



Virtual education platforms bridge oncology training gaps in resource-limited regions worldwide

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INTRODUCTION

Healthcare disparities in lower socioeconomic (LS) regions have consistently been linked to increased cancer mortality rates.¹ Contributing factors include delayed diagnoses, limited access to care, inadequate infrastructure, financial constraints, and restricted availability of the latest medical knowledge and advancements.² These barriers underscore the urgent need for targeted interventions to address healthcare inequities and improve cancer outcomes in these underserved communities. Central to these efforts is the role of healthcare providers and institutions in delivering equitable care and developing sustainable solutions to reduce cancer mortality in LS regions.

In response to these challenges, MedNews Week (MNW) was established as a freely accessible digital platform designed to provide global oncology education. Unlike generalized platforms, MNW focuses on delivering accurate, up-to-date information tailored to the needs of healthcare professionals, particularly in low-resource regions. By hosting biweekly conferences featuring keynote presentations from leading experts and rising stars in oncology, MNW disseminates cutting-edge knowledge and practical strategies to a global audience spanning over 90 countries. This approach directly addresses the educational disparities that contribute to poor cancer outcomes in LS areas.

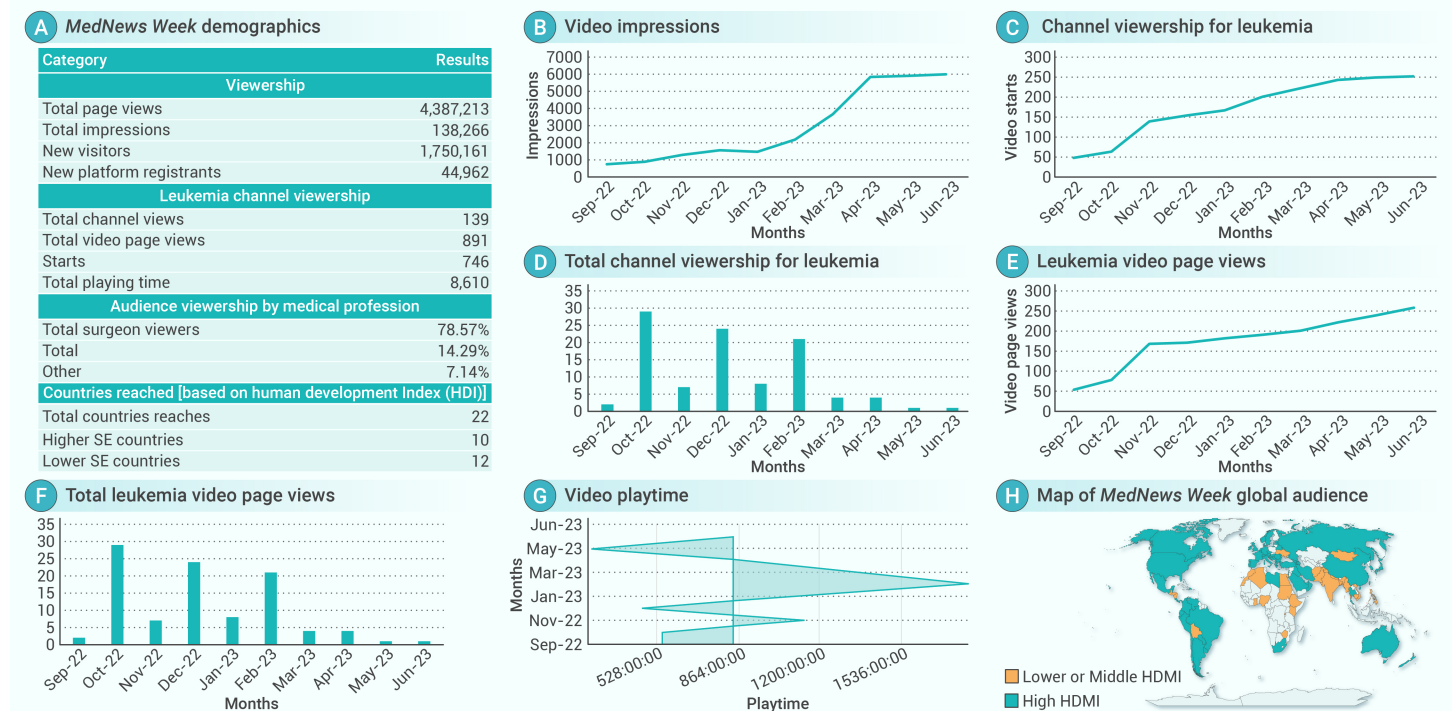


Figure 1. Growth metrics and audience demographics for MedNews Week (MNW) over an 11-month period (A) Illustrates the significant increase in total page views (4,387,213) and impressions (138,288) on the MNW platform, highlighting 1,750,161 new visitors and 44,982 new registrants engaged during this timeframe. (B-F) Details the linear growth of the Channel and associated video pages, showcasing 139 channel views and 891 total video views. (G) Lists videos that achieved 746 starts, accumulating a total viewing time of 8,610 minutes. (H) Presents the audience composition, with 78.57% surgeons and 14.29% allied healthcare professionals, distributed across 22 countries, including 12 from low socioeconomic areas such as Nigeria, Sudan, Georgia, and Bangladesh, and 10 from high socioeconomic areas.

