



KEY POINT SUMMARY

OBJECTIVES

The objective of the study was to propose a visual tool, the Integrated Patient Journey Mapping Tool (IPJM) that would simultaneously consider the factors of performance improvement, regulatory constraints, and the patient experience.

An integrated patient journey mapping tool for embedding quality in healthcare service reform

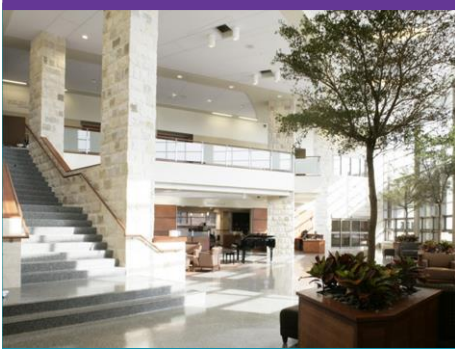
McCarthy, S., O'Raghallaigh, P., Woodworth, S., Lim, Y. L., Kenny, L. C., Adam, F., 2016 | *Journal of Decision Systems*. Volume 25, Issue S1, Pages 354-368

Key Concepts/Context

Healthcare facilities have complex processes that require adequate monitoring to provide a satisfying experience to the patient. Having an efficient and compliant process doesn't necessarily guarantee good overall patient satisfaction. There are rules and regulations that control the experience patients have in a facility. There are constraints, medical protocols, certifications, and data sharing protection to ensure the well-being and privacy of healthcare recipients. The patient experience is in need of a measuring instrument to help improve overall performance. The authors of this study have developed a modeling tool, using a human-centered design research approach, to evaluate the patient experience using facility journey mapping.

Methods

The study started with a literature review of the latest healthcare service reform frameworks. The following methods for mapping the patient experience were highlighted: 1- Journey maps 2- User personas 3- Storyboards. A prototype was evaluated to ensure the consideration of performance improvement, regulatory constraints, and patient experience goals in the design of the IPJM tool. Four six-hour workshops included a multidisciplinary team of stakeholders composed of two clinicians, three system developers, one information architect, a business analyst, and a head facilitator focused on deriving the requirements of a connected antenatal system monitoring the well-being of expectant mothers. Various sources like the NICE guidelines for managing hypertension during pregnancy were used to analyze the best practices to manage patient pathways. Moreover, information requirements were researched based on the Health Service Executive's maternity health record, and the Data Protection Act guidelines.



The Center for Health Design: Moving Healthcare Forward

The Center for Health Design advances best practices and empowers healthcare leaders with quality research that demonstrates the value of design to improve health outcomes, patient experience of care, and provider/staff satisfaction and performance.

Learn more at
www.healthdesign.org

The modeling tool was designed using an approach benefitting from the practice of design and the science of design. Design science being focused on identifying and generating abstract knowledge was used first to guide the design of the IPJM tool. Design practice being focused on using abstract knowledge also was used to design and evaluate successive prototypes. In this study, the design science and the design practice activities were integrated tightly, as one output influenced the other. A sample of methods was applied to evaluate the IPJM tool prototype and was presented in a table. To conceptualize the patient journey and to understand the problem domain using common vocabulary an ontology was developed. Next, a patient journey mapping ontology was visualized in a chart based on the literature reviewed, qualitative research, and the multidisciplinary team. The ontology was split into three areas:

- 1- Patient Persona – A characterization of the user group being considered.
- 2- Medical Timeline – A division of care across a defined timeframe.
- 3- Medical Pathway – A description of the consecutive events in the care episode which had eight subcomponents: Encounters, Tasks, Goals, Constraints, Actors, Emotional Journey, Physical Journey, and Device Touch Points.

After the completion of the ontology the IPJM modeling tool was developed through iteration and evaluation. The tool template was represented visually in a table with the Patient Persona on the left, the Medical Pathway and its components in the center, and the Medical Timeline across the top. The Goals, Constraints, and Actors were placed under the Tasks components. The stakeholders used Post-it Notes that they placed on the template to describe elements of the healthcare service. This system provided the flexibility of rearranging the notes and using colored markers to connect them or show where change was needed.

Findings

The authors stressed that the IPJM tool developed would help stakeholders map and test models that balance patient experience, performance improvement, and regulatory constraints. The development of the tool was achieved by using journey mapping, user persona, and storyboards to graphically demonstrate key domain knowledge. The ontology used had team constraints but allowed for the accessibility and adaptability to various specialties. The resulting tool would enable and promote creative thinking regarding healthcare service reforms and would allow for a dialogue between the stakeholders and facility designers to improve future designs.



Limitations

Further evaluation and analysis of the tool is required and will be carried out in future studies according to the authors. Limitations included team members not fully committed to using the template for modeling problems, so future versions need to be more capable of engaging the practitioners. Small displays were used that limited the visibility and legibility of all components. In addition, the IPJM did not make explicit reference to the key performance indicators such as waiting times and other metrics like productivity and cost-effectiveness. A more interactive tool needs to be developed to give a complete picture of the complexities of the healthcare system.

Design Implications

It was suggested by the authors that healthcare service reforms should consider performance improvements, regulatory constraints, and patient experience in methodologies adopted that would be reflected in functionality, engineering, and the patient aesthetics experience. The IPJM tool would allow designers to visualize patient journeys through a hospital to better design future facilities and improve the patient experience.

The Knowledge Repository is a collaborative effort with our partners

Academy of
Architecture for Health
an AIA Knowledge Community

AAHF
ACADEMY ARCHITECTURE HEALTH
FOUNDATION

ASHE
Optimizing health care facilities

FGI



The American
Institute
of Architects

Additional key point summaries provided by:

NIHD | Nursing Institute for
Healthcare Design
LEADERSHIP • EDUCATION • ADVOCACY

RESEARCH DESIGN
CONNECTIONS