Abstract

Background: Artificial intelligence (AI) is often presented as a technology that will change healthcare and be useful in clinical work in disease prediction, diagnosis, and precision health. More knowledge is needed regarding the value of AI applications based on the perspectives of healthcare leaders to understand their roles as gatekeepers and facilitators for successful implementation.

The purpose of the study: To explore healthcare leaders’ perceptions of the value of AI applications in clinical work.

Methods: The study had an explorative qualitative approach. Individual interviews were conducted from October 2020 to May 2021 with 26 healthcare leaders with different experiences in implementing AI in clinical practice in a county council in Sweden. Inductive qualitative content analysis was used, and eight sub-categories and three categories emerged.

Findings: The value of AI applications in clinical care was described in terms of expected benefits for patients as tools supporting person-centered information and individualized self-management. The expected benefits for healthcare professionals included decision-support in diagnostics, risk assessments, and treatment recommendations but also providing warning systems and second opinions in clinical work. On an organizational level, the benefits comprised patient safety and decision-support in prioritizing healthcare resources in and across healthcare organizations.

Conclusions: The healthcare leaders perceived that AI applications would provide value on different levels in healthcare for patients, healthcare professionals, and organizations. Across these levels, the implementation of AI can support person-centeredness, patient self-management, quality of care, patient safety, and resource optimization.

Keywords: AI applications, healthcare leaders, qualitative study, value