

### Expanding competency-based credentialing in healthcare: A case for digital badges for global health delivery

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**Program/Project Purpose:** The World Health Organization estimates there are 59 million health care workers worldwide. Many of them have non-clinical responsibilities as managers and policy-makers, but lack opportunities to develop and showcase the necessary skills. Formal programs such as an MBA or MPH are often expensive and inaccessible, while informal recognition is difficult to validate to potential employers and donors. Taking inspiration from competency-based credentialing in education, architecture, and other industries, at the Global Health Delivery Project at Harvard University (GHD) we are developing badges for healthcare delivery. Through our digital badges, we hope to formally acknowledge the skills of health care workers that are not always gained through traditional means and to provide a professional development roadmap for healthcare workers.

**Structure/Method/Design:** GHD built and operates an open-access platform, GHDonline, with more 14,000 professionals from 182 countries learning, discussion and collaborating on key challenges in global health delivery. We have worked to research, develop, and test digital badges since early 2014. After an expert panel in 2013, our users discussed key issues as managers in global health delivery. In response we are developing badges in management, public health, and public policy. Participants will be able to receive a “basic” badge after an online assessment and progress to “advanced” badges with additional assessments, coursework, and structured interviews. Badges will be made available for a range of healthcare providers including nurses, pharmacists and physicians. Initial testers and participants will be selected from members of GHDonline. With their feedback we will iterate on the design and content. We are partnering with employers and donors to ensure badges are valuable to recipients. We have assessed existing online courses and resources and have been conducting focus groups and interviews with healthcare providers to test badge components. We are currently prototyping a management and public policy badge to launch in spring/summer of 2015.

**Outcomes & Evaluation:** Healthcare providers have had positive reactions to the concept of digital badging for health care delivery. There are many online resources related to the field of healthcare delivery available already that will be easier to navigate and be more valuable with the introduction of a badging or recognition system.

**Going Forward:** We need to broaden awareness of badges among employers and donors in order to make them an accepted credentialing mechanism for healthcare workers. Further work also requires evaluating the scalability of the badges, while taking into consideration the specifics of each country. Ultimately, we aim to pave the way for broader adoption of competency-based credentialing and education in global health.

**Funding:** We have received support from the Venture Residency Program at the Harvard Innovation Lab and are seeking additional funding, as well as opportunities for public-private partnerships.

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### Developing a low cost, mutually beneficial teledermatology collaboration

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**Program/Project Purpose:** Hillside Healthcare International (HHCI) is a faith-based non-government organization (NGO) founded in 2000. Primary care professionals provide basic healthcare to remote residents of southern Belize. In 2012, a need for specialized dermatology assistance was identified with a high volume of dermatologic cases and a paucity of dermatology specialists in-country. Given the shortage of dermatologists in low resource settings with large numbers of cutaneous diseases, there has been an increased interest to address these challenges through telemedicine. A long-term partnership with the Medical College of Wisconsin (MCW) created a unique clinical and educational opportunity for dermatology faculty, trainees and the primary care physicians in Belize. This Abstract describes how our collaboration launched a low-cost teledermatology program.

**Structure/Method/Design:** Several factors are required for a low cost, mutually beneficial academic/NGO teledermatology collaboration to be successful and useful. Shared objectives are essential in program development and co-ownership. The entire process must accommodate the legal requirements, technological capabilities, administrative support, and time requirements of each partner. A substantial clinical need must first be recognized, with an interest from subspecialty consultation on the part of the academic institution. Management of the consultations can be integrated into the dermatology residency curriculum, allowing continuity and information sharing over time.

**Outcomes & Evaluation:** Extramural funding was obtained to purchase essential start-up teledermatology equipment. Key teledermatology program stakeholders at MCW included in-kind support from dermatology faculty and residents, faculty leadership positions on the HHCI board of directors, and legal counsel. Key teledermatology stakeholders from HHCI were predominately leadership (medical and NGO directors), and additional input was sought from HHCI staff. MCW created dermatology training modules for HHCI primary care providers, including instructions on how to capture quality clinical images on cameras provided by nominal extramural funding. A formal medical chart review helped to characterize and quantify dermatologic disease presentation and develop an appropriate medication formulary tailored to differential diagnoses of common endemic diseases. The total cost was less than five thousand dollars.

**Going Forward:** Lack of reliable internet connection and functioning computers is one of the largest barriers preventing store-and-forward teledermatology use. The inability to see three-dimensional imaging, ask additional follow-up questions, and perform skin biopsies creates challenges for the program. An additional challenge is the limited treatment options and diagnostic modalities available in Belize. Each partner continues to offer their perspectives, edits, additions in each step of development, and implementation. Ensuring the process has the time to develop organically, adapt with partner suggestions, and strengthen as the process further develops, leads to a well thought-out teledermatology program.

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### Improving pneumococcal vaccination rates of medical inpatients in Urban Nepal: A trial of quality improvement processes

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