Educate, Motivate and Improve
In favor of inspecting and rating usability processes

June 7, 2011

Mary Kate Foley

Vice President, User Experience

athenahealth

athenahealth

▶ **Overall, EHRs lag in usability**

- Inhibits adoption

- Inhibits user productivity

- Can contribute to clinical risk

▶ **AHRQ report on EHR Vendor Practices and Perspectives**

- Commitment to usability stated as high by all vendors who participated

- But usability maturity levels vary across vendors, and are generally low

▶ **Market factors will exert pressure and create beneficial upward spiral of increased usability**

▶ **But can we anticipate and accelerate?**

Apply our UCD techniques to this problem

▶ **Understand problem well**

▶ **Focus on target audience**

- Needs

- Motivations

- Goals

- Experience

- Environment

▶ **Design with target audience in mind**

▶ **Set measureable objectives**

▶ **Measure, adjust until objectives met**

Apply our UCD techniques to this problem

Understand problem well

Complex needs: Cooperative work, often human-human-computer. Multiple systems, hard and soft. High stakes.

User base and contexts of care are numerous and varied

- Various credentials and licensure
- Primary care vs specialties
- Ambulatory vs hospital, for-profit vs academic
- Small vs medium vs large vs enterprise
- Variety of other systems to integrate with

Familiar design approaches can provide starting points, but optimal design solutions for EHRs aren't worked out yet

Apply our UCD techniques to this problem

Focus on target audience

Low ⬅ Usability maturity ➡ High

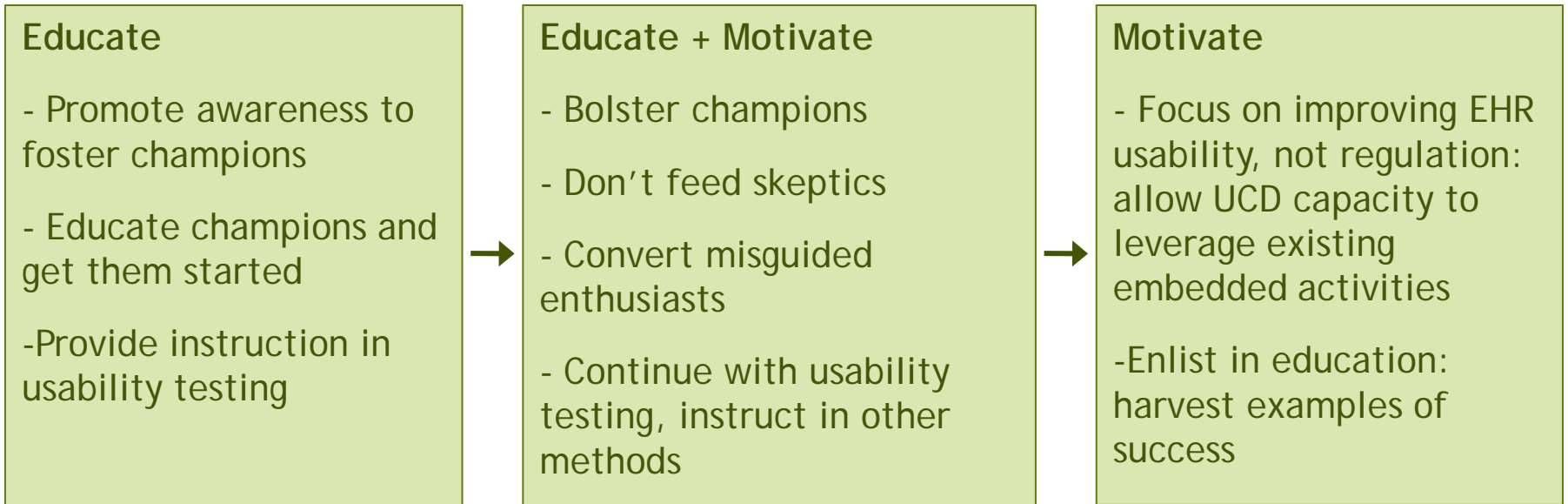| Low	(middle)	High
- May not even know they are at low maturity - Unaware - Not practicing - Champion? May not even be one - Skeptic? Likely more than one - Misguided enthusiast? May also exist—and distract	- Likely a few practitioners - Organization still learning, employing a method or two - Champion is beleaguered - Plenty of skeptics—feel UCD/usability work is based on uninformed opinions, a waste of time - Still likely some misguided enthusiasm	- Usability is recognized lever for business performance - Experienced, dedicated usability/design practitioners integrated with R+D - Employ reliable UCD processes yielding valid results - Want to focus making real progress on usability, rather than on work to satisfy regulations

Apply our UCD techniques to this problem

Design with target audience in mind

Low ←——— **Usability maturity** ———→ High

Educate

- Promote awareness to foster champions

- Educate champions and get them started

-Provide instruction in usability testing

→

Educate + Motivate

- Bolster champions

- Don't feed skeptics

- Convert misguided enthusiasts

- Continue with usability testing, instruct in other methods

→

Motivate

- Focus on improving EHR usability, not regulation: allow UCD capacity to leverage existing embedded activities

-Enlist in education: harvest examples of success

Get each vendor started where traction is likely to be greatest within vendors: *usability testing*

