Paradigm Shift – A Fresh Approach to the EHR

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Interoperable health information is essential to engineering a high quality cost effective system of healthcare delivery. However, a recent National Research Council (NRC) committee found "current efforts aimed at nationwide deployment of healthcare information technology will not be sufficient to achieve the vision of 21st century healthcare, and may even set back the cause" (Stead & Lin, 2009).

This tutorial introduces a fresh approach to achieving interoperable health information. The key shift is from thinking of the electronic health record as a by-product of automating practice, to thinking of it as a visualization of signals accumulated about patients and populations across scales of biology, time and geography. Participants will learn how to apply this paradigm shift to decrease the time and cost to deploy today’s EHR technologies and to increase the benefit of using the technology.

By the end of the tutorial, the participants will be able to:

- List expectations for EHRs as the foundation of an engineered system of healthcare that are not met by today’s deployed systems.
- Describe reasons for this gap
- Appreciate how a shift in the paradigm might close the gap
- Make better decisions about how to deploy today’s EHR technologies and when to look for alternative approaches.

Outline of topics:

- The problem
  - Requirements for an engineered system of health care’s information foundation
  - Reality of today’s deployed EHR systems
  - Root causes of the gap between what we have and what we need
- The paradigm shift
  - Working with information at multiple scales to manage complexity
  - Matching computational technique, effort and governance to the scale of the task
  - Examples from different perspectives: enterprise, regional, personal
- From idea to action
  - Shift from certification to measurement and reporting
  - Steps for health care enterprises & vendors
  - Research challenges