User-Centred Design For Decision Support Tools for Hospital at Home

As healthcare models evolve to meet the demands of an ageing population and the constraints imposed by global health crises, the Hospital at Home (HaH) model has emerged as a promising alternative to traditional hospitalisation. This model allows patients to receive acute hospital-level care in the comfort of their homes, offering numerous benefits, including reduced healthcare costs and improved patient satisfaction. However, the decision-making process for HaH admission remains complex and underdeveloped, often requiring rapid decisions in high-pressure situations. This complexity underscores the need for effective decision-support tools tailored to the needs of patients, caregivers, and healthcare providers. The study discussed here focuses on co-designing a decision support app, 4PACS, to address these challenges by incorporating all stakeholders' perspectives in the HaH admission process.

Understanding Stakeholder Perspectives in HaH Admission

The initial phase of developing the 4PACS app involved conducting semi-structured interviews with patients, caregivers, and healthcare providers. The goal was to capture a comprehensive understanding of their experiences, attitudes and needs concerning HaH care and admission decision-making. Key themes emerged from these interviews, highlighting the importance of user-centered design in creating effective decision-support tools.

Patients and caregivers generally expressed positive attitudes towards HaH, appreciating the comfort and familiarity of receiving care at home. However, they also reported significant knowledge gaps about the HaH programme before admission, leading to anxiety and uncertainty. Healthcare providers echoed these sentiments, emphasising the need for clear, concise information to educate patients and support better shared decision-making. Providers also highlighted the challenges they face in patient selection for HaH, citing concerns about identifying clinically and socially appropriate candidates within the constraints of an emergency department or inpatient setting.

Designing for User Needs: Content and Functionality

Based on the feedback from stakeholders, several critical needs were identified that would shape the design and functionality of the 4PACS app. Firstly, there is an apparent demand for accessible, transparent information that describes the HaH programme in detail, including its components, care team roles, and differences from traditional inpatient care. This information must be presented in a user-friendly manner, utilising clear language and visual aids to accommodate varying levels of health literacy among patients and caregivers.

The app's functionality must also address the specific needs of healthcare providers, who require tools that integrate seamlessly into their workflow. Features such as auto-populating patient data and providing risk stratification scores can help streamline the decision-making process, reducing the burden on providers and increasing the likelihood of HaH being considered a viable option. Furthermore, the app must be adaptable to the diverse needs of its users, offering customisation options that allow for personalised care decisions based on individual patient profiles.

Overcoming Barriers to Implementation

While the development of the 4PACS app shows promise, several potential barriers to its successful implementation were identified. Providers expressed concerns about the app's ability to accurately represent patients' multidimensional risk profiles, which are crucial for making informed HaH admission decisions. There is also the risk of conflict between app-generated recommendations and clinical judgment, which could undermine the tool's credibility and adoption.

To mitigate these challenges, the app must be designed with a robust framework incorporating clinical and non-clinical factors into its decision-making algorithms. This includes considering social support systems, home environment suitability, and patient or caregiver preferences alongside clinical indicators. Additionally, ongoing user engagement through participatory design sessions and usability testing is essential to ensure that the app remains aligned with its users' needs and expectations.

Conclusion

The development of the 4PACS decision support app represents a significant step towards enhancing the HaH admission process through user-centred design. By incorporating the perspectives of patients, caregivers, and healthcare providers, the app is tailored to address these key stakeholders' specific challenges and needs. However, the success of such a tool will depend on its ability to integrate seamlessly into clinical workflows, provide accurate and reliable information, and support shared decision-making without overwhelming its users. As the next phases of development unfold, continued collaboration with end-users will be critical to refining the app and ensuring its practical utility in real-world healthcare settings. Ultimately, tools like 4PACS can potentially improve patient outcomes and make HaH a more accessible and sustainable option for acute care.

Published on : Sun, 1 Sep 2024