HCD-501: Human-Centered Design

Paper Prototype Write-Up

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For my paper prototype, I modeled the AI-Assisted Documentation System designed for student clinicians at the University of Michigan–Flint HEART Clinic. The prototype focuses on five core user tasks: (1) connecting a Polar heart-rate device, (2) viewing live heart-rate data, (3) generating an AI-drafted SOAP note, (4) editing and submitting the note for supervisor review, and (5) reviewing and approving notes as a supervisor. Each task includes at least three user interactions such as tapping, scrolling, and entering text to simulate realistic workflow steps.

Design decisions were guided by simplicity, safety, and educational value. I structured the layout with consistent navigation bars and clear labels to support users who are multitasking in a clinical environment. AI-generated content is visually differentiated with highlight boxes to help students distinguish automated text from manual input. Safety alerts and feedback prompts are color-coded (red for alerts, green for approval) to minimize cognitive load.

What worked well was the clarity of the user flow. Testers could easily follow the sequence from data sync to documentation. The paper format also made it easy to rearrange or iterate screens during early testing. However, what didn't work well was demonstrating real-time feedback; paper made it difficult to capture the dynamic nature of live data or AI auto-suggestions.

If I were to redesign the prototype, I would transition to a low-fidelity digital version in Figma to better represent interactions like alerts, data syncing, and modal pop-ups. I would also expand accessibility features such as larger text and color-contrast adjustments. Overall, the paper prototype effectively validated early usability while highlighting areas where digital interactivity would enhance realism and testing accuracy.