An mHealth intervention to improve guardians’ adherence to children’s follow-up care for acute lymphoblastic leukemia in Tanzania (GuardiansCan Project): protocol for a development and feasibility study

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Background

- Cancer is a leading cause of death during childhood and in low- and middle-income countries, survival rates can be as low as 20%.
- A lack of information and support for guardians has been reported as one of the major factors contributing to the low childhood cancer survival rates in Sub-Saharan Africa.
- The overall goal of the GuardiansCan project is to increase guardians’ adherence to children’s medications and follow-up visits and to decrease their psychological distress with the help of mHealth technology.

Methods

Overview

- Following the 2021 United Kingdom Medical Research Council (MRC) framework for developing and evaluating complex interventions, we will develop an mHealth intervention for subsequent testing.
- We will implement public contribution activities throughout the GuardiansCan project via the establishment of a Guardians Advisory Board (GAB) and to examine the acceptability, feasibility, and perceived impact of GAB activities (Study I).
- The GuardiansCan project is divided into two main phases in accordance with the 2021 MRC Framework: (1) intervention development (Study II and III) and (2) feasibility (Study IV).
- Figure 1 provides an overview of the objectives and study design for Study I–IV.

Guardians Advisory Board (GAB)

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<thead>
<tr>
<th>Study</th>
<th>Description</th>
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<tbody>
<tr>
<td>I</td>
<td>Implement public contribution throughout the GuardiansCan project via the establishment of a GAB and to examine the feasibility, acceptability, and perceived impact of GAB activities</td>
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<td>II</td>
<td>Explore guardians’ needs and preferences concerning the provision of follow-up care reminders, information, and emotional support</td>
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<td>VI</td>
<td>Examine clinical, methodological, and procedural uncertainties concerning the intervention study procedures to prepare for the design and conduct of a future randomized controlled trial of the mHealth intervention</td>
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<td>III</td>
<td>Co-design an mHealth intervention providing guardians with follow-up care reminders, relevant information, and emotional support</td>
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Study design: Semistructured interviews and impact logs

Setting

- The main research site is the pediatric oncology unit at Muhimbili National Hospital (MNH), Dar es Salaam, Tanzania.

Recruitment

- Guardians (Study I-IV) will be recruited from 7 regions in Tanzania and the island of Zanzibar (see Figure 2) and identified via MNH patient records.
- Healthcare professionals working at the pediatric oncology unit at MNH (Study II and III) and technological experts (Study III) will be recruited via in-person networks.

Discussion

- Developing interventions to address childhood cancer treatment inequalities and avoidable deaths from childhood is a public health priority.
- Despite piloting mHealth interventions across Sub-Saharan Africa, mHealth interventions are seldom scaled up due to lack of stakeholder involvement and consideration of the implementation context.
- We hope our significant stakeholder involvement and consideration of context will enhance the future implementation potential of the intervention.

References

GuardiansCan protocol