Towards Implementing a Global Competency-Based Nursing and Clinical Informatics Curriculum: Applying the TIGER Initiative

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Abstract. This workshop will review the history of the TIGER initiative in order to set the framework for an understanding of international informatics competencies. We will include a description of clinical nursing informatics programs in 37 countries as well as the results of a recent survey of nursing competencies in order to further discussions of internationally agreed-upon competency definitions. These two surveys will provide the basis for developing a consensus regarding the integration of core competencies into informatics curriculum developments. Expected outcomes include building consensus on core competencies and developing plans toward implementing intra- and inter-professional informatics competencies across disciplines globally.

Keywords. Education, Nurses, Clinicians, Competencies, Informatics, Innovation

1. Introduction

The TIGER Initiative (Technology Informatics Guiding Education Reform) was founded in 2004 to develop a shared vision, strategies, and specific actions for improving nursing practice, education, and the delivery of patient care through the use of health information technology. It has emerged as a grass roots effort in 2006 in the U.S. to allow informatics tools, principles, theories and practices to be used by interdisciplinary providers and consumers; interweave enabling technologies into practice, education and research to improve outcomes, patient safety and reduce costs; and prepare workforce to use technology and informatics for improvement of patient care [1]. Effective September 22, 2014, TIGER officially transitioned from a standalone foundation to Healthcare Information and Management Systems Society (HIMSS).

    Providing patient care has moved towards employing methods that target optimized processes and measurable health outcomes. Professional silos and single provid-

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er approaches have thus become obsolete while team based and inter-professional care promise to lead the way towards coordinated processes and better outcomes. This change in the perspective entails the need for informatics competencies that focus on the processes and the patient outcomes.

TIGER has recognized the role of education as a powerful enabler and change agent. It thus has adopted the education approach from its onset to leverage better patient care and to pave the way towards greater awareness, acceptance and better design and use of innovations in clinical informatics.

Given this extraordinary importance of education a series of national and international recommendations have been published in medical and health informatics education [e.g. 2]. This includes paper and digital content provided by TIGER members [3]. Recent recommendations make use of a competencies based approach, some with very detailed and highly granular descriptions [4]. The challenge of providing recommendations from a global perspective is to give meaningful advice while still leaving enough space for teachers and students to tailor educational measures according to their individual needs.

The goal of this workshop is thus to draw on these experiences, propose a competencies based framework for nursing and clinical informatics, present best practice examples and a practical mechanism to derive curricula and courses from this framework. This workshop will provide a platform for participant engagement to discuss the TIGER proposals and together, develop new insights into this demanding field. The results from this workshop are incorporated into the TIGER body of knowledge, also as a source for shaping the TIGER Virtual Learning Environment (VLE), and will be published as TIGER recommendations.

2. Materials and Methods

The objectives of the workshop focus on:
- **To review** the international informatics competency definitions.
- **To evaluate** the global competency set for nursing and clinical direct-care providers.
- **To build** consensus regarding core competencies for integration into curriculum development.
- **To plan** towards implementing intra- and inter-professional informatics competencies across disciplines.

The following list shows the timeline of the workshop.
- Introductory presentation (Marion J Ball): History of the TIGER Initiative - grassroots approach and methodology for gathering people, compiling their knowledge via the Virtual Learning Environment (VLE) and building consensus (10 minutes).
- Review process: First round of moderated discussion. (Moderators are: Heimar Marin, Polun Chang, Marion J Ball, Marisa Wilson, Ursula Hübner and Christel Anderson); participants form groups of up to 5 people, introduce themselves shortly (e.g. affiliation, professional experience) and discuss the question "What are the top 5 informatics competencies for nurses according to your experience?" (30 Minutes)

- Evaluate process - second presentation (Ursula Hübner): An international overview of the nursing and clinical informatics competencies framework: methodology and results (10 minutes)
- Build process: Second round of moderated discussion (Moderators are: Heimar Marin, Polun Chang, Marion J Ball, Marisa Wilson, Ursula Hübner and Christel Anderson); participants discuss the questions "What is your opinion about the competencies framework just presented?" and "Do you think that the core competencies differ between the various health professions and what are inter-professional competencies?" (30 minutes)
- Plan process: Group summary and conclusions (10 minutes)

3. Conclusion

We expect the following outcomes of the workshop:
- Attendees will engage as future TIGER members in educational, nursing/inter-professional and learning opportunities utilizing in the VLE.
- Attendees will be able to recognise the importance of nursing/clinical informatics competencies and contribute to the TIGER initiated global discussion building an intra- and inter-professional global curriculum.
- Develop recommendations for implementation of a world-wide informatics curriculum

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