Optimizing User Interfaces for the Elderly

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Framing a Problem

- Elderly have less familiarity with technology
- Health issues increase with age
- Connecting with the internet is a common occurrence for most of the world
- Many sites have a lot of distracting components
- Roughly 2/3 of people over 60 regularly access the internet (Anderson & Perrin, 2017)

Aging and Cognitive Decline

- Physical Changes
- Perceptual Changes
 - Colors are less bright
- Cognitive Load
 - Short-Term store reduced
 - Processing speed decreases

Social Media

Significant amount of icons

Unnecessary info

Flashy ≠ Easy

Logging in and interacting is difficult on facebook (Arfaa & Wang, 2014)

Other issues include simple navigation to the homepage and sending messages

Less interactive components the better (Chen, 2009)

Social Media Example



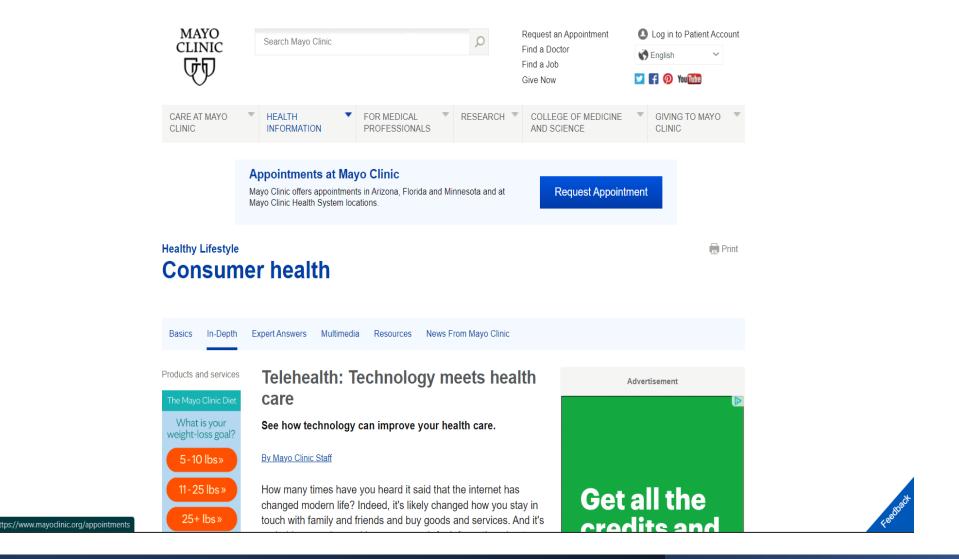
Health Websites

Health declines with age

Most issues with telehealth stem from lack of tech experience (Demiris et al., 2023)

Similar issues to social media

Moving parts can be a distraction



Health Website Example

Applying Nielsen's Heuristics



Visibility – Color palates, visuospatial info.



Feedback and Constraints -

How an interaction changes a webpage
Help bar might be important
Warning messages
Change indicators

Applying Nielsen's Heuristics (Cont.)

Mapping – Usually less important

 Consistency of interactive components uses mapping (i.e. cues)

Consistency – Parts that interact should be similar

- Color
- Text
- Size

Affordance – How much are they told

- Important for old people
- Directs toward a specific use
- What types of cues are used

What makes a good website for the elderly?

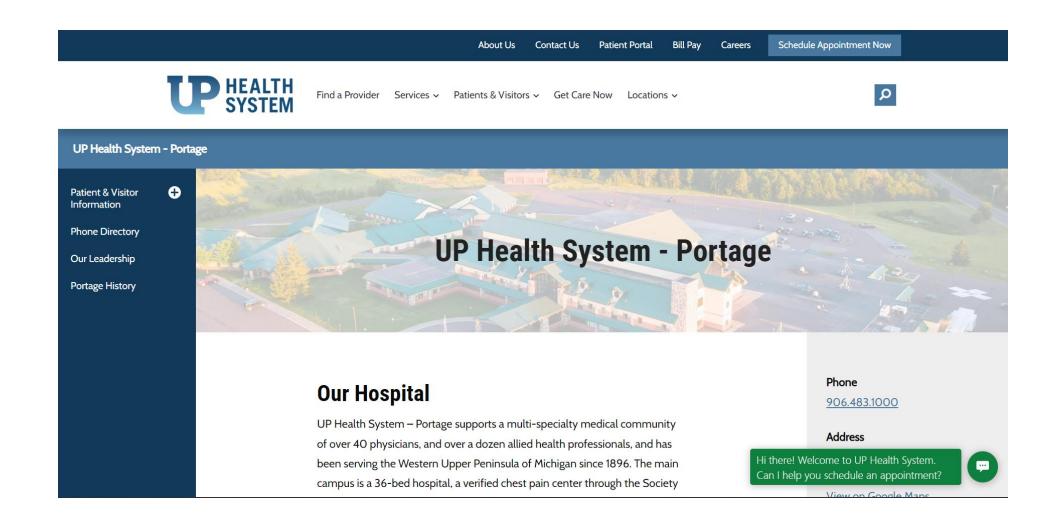
Simplicity

- Distinguishable colors without a crazy palate
- Consistency across interactable components
- Affordances that make sense Blinking lines to type

Less is more

- Limit of text
- Limit of interactables
- Help bars might be useful

Good Example



Significance/Applications

- Changes in general websites could increase usability
- Make social media platforms more elderly-friendly
- Healthcare webpages could benefit from reducing features
 - Decrease confusion
 - Improve regional public health

Citations

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 •Chen, Y. (2009). Usability analysis on online social networks for the elderly. *Helsinki University of Thechnology*.
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