Benefits of Interdisciplinary Cooperation

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Context 2: Training

Software engineers

Alignment with actual clinical workflow
One of Our Goals -- Bring together:

- Computer Scientists and Computer Engineers
- Clinicians (Physicians and Nurses), especially experienced with HIT and medical devices
- Sociologists
- Clinical workflow experts
- Research methodologists

And...

One of Our Goals -- Bring together:

- Medical device makers
- *Regulators (FDA)*
- FMEA (Failure Mode and Effects Analysis folk)
- HIT experts (some w/ focus on unintended consequences)
- NSF – Research focus
Example: False or Irrelevant Alarms

- Drive us nuts
- Are ubiquitous (95.6 alarms per patient per day; thousands per day in one unit)
- Distract from needed care
- Cry wolf….and obscure real alerts
- Are very dumb
- Difficult to adjust to make sensible

Dumb smart pumps: Part two
Devices don’t talk to each other

Question: What do you do when you hear or see an alarm?

Answer: Wait
And/or look at other indicators
So....What do we do here? What works?
(1)

Projects presented by students or faculty --

*Then typical discussions:*

Does the project make sense *in the real world*?
What do the data say? ¹
Where are the data from? Reliability; Validity? ²
Barriers to more information...and suggestions for
additional/more data sources ³

To the General: What do we do here?
What works? (2)

Other suggested solutions – statistics,
people, other organizations,
manufacturers, regulators

Problems with suggestions (oh gosh)

**Often: Discussion of workflow and medical specifics**
What really works?

The Unexpected and surprising:
• Often it’s the misunderstandings and the barriers that.....
• Sometimes it’s the triumph of computing power over what’s understood by .....:
  – And we try to help
• Sometimes it’s historical context.....

Problems and Options?
• Presentation of marginal progress is sometimes boring (for others)
• Insist on only incremental project updates?
• Limit attendance to those who don’t blush at the word dongle?
• And, as noted, it’s often the extensions and “distractions” that generate the best ideas and discussions...and the most interdisciplinary interaction and benefits.
Thank you

Questions?

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