



Summer Institute in Nursing Informatics 2019  
Poster Presentation

**The development of nursing informatics competency model for rapidly and effectively training clinical nurses in hospitals**

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**Objectives:** The development of nursing informatics in China is at its preliminary stage which fails to meet the tremendous needs of rapid EHR progress in hospitals. Therefore how to rapidly and effectively build up the nursing informatics competency for clinical nurses becomes very important for the success of the hospital EHR as well as modern practice context for nurses. **Methods:** We invited six full-time informatics nurses, in January to March of 2018, from hospitals with more than 1500 beds and were bench-marked in developing a hospital EHR and nursing information system (NIS) in China, including Taiwan. We used the Nominal Group Technique and Delphi approach, organized and chaired by one methodology expert, to acquire their knowledge for the critical success factors (CSF), necessary for clinical nurses with four levels to have successful EHR and NIS projects; the Entry level for all, the Trained for teaching, the Design to design and develop new components, and the Innovator to make nursing better. One run of NGT and two runs of Delphi opinion acquisition were implemented to generate the pool. Item analysis was used to remove less significant items. Factor analysis was used to examine the validity of model. Cronbach alpha was run to test the model reliability. **Results:** A total of 48 factors from three dimensions were obtained at the first stage. There was only one factor needed for the Entry level, Be Able to Use. There were 12 factors necessary for the Trained, 43 for the Design, 46 for the Innovator. At the second stage, only 37, out of the same three dimensions, were reserved in the model. The three dimensions were Computer Skill, with the first three leading factors the Use of Productivity Software Skill, Programming and Development Skill, and System and Function Framework; Comprehensive Application Skill, with three leading items Facilitating Quality Improvement, Familiarity with NIS and its Operation, and Doing Scientific Study; and Informatics Skill, with three most important items System Design and Planning, Feasibility Analysis, and Information Security. The model's Cronbach alpha was larger than 0.8. **Discussion and Conclusion:** Our model pinpoints the importance of better use of clinical work productivity software related to practical work, emphasizing more nurse's importance in joining the development of system design and development, better use of information in quality improvement, and the nurses' continuous participation in system design to implementation, and system maintenance.