## Telehealth to prevent suicide in Tanzanian HIV clinics: Perspectives of mental health professionals

Alyssa Martinez, MScGH<sup>a</sup>, Brandon A. Knettel, PhD<sup>a,b,c</sup>, Ismail Amiri, BA<sup>d,e</sup>, Elizabeth Knippler, MPH<sup>b,c</sup>, Linda Minja, BS<sup>d</sup>, Judith Boshe, MD<sup>e,f</sup>, Blandina T. Mmbaga, MD, PhD<sup>a,d,e,f</sup>, Sylvia Kaaya, MD, PhD<sup>g</sup>, Michael V. Relf, PhD<sup>a,b,c</sup>, David B. Goldston, PhD<sup>h</sup>

<sup>a</sup> Duke Global Health Institute, Duke University, Durham, NC

- <sup>b</sup> Duke University School of Nursing, Durham, NC
- <sup>c</sup> Duke Center for AIDS Research, Duke University, Durham, NC
- <sup>d</sup> Kilimanjaro Clinical Research Institute, Moshi, Tanzania
- <sup>e</sup> Kilimanjaro Christian Medical Centre, Moshi, Tanzania
- <sup>f</sup> Kilimanjaro Christian Medical University College, Moshi, Tanzania
- <sup>9</sup> Muhimbili University of Health and Allied Sciences, Dar es Salaam, Tanzania
- <sup>h</sup> Department of Psychiatry and Behavioral Sciences, Duke University, Durham, NC

**Corresponding Author:** Correspondence concerning this article should be addressed to Brandon A. Knettel, Ph.D., Duke University School of Nursing, 307 Trent Drive, Room 3080, Durham, NC 27710. Email: <u>Brandon.Knettel@duke.edu</u>, Phone: 919-660-1218.

Author Disclosure Statement: The authors have no competing interests to declare in relation to this research.

**Funding:** Brandon Knettel is supported by a Career Development Award from the NIH National Institute of Mental Health (K08 MH124459). We also acknowledge support received from the Duke Center for AIDS Research (P30 AI064518).

## Abstract

Suicide is a leading cause of death among people living with HIV (PLWH) worldwide, with prevalence of suicide deaths more than double among PLWH than among the general public. Additionally, 77% of all global deaths by suicide occur in lowand middle-income countries (LMICs), yet research and intervention development for suicide prevention is focused almost exclusively in high-income countries. The burden of suicide in LMICs is further exacerbated by the lack of formal mental health treatment. In Tanzania, only 278 mental health professionals attempt to serve the mental health needs of nearly 60 million people. Despite increasing penetration of smart phones, telehealth interventions for suicide prevention are extremely underutilized. The goal of this research was to explore the potential for using telehealth to improve access to vital suicide prevention counseling in Tanzanian HIV care. To achieve this goal, we conducted in-depth qualitative interviews with 8 mental health professionals working in two hospitals in the Kilimanjaro region of Northern Tanzania. Participants were approached and invited to participate at the hospitals, and those who agreed were interviewed in-person by a skilled qualitative researcher. Audio recordings were transcribed and we performed team-based analysis of the transcripts using an applied thematic approach and NVivo 12 software. Participants included 4 psychiatric nurses, 3 medical doctors, and a Bachelor's level counselor, with an average of 10 years of mental health work experience. Participants described frequent occurrences of suicidal ideation among PLWH in Northern Tanzania and low mental health service use. Four related themes emerged related to patient-level barriers to treatment adherence: intersecting HIV and mental health stigmas, underlying family conflict, financial challenges, and limited HIV and mental health literacy. In discussing telehealth

## INTERVENTIONS FOR SUICIDAL IDEATION IN AFRICA

treatment models, participants raised concerns about patient privacy and confidentiality, access to technology, and treatment costs. However, if these concerns could be addressed, providers were enthusiastic about the potential for telehealth to fill vital human resource gaps in the areas of adherence counseling and mental health support. The mental health workers provided invaluable feedback about areas of focus for a future telehealth intervention, treatment barriers that will need to be overcome, and the acceptability of this modality. In the next stage, we will implement principles of user-centered design to elicit detailed, iterative stakeholder feedback to inform intervention development. A telehealth-delivered intervention for suicide prevention among PLWH has strong potential to fill a critical need by linking at-risk individuals to counseling in this under-resourced setting.