

# Nursing Informatics Competencies for Nurse Leaders/Managers

Sarah Collins PHD, RN<sup>1</sup>, Mary K Kennedy MS, RN-BC<sup>2,3</sup>, Andy Phillips PHD, RN<sup>4</sup>,  
Po-Yin Yen PHD, RN<sup>5</sup>

<sup>1</sup>Partners Healthcare Systems, Boston, MA, <sup>2</sup>ONL MA&RI, Woburn, MA <sup>3</sup>AEGIS Informatics LLC, Barrington, RI, <sup>4</sup>MGH IHP, Boston, MA, <sup>5</sup>The Ohio State University, Columbus, OH

**Keywords:** Nursing Informatics Competencies, Nursing, Leadership, Health Information Technology

## Introduction/Background

In today's high-tech environment, all leaders in the healthcare field encounter decisions related to health information technology (HIT) in their organizations. Nurse leaders' ability to make informed strategic and operational decisions related to HIT adoption, implementation, and innovation is critical, necessitating the attainment of informatics competencies relevant to their work.<sup>[1]</sup> The purpose of this Delphi Study was to expand on prior related work<sup>[2,3]</sup> to capture nursing informatics competencies perceived as relevant and required by today's nursing leader/manager.

## Methods

The Organization of Nurse Leaders (MA&RI) Board, Council structure and membership were queried for their opinion on the relevance of 108 informatics competencies using a three round Delphi survey.<sup>[2]</sup> Quantitative analysis used the Content Validity Index (CVI) with criteria >0.80 to retain.<sup>[4]</sup> Qualitative content analysis of participants' comments was used to review items classified as 'borderline' to retained based on the CVI criteria.

## Results

There were three rounds of survey's (Round 1: n=34, Round 2: n=26, Round 3: n=41). Most participants were from an Academic Medical Center (26-34% per round) or a Community Hospital (36-50% per round). Many participants were in an Executive role (31-52% per round), had completed at least a Master's degree (56-80% per round), and had an average or above average knowledge of HIT compared to their peers (85-96% per round). Most participants HIT training was 'on the job' (84-97% per round). Round 3 results included 74 competencies and 15 categories.

Figure 1. Nursing Informatics Competencies for the Nurse Leaders/Managers

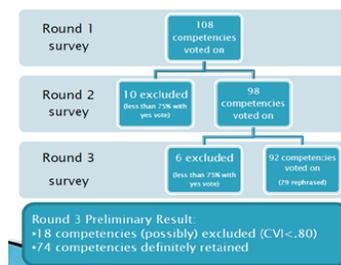


Figure 2. Categories of Competencies Retained in Round 3 Results (CVI >.80)

Category	Competencies Retained
Management Concepts	9
Requirements and System Selection	9
Ethical/Legal Concepts	8
Information Systems Concepts	7
Advances Software Applications	6
Executive Leadership	5
Financial	5
Implementation/Management	5
Patient Related Applications	5
Data Issues	4
Technical knowledge	4
Collaboration	2
Electronic Communications	2
HIT Selection	2
Standardization	1

## Discussion/Conclusion

The competencies identified as relevant to Nurse leaders and Nurse managers may be useful to support on-going professional education for nurse leaders involved in HIT related projects who are "learning on the job". Ongoing work includes development and validation of a NI competency self-assessment tool.

**Acknowledgements:** ONL Board and Executive Leadership team; Management of Practice NI-T sub-committee

## References:

- [1]Collins SA, Alexander D, Moss J. Nursing domain of CI governance: recommendations for health IT adoption and optimization. J Am Med Inform Assoc 2015.
- [2]Westra BL, Delaney CW. Informatics Competencies for Nursing and Healthcare Leaders. AMIA Annu. Symp. Proc., 2008, p. 804-8.
- [3] Simpson RL. Chief nurse executives need contemporary informatics competencies. Nurs Econ 2013;31:277-87; quiz 288.
- [4] Polit DF, Beck CT. The content validity index: are you sure you know what's being reported? Critique and recommendations. Res Nurs Health 2006;29:489-97.