

Inclusive Conversational Agents and Patient Data Use for R&D in Sweden

AKHONA CIKIZWA KHUMALO and ALA SARAH ALAQRA, Information Systems, Karlstad University, Sweden

Akhona Cikizwa Khumalo (Ph.D. student). Her research area is eHealth, currently her research focuses on Human-AI collaborations in healthcare settings, and she has an interest in the effectiveness and efficiency of collaborative tasks and decision-making between AI agents, practitioners, and patients, and the impact this collaboration has on work processes, quality of patient care, and patient safety. Her previous research has focused on multidisciplinary team meeting records in cancer care [3]. Ala Sarah Alaqra (assistant professor). Prior relevant empirical work has focused on human aspects for trust and adoption of privacy enhancing technologies (PETs), and machine learning based analysis of data, specifically for eHealth use cases with various stakeholders. Recent research has focused on multilayered consent for data sharing and providing structural and functional explanations of PETs to lay and expert users [1, 2]. With our research interests in human-AI hybrids, and privacy and security, we believe that finding new ways to handle patients' consent for access and use of their healthcare data, can protect and empower patients, while simultaneously allowing AI developers to gain wider access to data. While clinical datasets provide great value to both scientific research and the clinical care, there is a need to address when and how to seek patient consent for research and development (R&D) purposes, and AI-based clinical decision-making. Policy-based inclusion of clauses about access to information for R&D purposes and communicating and recording conditions for data use as it is generated may be plausible solutions. Informed consent interventions can improve comprehension of informed consent by patients. However, it is a challenge to inform patients using passive means such as leaflets and privacy policies. Conversational tools offer opportunities to better inform patients prior to their consent in an interactive manner and can retrieve and share information about who will have access to the data, how data minimization is done, and what data can be seen. With the ability to handle large amounts of data, language translation, and natural language processing (NLP), conversational agents can benefit persons with visual impairments, and facilitate inclusivity. We acknowledge that potential negative consequences and accuracy of AI agents that inform and aid decision-making should be carefully considered. This research seeks to explore the use of conversational agents in providing fair access and transparency regarding healthcare data use; placing more control in the patients' hands, in line with the objective of the Swedish Vision for eHealth 2025 to provide safe and secure information processing.

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