Safety as a Priority for Medical Informatics: 
Some Thoughts on Why the Obvious Has Not Yet Happened

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Growing Importance of Safety as an Issue for Health Care

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• Data to suggest significant harm to individuals is caused by errors
• Growing recognition that informatics offers important solutions to error reduction
• Some recognition that informatics solutions require systemic change in information management, not just decision support software
• Such systemic changes require cultural shifts, not just technologic advancement
The Idea is not New

• Informatics community has worked on clinical information systems incorporating decision support for over three decades
• Forces the question:
  *If informatics solutions to problems of medical error and safety are such a good idea, and we have known this for many years, why have we not seen the widespread implementation of systems designed to reduce errors through information management and decision support techniques?*

Barriers to Effective Use of Information Technology in Health Care

• Cultural
  – The technology has never been embraced
  – Seen as support activity, outside the usual foci of biomedical science
  – Poor appreciation of IT as a strategic asset
  – Technical challenges (and need for ongoing research) often poorly understood
  – Often viewed as a distraction from organization’s (or practitioner’s) primary goals
  – Reluctance to learn new skills in an area that seems foreign
Barriers to Effective Use of Information Technology in Health Care

• Making the business case
  – IT generally has had a poor track record in health care
  – Problems often blamed on the technology rather than the implementations, and available fiscal resources
  – Purchasers of health care IT are often poorly prepared to make appropriate decisions
    » Buyers generally are not the users
    » Users tend to be poor consultants in the process
  – IT viewed as a cost center
    » Measuring benefits, and agreeing on metrics, can be challenging
    » IT poorly integrated into cost (and reimbursement) models for health care financing

• Structural issues
  – Historically poor incentives for IT investment
  – Health care organizations are complex social environments
    » Many IT users do not work for the organizations that provide the systems for them
  – Too few individuals trained to work effectively at the intersection between biomedicine and IT
  – Inadequate participation of the health care community in evolving IT industry standards
  – Resulting challenges to integration within organizations and between institutions
Climate for Change

- Consumer activism
  - Increasing use of the Web by patients
- Legislation and cultural requirements for:
  - Data standards
  - Privacy
- Awareness of medical errors and the role of IT in support of quality
- New recognition of the crucial role informatics plays in biomedical research
- In the US: Major reports calling for organizational change within government and new kinds of investment in IT infrastructure for health care