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Letter to the Editor

## Closing the theory-practice gap: A bridge too far?

*Dear Editor*

In the past decade, research efforts dedicated to adding to the evidence base for providing oral care to critically ill patients and to gain insight into intensive care (ICU) nurses' practice and perceptions related to oral care have substantially increased. The road to these destinations might however still be long and troublesome and the ultimate goal of guaranteeing evidence based, high-quality oral care to all patients in the ICU seems as yet rather far from being accomplished.

In the context of adding to the limited evidence base for oral care provision, the recent and disconcerting preliminary findings that the use of chlorhexidine for disinfecting the oral cavity might be associated with deleterious outcomes, specifically mortality, are of particular interest (Deschepper et al., 2018; Klompas et al., 2014; Klompas et al., 2016; Price et al., 2014). Further research will hopefully soon clarify and inform clinical practice whether chlorhexidine should maintain its long-acquired position as gold standard for oral disinfection or whether alternative products should be investigated and considered.

As for research adding to the insights in ICU nurses' oral care perceptions and practice, the findings resulting from a survey conducted by Andersson and colleagues (2019), recently published in *Intensive & Critical Care Nursing*, deserve further and broader reflection, and as such have prompted this correspondence. The authors found that while most prerequisites to provide high-quality oral care were available for a sample of Swedish ICU nurses, their translation and implementation into daily practice appeared to be restricted and to leave room for ample improvement.

Some concerns related to the methodology used by Andersson et al. (2019) may call for caution when interpreting this paper's results. The conceptual framework used was not adapted to the specific context of the ICU patient and environment; the self-developed questionnaire is prone to enhancement in terms of validity and reliability; ordinal variables were analysed at the interval level and some flaws were noted in the way correlations were calculated. In spite of these points for improvement that the authors might consider in future research, the message resulting from their study is undeniable and clear: efforts should be invested in assisting nurses to bridge a fundamental gap between knowledge and intentions on one hand and performance in daily practice on the other hand.

Although most frequently investigated among nurses, difficulties in bridging this theory-practice gap have long been shown to prevail among healthcare workers of all professions. Physicians (Rello et al., 2002), dental hygienists (August et al., 2018), psychologists (Bearman et al., 2015) and physiotherapists (Bérubé et al., 2018) are all reported to struggle with the issue. The problem is complex and can be related to a broad range of inherent and environmental obstacles that hinder healthcare professionals to translate research findings into practice, but also to their inability to change behaviour or to convert intentions into deeds.

A large responsibility in trying to alleviate the problem has both been assigned to and claimed by the educational institutions (Hatlevik, 2012). Students were to be prepared for their transition to a professional environment in a way that would more appropriately reflect contemporary patient and care provider requirements and better equip them with the skills and attitudes needed to overcome the aforementioned obstacles. In the timespan of roughly the two past decades and with large regional differences in timing and approaches, nurse educators have thus invested considerable efforts into defining and validating new learning outcomes and competencies, and into integrating these in curricula that include a thorough introduction into the principles and application of evidence based nursing, courses on behavioural change theories and reflective skills acquisition, and a plethora of innovative educational tools. To date, it is not fully clear whether, and if so, to which extent, these changes in educational approach will influence newly graduated nurses' practice. Long-term monitoring through both qualitative and quantitative studies might be required to fully comprehend their effect. Andersson et al. (2019) did not report any associations between their sample's perceptions/practice and their sociodemographic data, more specifically age and years of work experience as a nurse. As such, it is not clear whether more recently graduated respondents to their survey better succeeded in translating knowledge and intentions into practice than their more senior colleagues. However, the sample's mean age of 48 years (standard deviation ±11.77 years) is suggestive for the assumption that most respondents might have graduated at a time when a more classical, mainly clinical approach towards nurse education was still common. As such, they might have been less influenced by and aware of more recently introduced learning contents and the contemporary emphasis on obtaining additional, not predominantly clinical, nursing competencies.

In order to assist nurses of all ages and educational backgrounds in narrowing the theory-practice gap, the efforts dedicated by nursing educators need to be supplemented by interventions for quality of care improvement and programs for continuing education initiated and conducted at the hospital- or unit-level. Implementation science has greatly contributed to determining the effectiveness of the many strategies that have yet been tested in clinical practice. Today, it is generally acknowledged that not the use of one type of intervention only but rather a combination of strategies tailored to the needs and resources of the setting is most likely to generate successful results (Leeman et al., 2017). Such multifaceted initiatives have indeed proven to be fruitful, in the field of oral care provision as well as in many other domains of patient care (Behzadi et al., 2018; Hassan et al., 2017; Hermes et al., 2018; Hickin et al., 2017). Often, however, only short-term effects of these programs are reported, while they will need to stand the test of a sustainability assessment to determine their long-term effects.

In conclusion, translating theory into daily nursing practice is a slow and laborious process in the field of oral care provision as in

many other domains of patient care. Individual nurses, nurse educators, and hospital and team managers share responsibility in contributing to try and narrow the theory-practice gap. A recent integrative review (DeGrande et al., 2018) identified three main domains of professional competence for ICU nurses: managing situations, decision-making and teamwork. I hope and plead that the domain of translating knowledge into deeds might be added to this triad in a near future.

## Conflict of interest

I have no potentially conflicting interests to report.

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# Response from Authors

## Intensive care nurses fail to translate knowledge and skills into practice – A mixed methods study on perceptions of oral care

We welcome the reflections regarding our paper "Intensive care nurses fail to translate knowledge and skills into practice – A mixed methods study on perceptions of oral care". Although our study has some methodological issues, it provides researchers and clinicians with a deeper understanding of oral care quality. The successful provision of evidence-based, high-quality oral care to patients in the ICU requires ICU nurses attention as well as educational and institutional initiatives. Our study highlights the need for combinations of strategies customized for ICU nurses, as well as resources in the ICU setting.

## Conflict of interest statement

The authors declare no conflict of interest.


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