Research in Practice Makes Perfect: How to Make Usability and Accessibility Happen in Healthcare and Everywhere

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Abstract – Nowhere are the promises of the Information Age more visibly squandered than in the Intranets of acute- and ambulatory-care institutions and the organizations that support them. Hospital Intranets have evolved organically into impassible repositories where hundreds of well-meaning contributors post content with inconsistent organizational schemes. These time-wasting tangles of bridgeless information islands put clinical and administrative staffs in conflict causing inefficiency, a lack of accessibility, dismal job satisfaction, and most importantly: endanger the populations these institutions were created to serve.
Moreover, without education and assistance institutions redesigning Intranets and websites rarely list accessibility as a top priority. Nor do they recognize that accessible systems work more efficiently, effectively, and engender greater satisfaction than inaccessible systems. The user-centered design processes that foster usability not only enhance the accessibility of websites, Intranets, and human services, they help prioritize it as a matter of fact - rather than conjecture - to developers, marketers, thought-leaders, and others involved in making change happen. If accessibility and usability are the medicine, then user-centered design is the delivery mechanism.

Right now acute and critical care institutions are recognizing their technological obsolescence and overhauling their public websites, enhancing their Intranets, unifying their business systems and their Intra-agency reporting structures. The opportunity is before us to promote user-centered design practices that ask institutions to define their user populations, including those with accessibility needs and to engage in a battery of proven human factors research techniques that will enhance the care they provide, the business they conduct, and the revenues they generate.

This case-based poster outlines how usability makes accessibility happen in practice by illustrating the efficient and effective techniques that can have dramatic, institution-enhancing impact. Practical examples will be drawn from lessons learned assisting hospitals, state departments of health, and Federal agencies improve the usability and accessibility of their Web- and software-based services and applications.

Overview

Nowhere are the promises of the Information Age more visibly squandered than in the Intranets of acute- and ambulatory-care institutions and the organizations that support them. Over the last ten years hospital Intranets have evolved organically into impassible repositories where hundreds of well-meaning contributors post content with inconsistent organizational schemes. Departmental websites become despotic fiefdoms where rules of the road change as users cross intramural borders. Procedural information, posted ad-hoc by individuals rather than institutions fosters misinformation and confusion over policy versions and procedural dictates. Electronic medical records, billing processes, and institutional efforts to "go paperless" suffer similar fates by failing to integrate seamlessly into a coherent whole. These time-wasting tangles of bridgeless information islands put clinical and administrative staffs in conflict causing inefficiency, a lack of accessibility, dismal job satisfaction, and most importantly: endanger the very populations these institutions were created to serve.

When called upon to address these concerns, institutions readily convene technical teams, programmers and coders, IT managers, perhaps a graphic designer, and set them to work amid a battery of administrators balancing departmental and institutional directives that are frequently at odds with each other. Current systems are failing on all fronts, but which specifically? And where to start? Should institutions adopt social media to foster internal communication? External communication? Could the promise of "Web 2.0" enhance business practices, salve complex hiring practices, make an institution "hip" or entice more business? Help them provide better care while reducing administrative complexity? Contributing to the confusion national bio-terrorism concerns have fostered an unprecedented interest in shoring up the lines of communication between institutions, between institutions and their suppliers, and Federal reporting agencies such as the Centers for Disease Control and Prevention. Add to that the institutional envy hospitals feel when seeing the self-service tools financial services and commercial websites make available to customers and the public, and you have a dizzying conflux of possibility and choices.

Without education and assistance institutions rarely list accessibility as a top priority. Nor do they recognize one of the most salient aspects of accessible design: namely that accessible systems work more efficiently, effectively, and engender greater satisfaction than inaccessible systems. Adherence to standards, awareness of code-level accessibility techniques and even a rudimentary understanding of how assistive technology users interact with websites and Intranets are afterthoughts- if that.

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Right now – today – acute and critical care institutions are recognizing their technological obsolescence and overhauling their public websites, enhancing their Intranets, and unifying their business systems as well as their Intra-agency reporting structures. The opportunity is before us to promote user-centered design practices that ask institutions to define their user populations, including those with accessibility needs; to engage in a battery of proven research techniques: surveys, focus groups, interviewing, workplace shadowing and workflow analyses, among others, in order to identify the core information needs of each system's users.

When these activities, singly or in combination, are followed by human factors design mainstays - rapid design sessions, wireframing, prototyping, and iterative usability testing - acute- and ambulatory-care institutions (and institutions of all stripes) see greatly enhanced efficiencies in their development cycles, greater satisfaction among their users, and a greater return on investment. When accessibility is considered a core facet of the user-centered design process, these self-same activities foster accessibility that is "baked in" from the beginning rather than retrofitted at great expense and confusion in response to legal dictates or fear of litigation.

In other words: the user-centered design processes that foster usability not only enhance the accessibility of websites, Intranets, and human services, they help prioritize it as a matter of fact, rather than conjecture, to developers, marketers, thought-leaders, and others involved in making change happen. If accessibility and usability are the medicine, then user-centered design is the delivery mechanism.

This case-based poster outlines how usability makes accessibility happen in practice by illustrating efficient and effective techniques that can have dramatic, institution-enhancing impact on development processes. Practical examples will be drawn from lessons learned assisting hospitals, state departments of health, and Federal agencies to improve the usability and accessibility of their Web- and software-based services and applications. Moreover, these examples will draw upon research conducted with persons who have disabilities and other assistive technology users.