Enhancing Hospital Meal Experiences: Designing Functional and Emotional Solutions

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Topic: Designing a hospital tray
Background information: The client organisation is a small industrial design organisation. The assignment was offered to me as there was a question from their client. They asked to discuss this together but was also a good project for a student to do.

In healthcare environments, the meal experience plays a crucial role in patient care, influencing both recovery and overall well-being. Current hospital meal trays focus primarily on functionality but often overlook the emotional and psychological needs of patients. This thesis addresses the question of "how the patient meal experience can be enhanced in hospitals with the perspective of the meal supplier?" The aim is to develop a tray that ensures optimal meal organization while also providing emotional support, contributing positively to the well-being of clinical patients during their hospital stay.

Design Process and Final Outcome

The design process was guided by a structured approach using the Double Diamond design framework. The first phase involved an in-depth analysis of the current hospital meal provision systems through field visits and interviews with hospital staff and patients. Key factors influencing the patient meal experience were identified, such as the disorganized setup of trays, the sterile hospital environment, and the emotional needs of patients, including feelings of stress and isolation.

Once these factors were clearly defined, several tray concepts were developed to address both functional and emotional needs. Each concept was tested and refined in an iterative process, ensuring alignment with practical requirements while keeping the patient's psychological well-being in focus. The main concepts explored were focused on aspects like meal organization, accessibility for patients with limited mobility, and emotional comfort through personalization and creative engagement.

The final tray design integrates these elements. Functionally, it features a clear organizational structure with compartments for meal components, preventing food from shifting and ensuring ease of access. Emotionally, the tray includes personalisation offering encouragement and a personal touch. This emotional feature helps patients feel more connected and supported during their hospital stay. For younger patients, the tray provides a creative outlet through interactive elements such as drawing spaces, which can serve as a welcome distraction.

Material selection played an essential role in the design process, balancing durability, cost, and sustainability. Polypropylene (PP) was considered due to its durability and cost-effectiveness, while a biodegradable material provided a more sustainable option. The choice of material will ultimately depend on the priorities of the healthcare institution—whether they prioritize long-term cost-efficiency or environmental sustainability.

A 3D-printed prototype of the final tray design was produced and reviewed with hospital staff. Initial feedback was positive, especially regarding the tray's potential to improve both practical efficiency and emotional well-being. However, further testing with patients is necessary to fully evaluate the design's effectiveness in real-world settings. Testing will focus on how the tray performs under frequent use and washing, as well as its impact on patient psychological comfort.

Conclusion

The redesigned hospital meal tray offers a balanced solution to both the practical and emotional needs of patients. The final design provides a well-organized layout for meal components while integrating emotional support features such as personalisation and creative engagement for younger patients. By addressing these aspects, the tray is expected to improve the overall meal experience, enhancing both patient satisfaction and recovery. Further steps include patient testing to refine the design and finalize the material selection, ensuring the tray meets the diverse needs of healthcare environments while positively impacting the emotional and physical well-being of patients.