HISA UX CoP Workshop: Usability and User Experience – Stories from the front lines

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UX

User Experience (UX) and its bedfellow usability, have a large impact on the extent to which IT systems are harnessed for maximum benefit to end-users, patients, carers and healthcare consumers; and yet the experience of many end-users of healthcare software is a poor one.

HISA has responded to this issue by establishing a UX Community of Practice. UX involves the sum of a user’s interactions with, and perceptions of, a system. It can and should carry enormous weight when deciding whether to implement a new system.

The Chair of the new UX Community of Practice, Associate Professor Chris Bain says: “We’d all be in a much better place if systems were more usable and clinicians had a positive experience of health IT. Whilst clinicians can sometimes be poor at communicating the exact problem to which IT is a possible solution, in no small part it is the role of informaticians and other relevant professionals to glean this information. Not providing specifics however can lead to ambiguity and frustration, and root problems can remain unsolved. A key purpose of the UX Community of Practice will be to develop a better understanding of what UX is and what it’s not, empower people and give them the knowledge and language to articulate their system problems, and to work with IT departments and vendors on collaborative solutions”.

Let me set the scene ....

- Many of us leading today’s sessions have worked in software development, even as programmers ......and we understand that making complex software is NOT easy .... and that unless you’ve built something of at least moderate complexity you cannot really appreciate that

- Whilst its inevitable we will expose many points of disappointment today around existing software systems .... today is not about bashing vendors

- Vendors are CRITICAL to the environment ... we cannot improve healthcare without the innovation and investment they bring.... BUT... hold that thought !!!
Usability can be defined a number of ways (including by ISO) but a simple and easy to follow definition from the U.S. Department of Health and Human Services is “How effectively, efficiently and satisfactorily a user can interact with a user interface.”

http://www.usability.gov/

(MEELS – memorability, efficiency, errors, learnability and satisfaction ….. NOT “clunkiness, intuitiveness” !!!)
Definitions (2)

- They also have a good definition of UX stating that:

- "User experience (UX) refers to the **quality of the user's interaction** with and **perceptions of a system** … think about that … it has very BROAD drivers and implications

- The same organization also states: “User experience (UX) focuses on having a **deep understanding of users**, what they need, what they value, their abilities, and also their **limitations**. It also takes into account the business goals and objectives of the group managing the project”

http://www.usability.gov/
What problems are we trying to solve?
Users have had enough ..... 

Electronic Health Record Use a Bitter Pill for Many Physicians (US)

- 16 office-based clinician practices
- 92% of EHR users - decreased efficiency because of EHR adoption
- Increased administrative workload for the Dr, workflow disruption, need to develop workarounds

Older adults (OAs) experience with a falls detection device (US)  
(with apologies to Demiris et al)

- Users were unhappy with the volume of false alarms and obtrusiveness of the device. Many also did not see a great need for having the device or were embarrassed by the device.
- Engineers must work to better develop this technology so that it is accessible to (OLDER) people with hearing loss, limited dexterity, and low vision
Users have had enough .....(cont)

Study participants from 45 countries (n=469) ranked their satisfaction with the current state of nursing functionality in EHRs as relatively low. **Two-thirds of the participants** (n=283) provided disconcerting comments when explaining their low satisfaction rankings. More than one half of the comments identified issues at the system level (*e.g.*, poor system usability ...) *(Topaz et al, 2016)*

3081 physicians surveyed - **The results do not show notable improvements in physician's ratings for their EHRs between the years 2010 and 2014 in Finland.** Instead, the results indicate the existence of serious problems and deficiencies which **considerably hinder the efficiency of EHR use and physician's routine work.** *(Kapio et al, 2017)*

Our data set consisted of 173 interviews, 24 rounds of observation and 17 documents. Participating hospitals were at various stages of implementing a range of systems with differing functionalities. **We identified two types of workarounds: informal and formal.** The former were informal practices employed by users not approved by management, which were introduced because of perceived changes to professional roles, **issues with system usability and performance and challenges relating to the inaccessibility of hardware** *(Cresswell et al, 2016)*
And worryingly ... it’s not just clinicians !!!!
And worryingly ... it’s not just clinicians !!!! (cont)

- “Out of the healthcare organizations that participated in the Medicare EHR Program, 88% of hospitals and 87% of professionals offered patients access to their health information online, yet only 15% of hospital patients and 30% of other providers’ patients accessed their data online”

- “The problem does not appear to be a lack of interest in viewing or obtaining health information, rather it is one of frustration”
  - Set up
  - Multiple portals for different providers
  - Architecture / navigation differences
  - Incomplete or inaccurate information etc etc
Why does a positive UX really matter?

- So why does all that matter ..... 
  - Because clinicians will (AND ALREADY DO) avoid using key systems if they do not have a positive UX - and under utilised systems under deliver on benefits (“the bridge that no-one drives over” ... and the rat runs ???)

- And CIS’ (especially EMRs) are usually designed to provide maximal benefits in holistic terms (not by using “parts of”)
  - Quality and safety implications for patients
  - Implications for financial ROI and viability

- And what of staff satisfaction, burnout and staff retention?
Why does a positive UX really matter? (cont)

- On the issue of burnout (Medscape 2017, US, 14 K physicians)
What can we do / where to from here ..... ?

- Sessions like today !!!!!
  - A bit like pharmacology .. everyone needs a little bit of knowledge but not everyone is a pharmacologist or a pharmacist !!!! (Nielsen anyone ???)
  - Content generation … white papers, webinars, guidelines as per initial feedback from our UX CoP survey (n= 54)

- For users and customers ....
  - Learn about UX and usability – DON’T MAKE IT UP
  - Use that knowledge to better express your needs

- For governments, hospitals and other funders
  - Change your evaluation frameworks and procurement approaches to suit (60% + around usability / UX !!!)
  - Improve the relevant details in your specs /RFTs
  - Realize that if you don’t change ….. IT WILL BITE YOU IN THE END !!!

- For vendors ..... Multipronged approach .... For another time !!!!
What is your health tech user experience?