Abstract

E-learning platform for Medical Officers in Adolescent Friendly Health Clinics in Himachal Pradesh

Problem statement

Adolescents represent a significant demographic globally (over 1.2 billion) and within India (approximately 21% of the population).[1] The Rashtriya Kishor Swasthya Karyakram (RKSK), addresses health of adolescents through community, school, and facility-based approaches.[2] The COVID-19 pandemic disrupted health services, especially adolescent health services under the RKSK programme.[3] The suspension of physical trainings prompted an adaptable solution in form of an e-learning platform, developed by the state government and MAMTA Health Institute in 2022-2023 for medical officers in Himachal.

Innovation or Practice Description

This e-learning platform, a tripartite innovation by MAMTA, Pathfinder International, and WHO Geneva, translates the traditional resource book for medical officers into a dynamic digital format. The platform features 42 videos covering crucial adolescent health topics viz. Nutrition and anaemia in adolescents; Healthy lifestyle- prevention of NCDs among adolescents; Adolescent mental health; Sexual and reproductive health during adolescents; Prevention and management of substance misuse; Prevention and redressal of injuries and violence among adolescents; Promotion of safe use of internet, gadgets and social media; Adolescent health and climate change. It employs quizzes, case studies, video conferencing, and "Mentor Connect" features to reinforce learning. The platform's data dashboard displays course completion status and hosts the discussion forum, providing users with notifications for discussions and meetings. Before the platform was finalised and launched by the state government, it was validated with the users.

The Government of Himachal Pradesh nominated 100 medical officers (MBBS and MD doctors) at Adolescent Friendly Health Clinics (AFHCs) across 12 districts to participate in online orientation sessions on the platform. These clinics are designed to provide clinical and counselling services to adolescents in a welcoming and confidential environment.[4] Out of the 100 nominated medical officers, 83 registered in the course. MAMTA conducted orientations in August 2024 for all the registered medical officers, who were then given 90 days to complete the self-paced e-learning platform.

A structured mentoring framework, utilizing a multi-pronged approach, was deployed to ensure continuous support and engagement. A dedicated WhatsApp group, managed by the state and MAMTA, facilitates communication and provides regular updates. Virtual mentoring sessions led by subject matter experts (nominated by the state government) were invited to hold sessions

[1] Table C-13, Single Year Age Returns by Residence and Sex: Census of India 2011
[2] Training manual for Adolescent Health Counsellor, Resource Book, for Adolescent Health Counsellor
[3] Arora, M., Dringus, S., Bahl, D., Rizvi, Z., Maity, H., Lama, S., ... & Bassi, S. (2022). Engagement of health workers and peer educators from the National Adolescent Health Programme-Rashtriya Kishor Swasthya Karyakram during the COVID-19 pandemic: Findings from a situational analysis. *Plos one*, *17*(9), e0266758.
[4] https://nhm.gov.in/images/pdf/programmes/RKSK/Guidelines_(M-%20AFHRCs).pdf

on critical topics like substance misuse and adolescent mental health during the implementation phase.

Results and Evidence of Impact

The e-learning program shows promising engagement and completion rates. Of the 100 nominated medical officers, 83 registered, and 74 successfully completed the course. The 74 medical officers who completed the course were from various healthcare facilities across the state. The majority were from Civil Hospitals, followed by nine from Community Health Centers, five from Primary Health Centers, and five from Regional Hospitals. One medical officers each was enrolled from a District Hospital, a Medical College and a Zonal Hospital.

The data reveals varied engagement across modules for 74 medical officers. "Nutrition and Anaemia in Adolescents" (01:37:15) and "Promoting Healthy Lifestyles" (01:34:03) had the highest average time spent, while "Adolescent Health and Climate Change" saw the least (00:30:29). This suggests differing levels of interest or complexity among the topics in the e-learning program.

The e-learning platform demonstrated positive learning outcomes. The average pre-test score for the medical officers was 6.5 out of 10, increasing to 7.6 in the post-test, reflecting an 11% improvement. A minimum of 60% achievement score in post-tests was the benchmark for successful completion. Notably, those who initially scored below 60% showed significant gains in adolescent mental health (90%), adolescent health and climate change (80%), safe use of internet (75%), and knowledge of RKSK (74%). These results suggest the e-learning platform is effective in improving knowledge and competency in key areas of adolescent healthcare and that the E-learning can be as effective as traditional methods.

Scalability & Sustainability

The platform's design, development, and validation spanned 12 months, with a three-month implementation period where real-time user analytics revealed the knowledge shifts among the users. To ensure sustainability and scalability, MAMTA will continue to orient and mentor new medical officers identified by the state government in district Hamirpur covering more facilities beyond AFHCs. Concurrently, integration with the State Department’s Information and Technology server will embed the platform within the state's healthcare system. This strategic integration promotes long-term viability by leveraging existing infrastructure. The platform is designed to be adaptable for use in other Indian states, with the potential to augment medical officers’ training via a virtual platform. This scale-up potential aligns with the broader movement towards borderless universities and accessible teaching and learning via e-learning systems, reducing costs for each additional learner.

What resources or policies support it?

The initiative was supported by WHO Geneva, Under the WHO Technical Assistance (TA) Coordination Mechanism. At the national level, The Rashtriya Kishor Swasthya Karyakram (RKSK) which is the National Adolescent Health Programme in the nation supports it. Further,

the Digital India Initiative,[5] promotes the use of digital technologies across various sectors, including healthcare. E-learning platforms for medical professionals fit into the broader scope of this initiative.

Lessons Learned or Key Insights

The validation process of the modules, led to alterations in the platform. For example, during the validation process, several MOs pointed out that the navigation between modules was confusing and the need was expressed for a video-conferencing facility. This feedback led to a redesign of the course interface, simplifying the inclusion of the video conferencing facility. The constant supportive supervision of the Mamta team helped increase completion rates. Together with the periodic reminders sent from the MAMTA team and mail notifications from the National Health Mission, led to improvements in the course completion rate, It was observed that the users were completing the course in a staggered manner, achieving the full course over weekends. A clarity on the roles between MAMTA and Pathfinder facilitated efficient and timely project implementation. By clearly defining each partner's responsibilities and areas of expertise from the outset, duplication of effort was minimized, and a streamlined workflow was established. This clarity enabled both organizations to leverage their respective strengths and expertise, fostering a collaborative approach that accelerated the project's progress.

[5] Singh, M., Adebayo, S.O., Saini, M. *et al.* Indian government E-learning initiatives in response to COVID-19 crisis: A case study on online learning in Indian higher education system. *Educ Inf Technol* **26**, 7569–7607 (2021). https://doi.org/10.1007/s10639-021-10585-1