Formative Usability Testing Methods
Acknowledgements

- AMIA Usability Task Force
- HIMSS Usability Task Force
- Robert Schumacher, Janey Barnes – original learning module creators
Formative Usability Testing is a methodology used to obtain **qualitative reactions** to user interface **concepts** and **designs**.

Also known as Exploratory Usability Testing Methods.
Goals of the Method (1 of 2)

- Primarily used to obtain qualitative reactions to UI concepts and designs: workflows, information architectures, language, icons, navigation, visual design, etc.
  - Frequently, user needs and enhancement ideas are reported by the participants.
  - As the interface matures, other more quantitative measures may be taken.
Formative testing is also used to help design/development teams choose between alternative designs.

Formative testing is very pragmatic and should be used early and often during the development process.

The emphasis though should be on behavior rather than on attitude and opinion.
Best Timing in the Software Development Lifecycle

- From very early in design/development process up until summative testing is called for.
Application Analysis (NISTIR 7804)

- Provide a description of the design of the application’s user interface
- And how the design has been optimized via iterative formative and exploratory usability assessments during development.
Details for Planning & Executing the Method (part 1)

- Determine research questions/issues that need to be addressed
- Develop tasks that need to be done to address the research questions
- Develop Recruiting Screener
- Create Moderator Guide
- Prepare materials
Details for Planning & Executing the Method (part 2)

- Recruit participants (4–8 per user group)
- Run pilot session
- Conduct sessions
- Compile data
- Draw Conclusions and Report to team
Exercise

- This is a hands-on activity related to planning/executing a Formative Usability Test:
  - Using the Drug x Drug Interaction Prototype
  - Define objectives
  - Define tasks
  - Define measurement
  - Identifying and finding users
  - Discuss a test with one task
Impact of the Formative Usability Test

- Reporting the findings and recommendations back to the team so as to have a positive impact on the development of the product.
Impact of the Formative Usability Test

Participants appreciated the Summary View.

Problem is – clicked proceed with both and expected to move ahead one step not come back to previous page
**Impact of the Formative Usability Test**

This is the information important to participants:

**citalopram (Celexa 20 mg oral tablet) - amitriptyline 25 mg oral tablet (interaction)**

*Citalopram*/amitriptyline: **MAJOR**

**MONITOR CLOSELY:** Concomitant use of agents with serotonergic activity such as serotonin reuptake inhibitors, monoamine oxidase inhibitors, tricyclic antidepressants, 5-HT1 receptor agonists, ergot alkaloids, lithium, St. John's wort, phenylpiperidine opioids, dextromethorphan, and tryptophan may potentiate the risk of serotonin syndrome, which is a rare but serious and potentially fatal condition thought to result from hyperstimulation of brainstem 5-HT1A and 2A receptors. Symptoms of the serotonin syndrome may include mental status changes, autonomic dysfunction, rigidity and myoclonus, confusion, shivering, tachycardia, fever, diaphoresis, and hyperreflexia. Symptoms may progress to severe autonomic instability, rigidity, hyperreflexia, and seizures. If serotonin syndrome is suspected, discontinue citalopram and amitriptyline, supportive care, and monitor for resolution of symptoms.**
Impact of the Formative Usability Test

All the clinician needs to see...Characteristics of a good warning: Get the person’s attention, What’s wrong, How bad is it, What’s going to happen if the person continues?

Jeff Belden, toomanyclicks.com
Impact of the Formative Usability Test

- Reporting the findings and recommendations back to the team so as to have a positive impact on the development of the product.