MNW's unique mission to combat misinformation and advance health literacy distinguishes it among digital educational platforms. Through its collaboration with VuMedi, a global video education platform for physicians, MNW has further expanded its reach, enabling broader access to high-quality

oncology education. This partnership leverages VuMedi's extensive network to enhance the impact of MNW's hematology-oncology programming, particularly in regions where access to such resources is limited.

This study evaluates the effectiveness of MNW's educational initiatives in

narrowing the oncology training gap in LS regions. Metrics such as viewership, audience demographics, and user engagement were analyzed to assess the platform's impact on knowledge dissemination and skill enhancement among healthcare providers. By examining the outcomes of this partnership, the study contributes to the growing body of literature on the efficacy of virtual platforms in medical education. Ultimately, the findings aim to inform future efforts to address disparities in oncology education and improve patient outcomes by ensuring equitable access to high-quality cancer care resources.

MATERIALS AND METHODS

This study employed a comprehensive approach, combining online webinars and qualitative interviews with oncology healthcare professionals to assess the impact of digital platforms on oncology education. Both quantitative metrics, such as digital platform usage, and qualitative data from interview transcripts were analyzed to provide a holistic understanding of the topic.

Between September 2022 and July 2023, MNW featured presentations by 11 leading global experts in leukemia, which were made accessible via VuMedi. This approach facilitated the dissemination of cutting-edge information to healthcare professionals worldwide, effectively reducing traditional barriers to access.

The study examined a range of metrics, including viewership statistics and audience demographics, using data obtained from VuMedi as well as mixed-method analyses to assess engagement and reach.

