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## STRENGTHS AND WEAKNESSES OF STANDARDIZED NURSING TERMINOLOGIES USED IN ELECTRONIC HEALTH RECORDS: A LITERATURE REVIEW

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**Background:** Standardized Nursing Terminologies apprise the nursing care provided and facilitate clinical research and education.

**Aim:** To identify strengths and weaknesses of standardized nursing terminologies used in electronic health records.

**Methods:** A literature review was conducted. Studies were retrieved from: PubMed, Cochrane Library, CINAHL, Cuiden, Scopus, and ISI Web of Knowledge. The search strategy included articles in English, French, Portuguese and Spanish published between 2002 and 2016 focusing on standardized nursing terminologies most frequently used in electronic nursing records.

**Findings:** NANDA/NIC/NOC and ICNP were the Standardized Nursing Terminology most frequently used. The use of Standardized Nursing Terminology allows to make comparisons between nursing records sharing the same terminologies. Sometimes the standard terminology was not sufficiently understood by nurses and therefore it could not be efficiently used, at some extent, hindering nursing continuity care.

**Discussion:** Standardized nursing terminologies had a strong impact on information quality, process quality and efficiency, but not on patients or professionals.

**Conclusion:** nurses must know why they are using a particular standardized terminology is beneficial or detrimental for patients, nursing knowledge or for themselves.

Table 1. Strengths and weaknesses of standardized nursing terminologies in electronic health records.

Reference	Year	Country	Standardized Nursing Terminologies	Strengths (+) and weaknesses (-)	Design	Effects using in EHR
Barto	2003	USA	Omaha	+	Observational	Use of Omaha systems provide documentation of patient problems interventions and their outcomes
Tanwall	2004	Sweden	VIPS	-	Observational	It is necessary that all the nursing process is reflected correctly. Little use of diagnosis and outcomes
Horvatz	2005	Australia	ICNP	+	Observational	The nurses are in a good position to lead a change in the paradigm of standardized clinical languages and their incorporation in EHR
Kennan	2005	USA	NSN	+	Experimental	It was found that increasing the visibility of nursing care promotes greater awareness and understanding of attention and in turn greater care continuity
Pakantidis	2005	Greece	ICNP	+	Experimental	Use of the ICNP records provides data to describe and quantify nursing practices and outcomes
Theodorou	2005	Greece	NSN	+	Experimental	The NSN language is useful to describe the work and supports the construction of nursing knowledge
Cho	2006	Korea	ICNP	+	Observational	The ICNP could cover more than 75% of the nursing reports in an EHR system
Demet	2006	Denmark	VIPS	-	Observational	It is likely that in the future has to be replaced by interdisciplinary terminology
Derra	2006	Canada	NIC	+	Observational	VIPS model facilitates the storage and retrieval of nursing. It is simple to use and improves nursing documentation
Theodorou	2007	Greece	NANDA-NIC	+	Observational	Using 77 NIC interventions to link nursing interventions are associated with patient outcomes
						Improvement in the use of functional health patterns using terminologies NANDA NIC

Reference	Year	Country	Standardized Nursing Terminologies	Strengths (+) and weaknesses (-)	Design	Effects using in EHR
Boyd	2007	USA	NSN	+	Experimental	The creation of computerized management plans, evidence-based care using standardized assessment
Müller-Staub	2007	Switzerland	NSN	+	Experimental	The implementation of NSN supported with a planned educational program led to a higher quality of nursing documentation
Vao Kergul	2007	Norway	NSN	+	Observational	Discussion on theoretical and methodological aspects of the implementation of a standardized model registration
Müller-Staub	2008	Switzerland	NSN	+	Experimental	The use of NSN improves nursing documentation
Viterna	2009	Italy	Omaha	+	Observational	Development of the computerization of the Omaha system
Dylev	2009	USA	ICNP and NANDA	+	Observational	While awareness of the concept and the structure of the topic-based ICNP makes it a robust flexible standard
Hwang	2009	Korea	ICNP	+	Observational	Integration of Asian nursing systems with western records promotes the interchange and communication between the two records thereby allowing a comprehensive focus to improve the quality of care
Luo	2009	USA	NSN	+	Experimental	The creation of a database combining clinical data with NSN allows users to detect the nurse working procedure in relation to their condition
Müller-Staub	2009	Switzerland	NSN	+	Qualitative	The QPRO instrument is valid to assess the quality of NSN
Borchert-Jur	2010	Switzerland	NSN	+	Experimental	Integration of NSN in EHR allows to follow the logical sequence of nursing process
Haytem	2010	Finland	FACC	+	Observational	National project of computerized records. According to this model nursing records in Finland force visibility and quantification of the interventions
Juurila	2010	Finland	NANDA	+	Observational	Validation of diagnoses for recording preventative care
Sotelo	2010	Spain	NSN	+	Observational	The computerized many of care offers the opportunity to measure health outcomes
Wachs	2010	USA	Omaha	+	Observational	It is feasible to integrate the Omaha system and compare the use to document nursing problems, rates outcomes and results. Feasibility of integrating data from different health providers and data interoperability

### Biography

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