

# Healthcare Informatics Schemata: A Paradigm Shift over Time

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**Abstract:** The schemata “A paradigm shift over time©” (Sackett & Erdley, 2006) a graphic model, visualizes development and progression of informatics in health over time. The model portrays information technology trends, from computers as resource through computational ubiquity, and the shift to social networking and e-Health. The discrepancy between “real” and “proposed” suggests gaps involving issues such as value, interoperability and ontology requiring attention, development and ultimately adoption, hinging on a universal standards framework. The workshop objective is to review previous and current models of healthcare informatics to springboard revisions of the schemata for current and future use.

**Keywords.** Model (theoretical), healthcare, informatics, nursing

## 1. Workshop Organization

The proposed speakers are:

Dr. W. Scott Erdley, Behling Simulation Center, UB, [erdley@buffalo.edu](mailto:erdley@buffalo.edu),

Dr. Erdley has been involved with nurse and health informatics education since the early 1990's. The last 5 years his focus shifted to immersive human patient simulations. He has published and presented on topics related to high fidelity simulations for health care students (nursing, medicine, dentistry to physical therapy).

Dr. Kay Sackett Fitzgerald, Frontier Nursing University, [kay.sackett@gmail.com](mailto:kay.sackett@gmail.com),

Dr. Fitzgerald has been involved with nursing since the mid-1970s and healthcare informatics since the mid-1990s. The last several years were spent focused on healthcare informatics, evidence-based practice and online education. She has numerous papers, presentations and book chapters related to her areas of interest.

## 2. Workshop Description

### 2.1. Format

Type of format: Breakout group discussion

Timeline

- Introduction and setting the stage – 10 minutes
- Historical review of schemata – 10 minutes
- Breakout group discussions – 45 minutes

- Breakout group summation presentation to others – 15 minutes
- Wrap up and Q&A – 10 minutes

## 2.2. Description

Visual models historically provide graphical representation of items and processes, concepts and relationships, otherwise not easily contemplated. Nursing informatics is well represented with models such as those by Schwirian [1], Graves & Corcoran [2] and Turley [3]. Each of these models provided representation of difficult concepts and relationships, thereby aiding intellectual digestion and subsequent discussion by users within and without nursing.

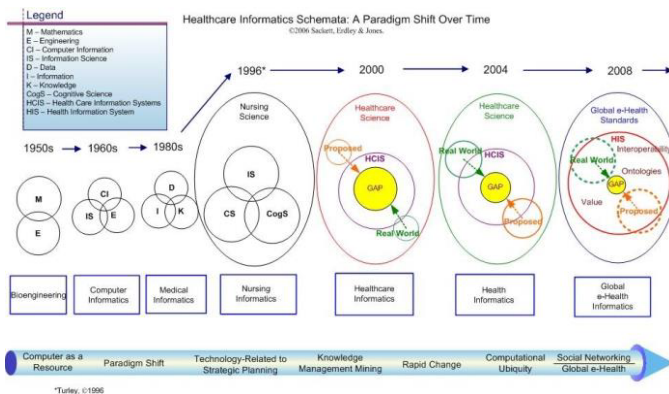


Figure 1 [4]

The healthcare informatics schemata “A paradigm shift over time©” (Sackett & Erdley) provides broader insights into the development and progression of healthcare informatics over time. Beginning with the early 1950s through 2008, this graphical representation conveys past and current trends, from computers as resource through computational ubiquity, and the shift to social networking and online health records. Parallel growth is depicted by the shift from discipline-specific applications to global, or universal, e-Health concept. The speed of changes accelerated the narrowing gap between the “proposed” and “real” world of working health informatics.

The discrepancy between the “real world” and “proposed” suggests a gap where issues of standards, interoperability, affordability, interface and modularity diagnostics and health information technology related to patient safety may be addressed from both national (US) and global perspectives. Singh and Sittig [5] developed the Health IT Safety (HITS) framework as a mechanism to measure and improve patient safety through information technology. The “sociotechnical work system” was articulated and safety domains identified. The need for shared responsibility between all stakeholders; healthcare providers, patient safety professionals and EHR vendors are considered from the US perspective. A global perspective to develop health technology standards using exemplars from industry is articulated by Masum, Lackman and Bartleson [6]. This global perspective is not bound by national boundaries. The goal is to improve healthcare for all. Identified are comparisons between healthcare and other industries economic and technological viewpoints, intellectual property, regulations and a global health business module. Emphasis on “point of care diagnostics” as one global health

technology with lesson learned from other industries that has potential to narrow the “real-world” to “proposed” gap is elucidated and complimented by best practice standards.

This workshop is designed to stretch attendees’ thinking and perspectives of healthcare and nursing informatics global impact, both now and in the future. Visual representations of concepts and ideas have a long-standing history in health care in general. This workshop will explore how this current model might be improved using past history along with participants’ life experiences and knowledge. The workshop will include two short presentations, one related to review of models in nursing and the second to include background information about the model. The bulk of the session will incorporate moderator-led active discussion with the participants. Recording comments will be accomplished via hard copy, computer-aided, pen and paper, and audio recording with participant permission will also be employed to document discussions. Ultimately all suggestions will be reviewed and incorporated into the schemata with a subsequent publication in a peer-reviewed journal.

## References

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