RESULTS

Over 11 months, MNW experienced notable and consistent growth, evidenced by a linear increase in programming that generated a total of 4,387,213 page views and 138,288 impressions (Figures 1A-B). Analysis of the top-viewed audience occupation demographics revealed that the majority of viewers were healthcare professionals specializing in hematology-oncology, with significant engagement from medical students and researchers. MNW attracted 1,750,161 new visitors and welcomed 44,982 new registrants during this period (Figure 1A). The increase in viewership can be attributed to the diverse range of content offered by MNW, catering to the specific interests and needs of healthcare professionals in the hematology-oncology field. The growth in new visitors and registrants highlights the effectiveness of MNW's outreach efforts and the value that users find in the platform's resources. Moreover, the Leukaemia Channel and Video Pages exhibited consistent growth, featuring 139 channels and garnering a total of 891 video page views (Figures 1C-E). The strong engagement of users with video content, indicating a preference for multimedia resources in addition to written articles. The success of the Leukemia Channel and Video Pages underscores the importance of providing a variety of formats to cater to different learning preferences among healthcare professionals. These videos initiated 746 starts with a cumulative playing time of 8,610 minutes (Figures 1A & G). Notably, the audience composition primarily consisted of surgeons (78.57%) compared to allied healthcare professionals (14.29%) from a diverse array of 22 countries. Among these, 12 countries hailed from lower socioeconomic (LS) areas such as Nigeria, Sudan, Georgia, and Bangladesh, while ten countries represented high socioeconomic areas (Figures 1A & H). The diverse global audience highlights the need for accessible educational resources in healthcare, especially in underserved regions. The significant engagement from surgeons suggests a strong interest in this type of learning resource within the medical community-- providing educational content in various formats, such as videos, can effectively engage healthcare professionals worldwide. The need for continued efforts to reach a diverse audience, including those from lower socioeconomic areas, as stated. The engagement metrics for the Leukemia Channel and Video Pages underscored a high level of interest from the audience, with a significant number of video starts and extensive total playing time. The diverse geographic representation, encompassing both LS areas and high socioeconomic areas, highlights the global reach and impact of MNW's content. This diverse viewership signifies the platform's effectiveness in reaching a broad spectrum of healthcare professionals and underscores its potential to address medical education disparities on a global scale. This broad reach demonstrates MNW's

ability to break down educational barriers and ensure that vital medical knowledge is accessible to those who need it most. By providing reliable, up-to-date information and fostering a global network of healthcare professionals, MNW plays a crucial role in shaping the future of medical education and promoting leadership in health promotion. The results were encouraging, with high viewership and engagement, particularly among healthcare pros in hematology-oncology. It's not just about numbers; feedback highlighted online education's value, especially for underserved areas. MNW's growth over the year was steady, drawing in over 4 million page views and attracting both seasoned professionals and newcomers, particularly surgeons, from diverse backgrounds. This diversity, including viewers from both wealthy and lower-resource areas, emphasizes the platform's global impact.

CONCLUSION

MNW has successfully engaged a diverse global audience of physicians, with a significant proportion of viewers originating from lower socioeconomic regions. These findings highlight the platform's potential to address disparities in access to high-quality medical education, particularly in resource-limited settings.

Despite challenges, such as limited internet access and high costs, MNW has shown consistent growth, emphasizing its ability to reach underserved areas. By curating content that is both relevant and engaging, and incorporating contributions from global leaders in hematology-oncology, MNW addresses critical gaps in education, particularly in leukemia and related fields.

Future efforts should focus on overcoming persistent barriers to access and continuing to adapt content to meet the needs of diverse audiences. The platform's emphasis on delivering cutting-edge research and practical knowledge equips healthcare providers with essential tools to enhance patient care, positioning MNW as a valuable resource in the global medical education landscape.

In summary, MNW's approach demonstrates the capacity of digital platforms to mitigate disparities in medical education. Continued innovation and targeted outreach will be crucial in furthering its impact on healthcare professionals and patient outcomes worldwide.

DISCLAIMER STATEMENT

The opinions and assertions expressed herein are those of the authors.

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AUTHOR CONTRIBUTIONS

Yan Leyfman and Viviana Cortiana contributed equally to this work. Yan Leyfman conceived and designed the study, contributed to data analysis, and drafted key sections of the manuscript. Viviana Cortiana was instrumental in data collection, performed critical data analysis, and co-wrote the manuscript. Jenna Ghazal provided significant support in the literature review and data acquisition. Harshal Chorya and Maduri Balasubramanian contributed equally to the statistical analysis and interpretation of data. Gayathri P. Menon and Muskan Joshi assisted with experimental procedures and data verification. Helena S. Coloma played a key role in revising the manuscript and providing intellectual input. William B. Wilkerson and Chandler H. Park provided senior supervision, critical revisions of the manuscript, and final approval of the version to be published. All authors have read and approved the final manuscript.

DECLARATION OF INTERESTS

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