundings, and after body fluid exposure risk. The Oral Hygiene checklist (Juan and Sonja, 2011; Feider et al., 2010; Lin et al., 2011) includes steps of oral care: washing hands, wearing gloves, positioning the patient in the proper position, brushing teeth in a continuous line; first from the upper right to upper left to lower left to lower right outside. Secondly, from the lower right to lower left to upper left and finally to upper right gingival to lingual, angle toothbrush at 45o to gingival margins, suctioning secretions as they accumulate, brushing using a chlorohexidine solution and applying a thin layer of water-soluble mouth moisturiser to lips.

The Urinary Catheter Care checklist (Drekonja et al., 2010; Titsworth et al., 2012) includes steps of catheter insertion and ongoing care. The steps of insertion are cleaning the urethral meatus, using a sterile, closed drainage system, performing hand hygiene, following an aseptic technique, and wearing personal protective equipment (gloves are single use items and should be removed and discarded immediately after the care activity, while eye/face protection is indicated if there is a risk of splashing with blood or body fluids). The steps of ongoing care are performing hand hygiene, performing catheter hygiene (cleaning catheter site regularly as unit policy), following aseptic technique when performing sampling via the catheter port, and examination gloves should be worn to manipulate a catheter and manipulation should be preceded and followed by hand decontamination.

The Skin Care checklist was derived from the SSKIN Bundle for pressure ulcer prevention, (Whitlock, 2013; Watret and Middler, 2012; Guy et al., 2013) which includes S- Surface: assessment and application of appropriate mattress, cushions, observing presence of drains, catheters, lines, and repositioning it. S- Skin inspection: inspect skin/pressure areas regularly. K- Keep moving; repositioning every 2 hours, putting patient on a chair for no longer than 2 hours, checking tubes and fixation devices/2 hours, checking oxygen mask doesn't place pressure on the tops of the ears/2 hours, and checking the site of the connecting tubes of every 2 hours. I-Integument/Incontinence includes managing the moisture of patients whose skin is exposed to increased moisture (wound drainage/continence issues/leaks/discharge) and ensuring skin is kept clean and dry. N-Nutrition includes performing nutritional assessment within 24 hours of admission, and maintaining adequate nutrition and adequate hydration as prescribed.

A scale of 'Y', or 'N' depending if the elements of care have been applied; Y if the element criteria is compliant and N when the element criteria is non-compliant. When the score is more than or equal 75% of total practice score, proper practice was considered, and when the score is less than 75% of the total practice score, improper practice was considered.

Tool 2: "Interventional patient hygiene knowledge questionnaire"

This tool comprises 30 questions related to hand hygiene (Abd Elaziz and Bakr, 2008; Alsubaie et al., 2013), oral (Juan and Sonja, 2011; Lin et al., 2011; Feider et al., 2010), catheter (Drekonja et al., 2010) and skin care (Whitlock 2013; Watret and Middler, 2012) (Fig. 1). There are two levels of responses for each knowledge item: the response "know" for any item was given score of one and "unsure/do not know" given zero. Total knowledge responses for all items was 30 score. "Poor knowledge" or unsatisfactory means <70% of the total knowledge score and "good knowledge" or satisfactory means ≥70% of total knowledge score.

In addition to the critical, care nurses' characteristics that are age, sex, educational level and experience in intensive care.