Theory of Change Worksheet – OR/ Medical Devices Scheduling System Redesign

This worksheet helped our group test our brainstorming ideas using IDEO's Theory of Change method. It helped us link what we do (activities) with what we hope to achieve (outcomes and impact) through the redesigned scheduling system.

The lasting social change we would like to contribute to is:

We aim to create a more efficient, transparent, and user-friendly scheduling process that reduces confusion, saves time, and makes staff feel more included and satisfied with how schedules are created.

The key shifts that need to happen in order to get there are:

From	To
Manual, time-consuming scheduling done through spreadsheets and emails.	Automated, data-supported scheduling that updates quickly and reduces workload for hospital managers and staff.
Uneven shift assignments and frequent fairness complaints.	Balanced and transparent scheduling system that staff can view for OR and medical devices and understand.

The concepts we are taking forward to address these shifts:

- Prototype a **Smart Scheduler** that uses data to suggest shift plans and create a list of medical devices or related tech available.
- Pilot a **One-Click Swap system** that allows staff to exchange shifts digitally in case any medical tech/support staff/surgeons are not available.
- Create a **Fairness Dashboard** that shows how evenly shifts and medical devices are assigned.
- Conduct **user testing sessions** with staff and managers.
- Collect **feedback** and make improvements before a full rollout.

Your Impact Ladder

Outcomes We Need to Achieve

- **Short-term outcomes:** Faster scheduling, fewer conflicts, and better staff communication.
- **Medium-term outcomes:** More balanced workloads, improved fairness, and greater overall satisfaction with the system.

Long-Term Impact

A data-smart, transparent scheduling process that saves time, minimizes conflict, and ensures staff feel valued and included.

The more near-term outcome that tells us our solution is working is:

- Scheduling time is reduced by at least **40%**.
- Shift conflicts or double-bookings fall below **two per month**.
- At least **85% of users** rate the system as easy to use.
- Workload variation between staff remains below **10%**.

Assumptions We Are Making

- Employees will be open to learning and using a digital scheduling tool.
- Managers will support data-based scheduling if it saves time.
- The organization will have enough technical access (devices and internet).
- Transparency and visibility will build trust and adoption.

Risks and Barriers

- Staff resistance to switching from paper or Excel.
- Internet or device access may be limited for some users.
- Hospital managers may have limited time to train staff.
- Ongoing system maintenance and updates are required.

Reflection / Revised Understanding

After doing this exercise, we realized that gradual implementation and regular feedback are essential. Building trust with staff through the **Fairness Dashboard** will encourage adoption. The system should start with basic automation and move toward full integration as users become comfortable.

Reference

IDEO.org. (n.d.). Theory of Change – Design Kit Method Worksheet. Retrieved from https://designkit.org/methods/theory-of-change

Lin, Y.-H., Chen, T.-H., & Chen, T. (2024). Developing a Cost-Effective Surgical Scheduling System. JMIR Formative Research, 8(1), e52185.