



St. Jude Global Scholars Projects: Diriba Fufa Hordofa



Implementation Study of Integrating Adapted Resource and Implementation Application (ARIA) and Hospital Based Cancer Registries at Two Cancer Treatment Units in Ethiopia

This project aimed to strengthen childhood cancer care by conducting an implementation study of the integrated implementation of the Adapted Resource and Implementation Application (ARIA) Guide and Hospital-Based Cancer Registries (HBCRs) in pediatric oncology units at Jimma University Medical Centre and St. Paul's Hospital Millennium Medical College in Ethiopia. The overarching goal was to improve the quality, continuity, and accountability of pediatric cancer care through digitalization, standardization, and data-informed practice.

The project employed a mixed-methods implementation science approach, recognizing that success relied not only on the tools but on how they were adopted, integrated, and sustained. Implementation mapping guided the work, with formative and summative evaluation based on established frameworks. The global health significance of this project lies in demonstrating a feasible, scalable model for digitizing and standardizing pediatric oncology care in low-resource, public hospital settings, shifting norms from ad-hoc, paper-based processes toward protocol-driven, data-informed pediatric oncology management.

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Project Details



Location
Ethiopia



Setting
Multiple Centers within a Country



Health Condition
Childhood Cancer



Focus Areas
Equity, Quality



Target Age Group
All Pediatric Patients

Systems-Level Change

Participants

258 Children

12 Health Care Workers

258 Caregivers

UN Sustainable Development Goal

Goal 3: Good Health and Well-Being

Goal 9: Industry, Innovation and Infrastructure

Goal 10: Reduced Inequalities

Goal 17: Partnerships for the Goals

WHO Health System Building Blocks

Health information systems

Health service delivery



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Key Findings

The key findings of this Global Scholars Project are summarized based on the RE-AIM framework as follows:

- **Reach:** Data capture and system access-the implementation successfully registered 241 new pediatric oncology cases across the two hospitals over an 11-month period, demonstrating substantial initial data capture. However, reach was limited by protocol restrictions, as the ARIA tool was initially only applicable to Hodgkin lymphoma covering a subset of cases.
- **Effectiveness:** Both digital tools improved data quality and key care processes. ARIA enhanced treatment standardization and safety by automating chemotherapy dose calculations, thereby reducing manual errors. The HBCR improved data accuracy and completeness, enabling better patient tracking and identification of patterns like treatment abandonment and completion rate.
- **Adoption:** Institutional and staff uptake-adoption was strongly enabled by leadership commitment. Key barriers included reliance on externally funded staff (e.g., data clerks), misalignment with existing hospital EMR systems leading to duplicate data entry, and a perceived low priority of pediatric oncology data within the broader national health system.

Systems-Level Change

[GICC CureAll Projects](#)

2. National Cancer Control strategy development/implementation

5. Defining national standards and guidelines for index cancers

8. Strengthening & linking cancer registries (population- & hospital-based)

9. Country dashboard for childhood cancer monitoring



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Key Findings

- **Implementation:** Successful workflow integration relied on clear successful implementation relied on clear, co-designed roles and SOPs within multidisciplinary teams. Major barriers were logistical and resource constraints, such as unreliable internet, which disrupted clinical workflows. The systems remained largely siloed from broader HMIS and EMR platforms, hindering efficiency and data interoperability.
- **Maintenance:** Long-term sustainability is currently at risk due to dependency on donor-funded human resources and a lack of formal integration into hospital and national budgets and policies. Institutionalization strategies, such as embedding tool-specific indicators into hospital Key Performance Indicators (KPIs) at both sites were identified as crucial for maintenance. Scalability depends on national policy endorsement, expansion of ARIA to cover more cancer types, and integration with national data systems like DHIS-2.



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