

Conference Abstracts

ONCIMS: An Integrated, Data-Driven Oncology Platform to Reduce Cancer Care Disparities in Low-Resource African Settings

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Background

Cancer care in many low-resource African settings relies on fragmented, paper-based record systems that are poorly suited to the complexity of oncology care. The absence of integrated, context-appropriate oncology information systems limits access to reliable cancer data, clinical decision support, referral coordination, facility mapping, and longitudinal patient follow-up. Patients and caregivers often lack access to trusted cancer information, peer support networks, and structured financial support mechanisms such as crowdfunding. These gaps contribute to delayed diagnosis, misdiagnosis, loss to follow-up, poor treatment outcomes, and significant psychosocial and financial distress, including catastrophic health expenditures and forced sale of household assets.

Methods

We co-designed and developed the Oncology Information Management System (ONCIMS) using a participatory, implementation science-driven approach to ensure contextual relevance and clinical usability. ONCIMS integrates two complementary components: ONCIMS+, a data-driven clinical oncology information management system, and CanInfoHub, a patient- and community-facing cancer information platform. ONCIMS+ supports structured and longitudinal management of cancer patient data,

including clinical clerking, diagnostic imaging and pathology, chemotherapy documentation, risk factor assessment, referrals, and follow-up. CanInfoHub provides verified cancer information, directories of cancer care facilities, AI-assisted service matching, patient and caregiver networking, and structured crowdfunding mechanisms. Mixed-methods evaluations assessed feasibility, acceptability, usability, unmet needs, pain points, and willingness to pay through surveys, focus group discussions, and iterative user testing

Results

ONCIMS is currently being piloted at the Uganda Cancer Institute, with active deployment of ONCIMS+ (<https://oncims.co.ug/>) and public access to CanInfoHub (<https://caninfohub.org/>). Early implementation demonstrates successful integration into routine oncology workflows, improved organization of clinical information, enhanced care coordination, and strengthened follow-up. Clinicians, patients, and caregivers reported high usability, feasibility, and acceptability, alongside improved access to cancer information, clearer navigation of services, and increased psychosocial support. There was a strong willingness across all user groups to continue using the platform.

Conclusion

ONCIMS demonstrates the feasibility and value of an integrated, data-driven oncology platform for addressing systemic gaps in cancer care delivery, information access, and continuity of care in low-resource African settings. By

strengthening clinical workflows while supporting patients and caregivers beyond the clinic, ONCIMS offers a scalable and context-appropriate model for reducing cancer care disparities and strengthening oncology health systems across Africa