

Heuristic Evaluation Tool – Getting Started

John Gosbee, MD, MS and Laura Lin Gosbee, MASc

Human Factors Engineering & Medical Device Workshop ▪ Ann Arbor, Michigan ▪ October 28-29, 2008

Red Forest Consulting, LLC

www.redforestconsulting.com

Product Metaphor

- Is it obvious what the device is at a glance?
- Is it obvious how to use it at a glance?
- Does the device work the same way as previous models or similar brands? Does this help or hinder the user?
- Does the device look like another device? Is that helpful in telling the user how to use it?
- Is the name of the device helpful in telling the user what it is, or how it's used?

Functionality of Controls

- Is it obvious what each button, dial, or switch will do?
- Are the controls grouped in a logical and helpful manner?
- Are the primary controls located in a way that makes them easy to access and operate?
- Do buttons look like buttons?
- Do any non-functional features of the device look like buttons or controls?
- Are critical controls differentiated from other controls?
- Does the size or shape of the buttons, dials, or switches make them difficult to use?

Feedback and Displayed Messages

- Is it easy to tell what the device is doing at any given moment?
- When completing a task, is it obvious when you are successful vs. unsuccessful?
- At any given point in operating the device, can you tell exactly what you need to do next?
- If you hand the device to someone, can they figure where you've left off and what they need to do next?
- Can you understand the meaning of messages, symbols, sounds, or lights that are displayed?

Labels and Warnings

- Can you easily see all the important labels and warnings?
- Are they located in an appropriate and relevant spot?
- Are the warning labels legible?
- Is the language understandable? Symbols meaningful? Or is special knowledge needed to interpret it?
- Do any labels obscure critical controls, lights, or parts of the device?
- Do any labels create visual clutter that might cause confusion?

This tool provides examples of the kind of triggering questions that will help identify human factors design issues with medical devices.