



The Computerworld Honors Program

Honoring those who use Information Technology to benefit society

Final Copy of Case Study

Year:

2013

Status:

Laureate

Organization Name:

Global Health Delivery Project at Harvard

Organization URL:

<http://www.ghdonline.org>

Project Name:

Global Health Delivery Online (GHDonline.org)

Please select the category in which you are submitting your entry.

Collaboration

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.)

In June 2008, the Global Health Delivery Project at Harvard launched GHDonline.org, a platform of expert-led professional virtual communities, to bridge the "know-do" gap. Many, from the World Health Organization to the Rockefeller Foundation, think that addressing this gap is the foremost challenge and greatest opportunity to strengthen health systems, improve public health, and ultimately achieve equity in global health. Without an opportunity for discussions to occur between professionals from disparate settings and sectors that can promote knowledge creation, transfer, and feedback loops, the potential of information to have real-life impact is diminished. Virtual communities create these opportunities for knowledge management and exchange across

organizations, industries, and geographies. They are vital to spreading information, identifying new research questions, and translating and testing new tools. As Wanda Orlikowski, an expert in information technology, reports, "The latest technologies digitize organizations, leverage the wealth of networks, and draw on the wisdom of the crowds to reconfigure the practice of institutional production and consumption." (Scott and Orlikowski. 2009) GHDonline.org combines versatile technology with managed communities. The platform was developed in-house using open source code and cloud computing resources, which allows continuous improvements to the platform. We schedule quarterly performance testing in Africa, Asia, Europe and South America. Colleagues at Brigham and Women's Hospital advise how best to ensure site security. A dedicated team of expert moderators and staff manages the communities, identifying topics, posting content, organizing virtual events, and connecting people. More than 8,500 professionals, including clinicians, managers and leaders from 173 countries have joined so far. Our communities are growing exponentially, and members often tell us, via email or in the communities, how information found in GHDonline.org has impacted their work.

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.)

GHDonline.org was developed in-house using open source software and is improved on a continuous basis with input from members. GHDonline.org first went live in June 2008 with four communities of practice led by expert moderators. By October 2010, the number of communities had doubled, and in January 2013 there were ten public communities with 33 expert moderators. The user interface has been redesigned twice, each time incorporating feedback from site members. In July 2009, we focused our redesign on improving readability and integrated Google Translate to allow users to browse the communities in their native language. Early 2011, we upgraded our search engine and hosting infrastructure to improve our members experience and the loading time of the site in areas with unreliable or slow Internet. In January 2012, we did our second redesign, incorporating new features such as "recommendations" and a personalized activity feed home page as a central place for signed-in members to collaborate with colleagues. In the first quarter of 2013 we will roll out a new email infrastructure and a second upgrade to our search engine, which will significantly improve the rendering and accuracy of search results. We continuously gather and analyze user feedback and analytics to improve the platform.

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.)

We consider the development and growth of GHDonline.org to be an ongoing process. Phase 1, from October 2007 to June 2008, was spent doing initial research on the needs for knowledge translation and understanding of the context and potential users, culminating with our first design and implementation phase, and launch of the site. Phase 2, from July 2008 to July 2009, was our initial start-up phase, as the communities organically grew, and we focused on developing features such as privacy controls, RSS feeds, and integrating Google Translate. In Phase 3, from August 2009 to January 2012, we built on top of our community model of interaction, adding features to support secure clinical case discussion, panel discussions, and discussion summaries. Phase 4, from February 2012 to December 2012, was focused on supporting the growth into maturity of our communities and the scale-up of our team of moderators. In Phase 5, starting January 2013, we aim to expand our notion of "global" health to include underserved areas of the United States, such as rural and urban settings. We will be adding new communities and enhancing the features of the platform so we are able to serve an integrated global and domestic user base.

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.)

Nyaya Health is a small nonprofit that runs Bayalpata Hospital in Nepal's neglected Far Western region. Nepal is among the poorest and least developed countries in the world, with almost one-quarter of its population living below the poverty line. When he joined GHDonline.org in August 2008, Dan Schwarz, MD, was the executive director of Nyaya. Here are some of the ways that GHDonline.org has benefited Nyaya's work: "Whereas two years ago, none of our staff even had access to the Internet, the addition of online services to our hospital and UpToDate as a gold-standard clinical reference has helped to inculcate a culture of evidence-based clinical care. Nyaya's clinicians access UpToDate, a leading electronic clinical information resource, via our international donation program. In the TB Infection Control community, Nyaya's team received guidance on infection control practices and design, which led them to update their internal protocols for using N95 masks and completely renovate their laboratory in 2010. While perhaps this is not an extremely fancy lab, these changes will significantly decrease our hospital's morbidity and mortality from nosocomial infections. These changes were made for approximately \$50 USD." He shared this experience in the community: TEAM hospital is a nonprofit surgical facility located in the same region as Bayalpata hospital. Dan "met" Doug, medical director of TEAM, in GHDonline.org. TEAM is now the referral site for Nyaya's patients in critical need of surgery. Prior to this, patients were sent off "into an abyss of no follow-up through the mountains." When they decided to



expand the Bayalpata hospital to include some surgical services, the team consulted the Global Surgery & Anesthesia community at length and received pointed feedback on their newly created Surgical Implementation Protocol.

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.)

GHDonline.org represents both a best practice and a notable advancement that is being used by other organizations. Our approach to knowledge translation in virtual communities is often used as a benchmark by other professional collaboration platforms (e.g., MalariaWorld) and we regularly act as advisors to global health knowledge management initiatives such as the mHealth Alliance Health Unbound platform. Our platform also supports the work and mission of a growing number of organizations. For example, Partners In Health, a leading nonprofit that provides health care to the poor in 14 countries, has adopted our approach to communities and knowledge translation in a community that supports secure clinical consults and continuing medical education. PIH physicians in Rwanda, Lesotho, Malawi, and Haiti discuss cases with specialists and sub-specialists based at Partners HealthCare hospitals in Boston, U.S. The community was started in March 2009. Clinical consults on more than 315 cases have been posted so far and 341 physicians and specialists are currently members.