Lessons Learned from COVID-19 Mobile Health Applications: Improving Cancer Prevention, Treatment, and Care in Low- and Middle-Income Countries

Darelle Van Greunen[1*], Larry D Icard[1,2*], Alida Veldsman[1], Margaret Williams[1] and Phumla Diamini[1]

[1]*Centre for Community Technologies, Nelson Mandela University, South Africa*

[2]*College of Public Health, Temple University, USA*

Submission: January 26, 2024; **Published:** February 02, 2024

*Corresponding author: Darelle Van Greunen, Larry D Icard, Centre for Community Technologies, Nelson Mandela University, South Africa, College of Public Health, Temple University, USA

Abstract

The mHealth response to the COVID-19 pandemic provides valuable insights that can enhance the prevention, treatment, and care of cancer patients in LMICs. This discussion aims to spotlight crucial insights derived from this experience.

Keywords: Cancer; COVID-19; mhealth; Applications; South Africa; Low- and middle-income countries

Introduction

As of May 2023, COVID-19 has claimed around 7 million lives globally, with lower-income countries bearing a death toll four times higher than high-income countries [1]. Additionally, approximately 8 million people die from cancer each year, with 5 million of those cases occurring in low- and middle-income countries (LMICs) [2]. Disparities in cancer incidence and mortality in LMICs mirror those observed in COVID-19 outcomes [3-5]. Both diseases share lifestyle and behavioral risk factors, yet COVID-19 directly impacts cancer patients, particularly those with compromised immune systems. However, COVID-19 vaccines have proven effective in reducing the severity, hospitalization, and mortality rates among cancer patients.

mHealth COVID Solutions

The emergence of more than 346 COVID-related apps and over 1200 cancer-related apps on major app stores highlights the accelerated innovation and adoption of mHealth during the pandemic [6-9]. The rapid evolution of COVID-19 variants has further catalyzed the use of mHealth in public health efforts, potentially revolutionizing cancer care services. From preventive measures to post-COVID-19 care, mobile applications have played pivotal roles in managing the pandemic, offering risk assessment, symptom management, contact tracing, and programmatic decision-making tools [10,11].

Barriers and Solutions

Various barriers contribute to elevated cancer morbidity and mortality rates in LMICs, including low awareness, delayed diagnosis, inadequate infrastructure, and limited access to technology [12-14]. Leveraging mHealth responses to COVID-19 can inform strategies for addressing these barriers. For instance, Mobile platforms like chatbots and WhatsApp have been effective in disseminating COVID-19 information, underscoring the importance of culturally tailored cancer education messages [15-17]. Additionally, cancer screening apps and self-examination tools have facilitated early detection and management, while mHealth applications aid in treatment management and patient support.

Conclusion

The mHealth response to COVID-19 offers valuable insights that can enhance cancer prevention, treatment, and care in LMICs. The widespread adoption of mHealth solutions during the pandemic underscores their potential in addressing healthcare disparities and improving patient outcomes. Recognizing cancer as a global health crisis akin to COVID-19 is crucial for maximizing the impact of mHealth solutions in LMICs.

References

1. OXFAM (2022) COVID-19 death toll four times higher in lower-income countries than rich ones. OXFAM International.

2. Elflein J (2023) Number of novel coronavirus (COVID-19) deaths worldwide as of May 2, by country and territory. statista.

3. Aung MN, Koyanagi Y, Yuasa M (2021) Health inequality among different economies during early phase of COVID-19 pandemic. J Egypt Public Health Assoc 96(1): 3.

4. Rossman AH, Reid HW, Pieters MM, Mizelle C, Von Isenburg M, et al. (2021) Digital Health Strategies for Cervical Cancer Control in Low- and Middle-Income Countries: Systematic Review of Current Implementations and Gaps in Research. J Med Internet Res 23(5): e23350.

5. Shahzad H, Mubarik F, Sattar AK (2021) The Novel Coronavirus (COVID-19) Pandemic and the Response in Low-to-Middle Income Countries. Curr Breast Cancer Rep 13(2): 63-68.

6. Adam R, McMichael D, Powell D, Murchie P (2019) Publicly available apps for cancer survivors: a scoping review. BMJ Open 9(9): e032510.

7. Bassi A, Arfin S, John O, Jha V (2020) An overview of mobile applications (apps) to support the coronavirus disease 2019 response in India. Indian J Med Res 151(5): 468-473.

8. Bender JL, Yue RYK, To MJ, Deacken L, Jadad AR (2013) A Lot of Action, But Not in the Right Direction: Systematic Review and Content Analysis of Smartphone Applications for the Prevention, Detection, and Management of Cancer. J Med Internet Res 15(12): e287.

9. Charbonneau DH, Hightower S, Katz A, Zhang K, Abrams J, et al. (2020) Smartphone apps for cancer: A content analysis of the digital health marketplace. Digital Health 6.

10. Adans DCP, Bamberg S, Bertacchi FP, Caulfield B, Chappie K, et al. (2020) Can mHealth Technology Help Mitigate the Effects of the COVID-19 Pandemic? Supplementay Material. IEEE Open J Engineer Med Biol 1: 243-248.

11. Kondylakis H, Katehakis DG, Kouroubali A, Logothetidis F, Triantafyllidis A, et al. (2020) COVID-19 Mobile Apps: A Systematic Review of the Literature. J Med Internet Res 22(12): e23170.

12. Brand NR, Qu LG, Chao A, Ilbawi AM (2019) Delays and Barriers to Cancer Care in Low- and Middle-Income Countries: A Systematic Review. Oncologist 24(12): 1371-1380.

13. Omotoso O, Teibo JO, Atiba FA, Oladimeji T, Paimo OK, et al. (2023) Addressing cancer care inequities in sub-Saharan Africa: current challenges and proposed solutions. Int J Equity Health 22(1): 189.

14. Pramesh CS, Badwe RA, Bhoo PN, Booth CM, Chinnaswamy G, et al. (2022) Priorities for cancer research in low- and middle-income countries: a global perspective. Nat Med 28(4): 649-657.

15. Al Azri M, Al Hamedi I, Al Awisi H, Al Hinai M, Davidson R (2015) Public awareness of warning signs and symptoms of cancer in oman: a community-based survey of adults. Asian Pacific J Cancer Prev 16(7): 2731-2737.

16. MacDonald ME, Diallo GS (2019) Socio-cultural contextual factors that contribute to the uptake of a mobile health intervention to enhance maternal health care in rural Senegal. Reproductive Health 16(1): 1-12.

17. Washington A (2020) The development of a culturally-informed cervical cancer screening and prevention health intervention for African American women.

Your next submission with Juniper Publishers will reach you the below assets

- Quality Editorial service
- Swift Peer Review
- Reprints availability
- E-prints Service
- Manuscript Podcast for convenient understanding
- Global attainment for your research
- Manuscript accessibility in different formats
  (Pdf, E-pub, Full Text, Audio)
- Unceasing customer service

Track the below URL for one-step submission
https://juniperpublishers.com/online-submission.php