Set measureable objectives, adjust until objectives met: Recommendation

▶ **Continue to educate the market re usability and valid usability practices**

- Both vendors and buyers, users

▶ **Rate usability process, don't mandate design**

- Devise reporting and rating protocols instead

▶ **Trust in the power of usability as a competitive market factor**

- Companies that execute proven usability processes well, and that are aligned with ongoing success of their users, will rise to the top

- Thresholds of acceptability will be continually reset higher

- Market dynamic rewards innovations that matter, penalizes detrimental change/variance
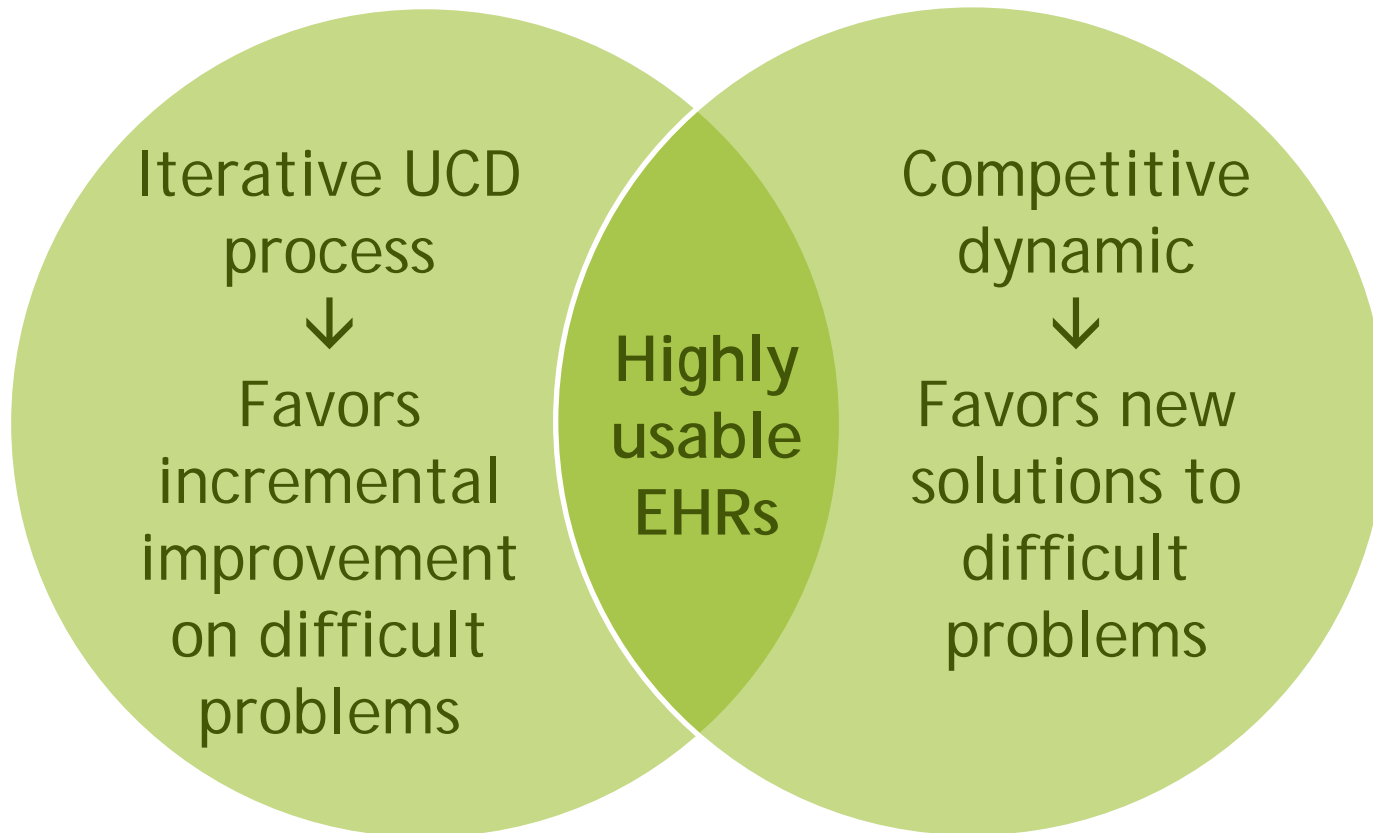
Reporting protocols should be focused and usable

▶ **Develop protocols for vendors to document their usability activities**

- *Every* protocol should promote proven techniques

- *No* protocol should detract or lower credibility of usability champions/practitioners
  - Don't gloss over complexity of problem space

▶ **Focus first on *what* and *how often***

- What types of research/assessments conducted, formative vs summative
- How many conducted, with what cells/dimensions

▶ **To combat issues inherent in self-reporting, consider audits**

▶ **Ensure protocol is *usable* by champions/practitioners:**

- In low, middle, high maturity organizations
- For any SD methodology or platform
  - Agile to waterfall
  - Cloud-based applications to installed software

Iterative UCD process
↓
Favors incremental improvement on difficult problems

Highly usable EHRs

Competitive dynamic
↓
Favors new solutions to difficult problems

athenahealth

Thank you