



Scan for demo

An open-source ePROM platform for the effective and efficient collection and analysis of PROMs in low-resource settings

Introduction

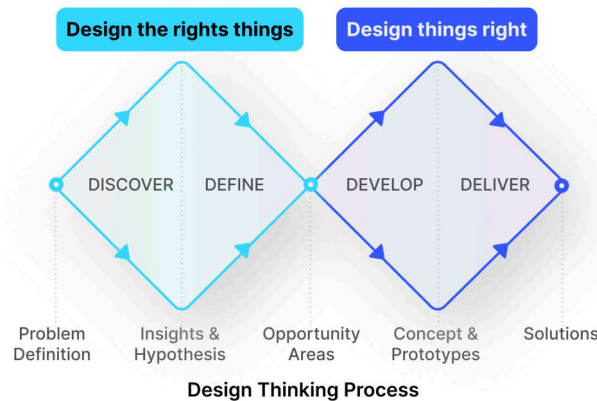
Noncommunicable diseases (NCDs) present an increasingly significant challenge to health systems across the world. NCDs disproportionately affect people in low- and middle-income countries (LMICs), where ensuring access to affordable healthcare for a majority of the population remains a major obstacle. Boosting digital health solutions can help prevent millions of deaths from NCDs.

Despite the increasing relevance of patient-reported outcome measures (PROMs) in managing NCDs, they are not yet integrated into routine medical practice in LMICs. Existing electronic PROM (ePROM) platforms are proprietary, have a significant financial cost and offer limited customization.

Open-source is a concept that revolves around access and distribution. Open-source software could hold the key towards the democratization of medical technologies and has the potential to accelerate the achievement of United Nations Sustainable Development Goals.

Methodology

Design thinking (DT), a human-centered design (HCD) approach, was fundamental in the design and development of PROCare, an ePROM platform for the collection and analysis of PROMs. HCD is an approach to product and service development and DT is an iterative process which prioritizes the needs, preferences, and limitations of the end-users at every stage of the design and development process. This facilitated development, testing and refinement of prototypes based on continuous user feedback, ensuring the platform's usability and effectiveness. Semi-structured interviews were conducted to ensure that PROCare met the specific needs of end-users, including healthcare providers, administrators, patients, and caretakers.

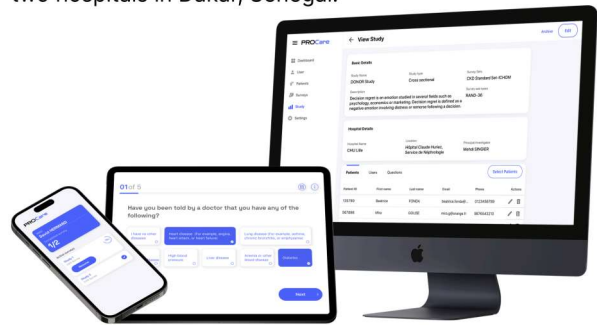


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Results

Leveraging HCD and DT, we have successfully developed PROCare, a robust, flexible and cost-effective solution to address the unique challenges of implementing PROMs in LMICs. The platform features a patient-facing mobile application for easy completion of PROMs and a web dashboard that provides medical personnel with comprehensive insights into patient outcomes. A pilot study is currently underway to evaluate the technological feasibility of implementing the ICHOM Chronic Kidney Disease (CKD) standard set for dialysis patients, demonstrating good adoption at two hospitals in Dakar, Senegal.



Conclusion

PROMs are essential tools for enhancing patient-centered care, improving clinical outcomes and driving quality improvement in healthcare. PROCare addresses a critical gap in LMICs by providing a lightweight, efficient, and scalable solution for implementing PROMs. Its open-source nature offers flexibility for customization by local IT teams, fostering continuous improvement and innovation through community collaboration. PROCare contributes to accelerating the digital transformation and democratization of healthcare systems, helping to mitigate the impact of NCDs by alleviating the burden on healthcare systems in LMICs. It presents a crucial step towards implementing value-based healthcare (VBHC) in LMICs.

