

# Training the Rest: Informatics Competencies for Health Care Professionals

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## Covvey's original categories of biomedical informatics practice

Category	Jobs
Academic	Informatics researcher or teacher
Professional	CIO, Chief Medical/Nursing Information Officer, Developer, Trainer
Health care professional	Using HIT in delivery of clinical care by physicians, nurses, and others

- Covvey et al., *Pointing the Way*, 2001
- (Previous talk substituted latter category for "liasion")



## Existing competencies in informatics

- IMIA Working Group on Education (MIM, 2000)
- ACMI – aimed more at researchers (Friedman, 2004)
- UK NHS Information Authority (Christie, 2003)
- Clinical specialties
  - Medical students – AAMC, 1999
  - Nurses – Stagers, 2002
  - Nurse practitioners – Curran, 2003
  - Public Health – O'Carroll, 2002

3



## Some general observations regarding competencies

- Role is a key differentiator
  - Role in the health care setting, e.g.,
    - Informatician vs. clinician
    - Researcher vs. professional
- Many of us play multiple roles
  - Exemplified best by AAMC competencies
- What distinguishes informatics is an understanding of the user and their tasks
  - Focus on information, not technology
  - Meeting those information needs

4



## AAMC competencies – details outdated but framework still valid

Category	1998	2006
Life-long Learner	- Knowledge resources - Critical appraisal	- Searching - Synthesized evidence
Clinician	- Electronic health records - Decision support	- Health care quality - Patient safety
Educator/ Communicator	- Select resources - Communications	- Learning management systems
Researcher	- Data management, analysis, and reporting	- Translational research
Manager	- Health care finance - Management	- Systems approach - Pay for performance

5



## What must clinicians know for 21<sup>st</sup> century health care?

- Knowledge-based information
  - Content – types of resources
  - Searching – where and how, e.g., beyond Google
- Patient-specific information
  - Electronic health records and basics of implementation, i.e., being a savvy consumer
  - Protecting patient safety, particularly in areas where information-related, e.g., patient hand-offs
  - Protecting patient privacy and confidentiality

6



## What must clinicians know? (cont.)

- The intersection of knowledge and the patient
  - Evidence-based medicine – finding and applying evidence in medical decision-making
  - Measuring and attaining health care quality – pay-for-performance and other initiatives
  - The unintended consequences of HIT

7



## Modern pilots are guided by a great deal of decision support



Pilots use most of instruments in the cockpit.

8



Do we want our future clinicians to work with half the instruments?



(Courtesy of John Lumpkin, MD, MPH)

9



## Barriers to informatics competencies

- Getting them into the curriculum!
- Personal experience
  - “But today’s students are all computer-savvy”
    - Informatics competency is more than computer literacy
  - Not owning curricular “real estate”
    - Informatics is an integrative science, best taught integrated with other topics, yet course directors rule the silos of the curriculum

10



## Conclusions

- Informatics competencies and education are equally important for clinicians as they are for informatics professionals and leaders
- 21<sup>st</sup> century clinicians must learn more about issues in practice that will impact their practices, such as quality, safety, and cost
- There are challenges and opportunities for those of us who are passionate about leading the way

11



## For more information

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12

