Ideation Worksheet – OR Scheduling System Redesign

Topic: Improving the OR & Medical Devices Scheduling System
Ideation Method Used: Brainstorm New Ideas (IDEO DesignKit Method)

We chose the brainstorming method because it allowed our group to generate many ideas quickly without judging them at first. It helped us think creatively and discuss possibilities for how the scheduling system could become more efficient, fair, and user-friendly.

Design Challenge:

How might we design a simple and data-smart OR and medical device scheduling system that reduces effort and confusion while helping everyone stay organized, productive, and satisfied with their schedules?

Prompts We Used:

- What if scheduling worked as easily as a playlist app?
- What if artificial intelligence could handle the scheduling process?
- What if everyone could swap shifts instantly without confusion?
- What if the system could show when someone is overworked?
- What if system could align surgical and medical device priorities and hospital priorities? (Eg. An emergency surgery coincides with a critical but non-urgent surgery)

Ideas Generated:

- Automated Smart Scheduler that predicts staffing & medical devices needs.
- Shift swap feature through a simple app interface that hospital managers can use to swap as per staff and equipment available.
- Dashboard showing fairness scores for shift distribution.
- Chatbot that sends schedules or updates automatically.
- Google Calendar style drag-and-drop schedule editor.
- Integration with payroll and attendance systems.
- Real-time alerts for unfilled shifts.
- Simple color-coded interface to track coverage.
- Voice-based scheduling assistant for accessibility.

Top Three Ideas (after team voting):

1. Smart Scheduler that uses past data to optimize shifts.
2. One-Click Swap application for employees.
3. Shift Fairness Dashboard that promotes transparency.

Next Steps:

• Combine top three ideas into a single prototype concept.
• Create low-fidelity sketches or mockups.
• Share concepts with managers and staff to gather feedback.
• Test small-scale versions before developing a full digital system.

Reflection:

The brainstorming activity helped us understand that most users value simplicity, flexibility, and fairness more than advanced technology. We learned that a balanced solution should include both automation and human control. The session gave us several promising directions to test in the next phase.

Reference:

Lin, Y.-H., Chen, T.-H., & Chen, T. (2024). Developing a Cost-Effective Surgical Scheduling System: Applying Lean Thinking and Toyota's Methods for Surgery-Related Big Data for Improved Data Use in Hospitals

– User-Centered Design Approach. JMIR Formative Research, 8(1), e52185. https://formative.jmir.org/2024/1/e52185