



# The Computerworld Honors Program

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## Final Copy of Case Study

**Status:**

Laureate

**Year:**

2013

**Organization Name:**

UpToDate & Global Health Delivery Project at Harvard University (GHDonline)

**Organization URL:**

<http://www.uptodate.com/home/uptodate-donations-program>

**Project Name:**

UpToDate® Global Health Initiative

**Please select the category in which you are submitting your entry:**

Health

**Please provide an overview of the nominated project. Describe the problem it was intended to solve, the technology or approach used, how it was innovative and any technical or other challenges that had to be overcome for successful implementation and adoption. (In 300 words or less.)**

Clinicians providing medical care in resource-limited settings frequently practice with limited access to colleagues with specialized training or resources for advancement of clinical knowledge. A single clinician may act as internist, obstetrician, pediatrician and surgeon, and frequently must do so with insufficient information resources to address the broad range of health issues affecting patient care. The UpToDate® Global Health Initiative addresses these challenges and supports clinicians practicing in resource-limited settings by providing four things: 1) donated subscriptions to UpToDate, a peer-reviewed, evidence-based clinical resource developed to aid in diagnosis and clinical management, 2) ongoing development of clinical content specific to the needs of clinicians in these settings, 3) continuing medical education, and 4) a dedicated community on GHDonline to share expertise with other clinicians and to access resources for improvement of patient care. The Global Health Initiative is a partnership between UpToDate, part of Wolters Kluwer Health, and the Global Health Delivery

(GHD) Project at Harvard University. To optimize the program's impact, organizations applying to the program are required to appoint a clinician to be responsible for training colleagues on the use of UpToDate and for posting feedback for program enhancements via GHDonline. In addition to user-support challenges, overcoming access barriers has been critical to success (discussed further in #6). Internet connectivity in many resource-limited settings is not reliable, and many hospitals do not have computer access on the wards. To date, the Global Health Initiative has granted UpToDate subscriptions to 175 institutions and 8,400 clinicians caring for more than 2 million patients in 45 countries (Appendix 1). The program has also facilitated UpToDate access following natural disasters worldwide, including Haiti (2010 earthquake and subsequent cholera outbreak), Japan (2011 tsunami) and New Zealand (2011 earthquake).

**When was this project implemented or last updated? (Please specify month and year.) Has it incorporated new technologies and/or other innovations since its initial deployment? (In 300 words or less.)**

The UpToDate Global Health Initiative was launched in 2009 by UpToDate and Global Health Delivery. Since then, the program has matured and expanded its reach. Grant recipients are now more thoroughly screened to determine which type of access will best allow them to optimize clinical use of UpToDate. These include internet access, versions downloadable to a local desktop (with updates provided when an internet connection is available) and physical DVDs. In December 2012, access options were significantly enhanced with the inclusion of UpToDate MobileComplete, a downloadable local version of UpToDate Mobile that provides UpToDate access even in the absence of an internet connection. To ensure users access the most current material, the application verifies that requested content is the most recent when a network connection is present. Feedback from grant recipients on GHDonline has resulted in the creation or enhancement of nearly 60 clinical topics specifically for clinicians in resource-limited settings (Appendix 2).

**Is implementation of the project complete? If no, please describe the project's phases and which phase the project is now in. (In 300 words or less.)**

Though formal implementation of the UpToDate Global Health Initiative is complete, the program continues to be refined and expanded in response to evolving needs, technical capabilities and clinical research. In response to participant feedback, new clinical topics are identified, developed and added based on the most current medical evidence and best-practice guidelines. When appropriate, guidance is also provided regarding how best to incorporate new evidence into existing clinical practices. The application process is also being streamlined to expand access to subscription grants. Study regarding the use of UpToDate in resource-limited settings is ongoing (discussed further in #11). Additional funding is being sought to enable further research regarding the impact of clinical information on health outcomes in these settings, the results of which will inform future program enhancements.

**Please provide at least one example of how the technology project has benefited a specific individual or organization. Feel free to include personal quotes from individuals who have directly benefited from the work. (In 300 words or less.)**

There are numerous examples of how the UpToDate Global Health Initiative has benefited clinicians in resource-limited settings by supporting diagnosis and care management decisions. The following comments were submitted in the UpToDate community on GHDonline. Dr. Bashiru Ismaila, a Fellow with the Nigerian Medical Association, recalls how UpToDate influenced management of a patient with a transverse colectomy for colon cancer. Adjuvant chemotherapy was planned and UpToDate was referenced to determine which form would be most appropriate and when it should begin. "Sometimes we are limited in the quality of care we can offer in our environment because of challenges of poverty and infrastructure, but right now, thanks to UpToDate, it is not due to lack of knowledge about what is best," writes Dr. Ismaila. Dr. John Shaw, a physician with Free Burma Rangers, which runs a medical school, hospital and clinic in Myanmar, notes that UpToDate has been invaluable on two fronts. First, the clinical and pharmaceutical information is used to prepare and enhance lectures. Second, UpToDate is used as a patient care reference and has made a "crucial difference in patient survival." He cited several case examples, including a boy with difficult-to-manage status epilepticus, a pregnant woman with wet beriberi and an adult with severe orbital cellulitis. "In many clinical experiences, in our isolated context, it was so helpful to have this complete source of knowledge in a format that doesn't depend on the internet or a book that will rot in the rainy season or get eaten by termites," writes Dr. Shaw. "One of my colleagues likes to say all a good doctor needs is compassion, competence and supply. UpToDate is a superlative aid to competence."

**Would this project be considered an innovation, a best practice or other notable advancement that could be adopted by or tailored for other organizations and uses? If yes, please describe that here. (In 300 words or less.)**

The UpToDate Global Health Initiative is both an innovation and a best practice in its provision of clinical decision support to clinicians in resource-limited settings. By focusing on individual clinicians rather than institutions, the program ensures that those who will benefit most from its use have access to broad medical knowledge and an online support network that would not otherwise exist. The Global Health Initiative may serve as a framework upon which other programs can be built. For example, the HINARI (Health InterNetwork Access to Research Initiative) program established by the World Health Organization (WHO) is focused on providing institutional access to biomedical and health literature, whereas the Global Health Initiative focuses on individual access and online support. Another organization may wish to apply our experiences to a program that provides additional forms of clinical decision support.

**If there are any other details that the judges should know about this project, please note them here. (In 300 words or less.)**

The efficacy of the UpToDate Global Health Initiative was demonstrated in a study that investigated the relationship between access to evidence-based, online clinical resources and improvements in patient care in resource-limited settings. The study included clinicians in four African hospitals who were trained to use UpToDate.



Participants included physicians (63%), nurses (25%), medical officers and students (12%). User survey data suggested that the provision of evidence-based medical information resources via the internet is feasible in these settings, is useful for a broad range of healthcare issues and could improve healthcare provider knowledge and clinical practice. It also has the potential to improve patient outcomes. All respondents reported that UpToDate "very much" or "somewhat" improved their clinical knowledge; 96 percent reported that UpToDate was "much faster" or "faster" for finding information than the best available alternative; and 60 percent indicated that use of UpToDate led to improved quality of patient care. (1) McNairy, M.L., Wurcel, A.G., Huang, F., Daily, J.P. Health care workers in Africa access a broad range of topics using evidence-based online medical information. *Global Public Health*. 2012;7(8):82339.