The interplay between global standards and local practice in nursing

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ABSTRACT

Purpose: The paper assesses the extent, form, and transformation of global nursing classifications (NANDA) in a nursing practice during a period of 5 years.
Method: A longitudinal case study was used to trace implementation, adoption and use of nursing classifications as an integral part of an electronic nursing module. A mixed method of data collection was used, including semi-structured interviews, observation and document analysis.
Results: A surprisingly high proportion of nursing diagnoses was consistent with the global standard, in spite of a gradual increase of user-generated concepts. This is elaborated more thoroughly through a co-constructing perspective, emphasizing how the global standard and the practice mutually shaped each other over several years.
Conclusion: Standardization is an iterative process that is performed in close relationship with practice. The mutual interrelation between formal classifications (NANDA) and local practices are co-constructed in a dynamic interplay that evolves over time. In such a process, the use of local classifications and local strategies can be a means to bridge the gap between these two extreme points.

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1. Introduction

The rapid evolution of medical technology and knowledge imposes new challenges to the organization and coordination of healthcare. The Institute of Medicine has also pointed out the gap between the health care we have and the health care we could have had and argues strongly for more sophisticated mechanisms to communicate and coordinate care processes [1, p. 4]. Particularly standardized ICT has been delegated an essential role for supporting collaboration and coordination in the healthcare sector and thus enhancing the quality of treatment and care. For instance, in the Norwegian health-care sector the use of Electronic Patient Records systems (EPRs) have since the 1990s been considered as key instruments for increasing efficiency and better quality through national strategies and visions such as; "We believe in improved quality, increased effectiveness and cost saving through the use of information and computing technology" [2, p. 2].

In nursing, standardization has frequently been associated with the implementation and use of standardized terminologies such as NANDA, NIC, ICNP, etc. [3–6]. These systems are supposed to contributed with improved information quality typically related to completeness and accuracy [7]. The use of

standardized terminologies may also ensure high degree of semantic interoperability, which is considered important for ensuring enhanced quality of the care process [8]. Access to accurate and reliable information is supposed to enable communication among healthcare teams and have an impact on both the outcome of the quality and continuity of care [7, p. 292].

In health care, organizations such as the International Standardization Organization (ISO) prepare formal standards, guidelines and recommendation. ISO has traditionally designed technical standards, but in recent years, it has prepared functional standards for the electronic patient record (EPR) [9] as well as an integrative model for nursing terminologies [10]. In addition, professional communities in nursing like the International Council of Nursing (ICN)[1] and North American Nursing Diagnosis Association (NANDA)[2] has played a key role in developing purpose-specific terminologies for nursing practice.

However, like other standardization efforts in healthcare [11–13], adopting and using standardized terminologies in nursing practice has been a cumbersome and slow process [14], and notoriously difficult to realize [6]. Although some studies have shown correlation between the use of nursing terminologies and quality of documentation [15], other studies have demonstrated that the diversity of terminologies used in nursing as an obstacle of semantic interoperability [4,6,16,17]. In line with this, a European survey revealed that general use of nursing terminologies is still lacking which makes access to sharable nursing data an obstacle [18]. This makes it relevant to examine how standardized nursing terminologies are implemented and used in practice, how global standards and local perspective interacts and finally how to approach such processes.

We base our study on a longitudinal case study (2005–2010) where we explore how context-specific nursing diagnoses have evolved in everyday practice through the use of electronic care plans over a period of 5 years. By applying an interpretive approach, we emphasized how the classifications have been adopted to local practice, the correlation between formal classifications and local documentation and how the use of classifications evolves during long-term use. The results of the paper are as follows: firstly, we illustrate how sustainable use of nursing terminologies is a co-construction between the global terms and local practice and how this presupposes a long-term negotiation between these two. Secondly, based on a frequency analysis, we present an interesting result where as much as 87.5% of all nursing diagnoses was consistent with NANDA. We analyse how this underpin our argument on co-construction, and also provide a critical reflection on the limitation of this method. Thirdly, we discuss the need for some flexibility in use for any standard to maintain local innovation and domain specific knowledge. We argue that such kind of flexibility facilitates local adaptations and translations. In connection with this, we also suggest that the use of social tagging (folksonomies) in combination with standardized terminologies may be a way to resolve the tension between standardization and flexibility in the use of nursing terminologies.

2. Background and status on standardization in nursing

Standardization in health care is a powerful movement as "standards specify how we work, how our technology interacts; they hold our socio-technical societies together" [19, p. 8]. Standardization is rooted in strategies as a means to increase the quality and effectiveness in health care. The International Organization for Standardization (ISO) Technical report highlights the ability to share information as one of the greatest potential benefits of the EPR and emphasizes interoperability across systems as a major challenges [9]. Timmermans and Berg [19] distinguishes between four standards used in health care; design standards, performance standards, terminological standards, and procedure standards. Design standards are more or less specification of social and technical systems ensuring uniformity and compatibility. Performance standards represent outcome specification used to regulate professional work and outcome measurements. An example is the adoption of quality indicators in Norway that offers transparency that is essential for securing accountability for health systems performance. The third kind of standard are terminologies that have a long history in various levels of the health care, such as professional organizations and the World Health Organization. North American Nursing Diagnosis Association (NANDA) and International Classification of Diseases (ICD) are examples of such standards that have evolved over a long time in order to share and compare clinical information and to ensure stability of meaning over different sites and times. Finally, procedural standards are specifications of processes such as clinical guidelines, protocols, procedures or care plans. These standards demarcate a number of actions to be performed when specified situation and conditions occurs, for example, what step a nurse should follow in preventing decubitus ulcers. All of the above standards may overlap each other and be a part of the same standard. For example, terminologies can be embedded in care plans, and clinical guidelines may also include outcome specifications.

The development of standardized terminologies for nursing started in the 1970s. The North American Nursing Diagnosis Association (NANDA) has been a driving force in efforts to develop diagnostic classification in nursing as a means to support clinical judgement and knowledge development [20]. Similarly, Nursing Intervention Classification (NIC) have been developed and used along with NANDA to support documentation of the phases of the nursing process. The implementation of EPRs including nursing care plans in the recent years has made wide-spread use of standardized nursing terminologies possible.

Standardization and integration are key issues to interconnect different areas and modules of the EPR system [21] which in turn is envisioned to facilitate coordination of work within and across the care team [22]. This implies the need to maintain the domain-specific knowledge embedded in nursing and, at the same time, enable integration with local practices and applications present in the EPR system.

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[1] http://www.icn.ch/.
[2] http://www.nanda.org/.