

fast facts

Project: Interactive, Structured, Multi-modal Clinical Guidelines to Improve Quality of Care by Rural Healthcare Providers in India
Lead Organization: Garhwal Community Development and Welfare Society (GCDWS)
Country: India
Budget: 40,000 AUD



situation

In many rural areas of India where physician density is low and accessibility to proper health facilities is poor, non-physician rural healthcare providers (RHPs) are the major providers of healthcare to millions. Most RHPs have a high school education, but their sources of training in health care are usually informal and thus not standardized. The quality of care they provide may be technically deficient and not aligned with standard disease management guidelines for community health workers.

solution

Non-physician rural health providers (RHPs) deliver health care in large parts of rural India, but most have not been trained formally; thus the quality of health care they deliver may not be standardized. This project was designed with the objective of enhancing and standardizing Rural Health Providers' (RHP) quality of care through use of disease management guidelines/protocols available on a user-friendly mobile phone platform.

The team used a system called Guidevue, invented by the team's project collaborator Dr. Sriram Iyengar, to develop the mobile phone-based medical protocols. The system is designed to provide multi-modal 'how-to' advice and teaching to perform simple procedures in a step-by-step way and enables integration of rich media (audio, pictures and video clips) into each step of the protocol. The technology is easy to use, and non-technical local teams can develop their own local adaptations of disease management protocols as necessary.

16 RHPs were included in the project from two sites in Tamil Nadu, a state in southern India. One group of 8 RHPs was comprised of independent male practitioners in the Tirupattur district, while the other 8 RHPs were all female community health workers linked to the outreach efforts of an NGO hospital called Tribal Health Initiative, or THI.

All 16 RHPs were formally trained for two days on the use of the mobile phone-based Guidevue system. A team of medical experts guided the RHPs in understanding and navigating through all the health content in the mobile applications. The group picked up the new skills of navigating through a touch-screen phone faster than expected. The team also observed that the mobile devices seemed effective at captivating the RHPs' attention and that all were receptive of listening to the information presented.

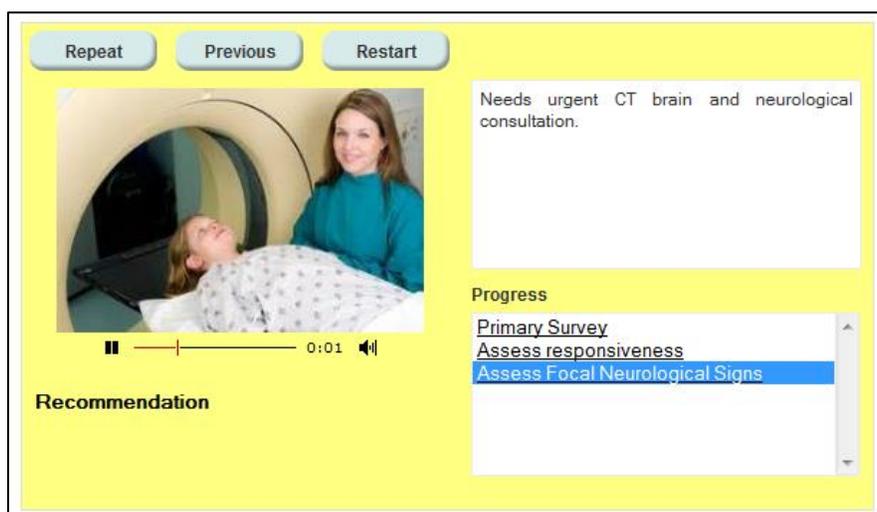
After the classroom training, in subsequent field-testing, staff used a randomized controlled study design and randomly assigned eight RHPs to the experimental group and eight to the control group. All sixteen were trained on mobile phones per above, but after the training only those in the experimental group received the Guidevue application on their mobile phones, while those in the control group received only the mobile phones without Guidevue and had to rely on paper-based written protocols.

Approximately 2 months after the training, the RHPs were assessed by a team of field investigators. The team used four study tools to assess usability, workload index, protocol compliance, and patient feedback of both the test and control groups. The team found that the overall mean protocol compliance of the experimental group (57.21%) was higher than that of the control group (52.70%), but was unable to perform significant statistical analysis due to the small sample size. A majority of the RHPs found the system useful and usable, were eager to have protocols for many more conditions loaded on the system, and found the audio instructions as the most useful part of the system. There was also a high level of patient acceptance for the system.

While a few of the RHPs reported that they may not use the Guidevue system for each and every patient when it came to common illnesses after they had mastered the protocols, they liked the multimedia system and would use it to check against their memory, much like a training or reference tool.

broader impact

The team plans to carry on with dissemination activities in the future, using their own resources, and also look for funds to develop a new project proposal in collaboration with additional local hospitals. The purpose of such a project would be to ensure that the technology becomes an inherent part of the larger health system for which it is developed, and to eventually scale to a regional and national level as part of an effort to standardize and raise the quality bar of health information.



Guidevue screenshot

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