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Rowena Luk, Matei Zaharia, Melissa Ho, Brian Levine, and Paul M. Aoki. "ICTD for Healthcare in Ghana: Two Parallel Case Studies" in *ICTD 2009 Conference Proceedings*:118-128.

Key Points

The authors examines two **parallel** programs – **the Ghana Consultation Network and OneTouch Medical Care Line** - which aim to provide **remote medical consultation to health care workers in rural Ghana**. The authors chose these two programs since they have similar objectives, are in the same region, but have different strategies. Due to their parallel nature, the authors try to **isolate the social, cultural, and professional influences on the research investigators** on the design of these two programs. Table 1 on page 120 provides a quick comparison of the two programs.

The article begins with some basic information on health care in Ghana: It's a **tiered system**. "**Formal and informal consultation** is highly integrated into the life of all doctors. Between hospitals, many doctors call personal contacts – friends, colleagues, classmates – to seek advice, and within hospitals this behavior is even more frequent." (119) Patient records are **largely paper-based** while some hospitals have rarely functioning electronic systems. The **communication infrastructure** – includes any type of Internet connection – is **unreliable** if it's even available.

The Ghana Consultation Network (GCN) is a Web-based GUI that is available in hospitals via the Internet as well as synchronized with the local Intranet. The application (119) It "was initiated by a group of **technologically-oriented researchers**" (118). The **goal is to enable doctor-to-doctor medical consultation and address network connectivity**. The application is set up like a social networking platform w/ patient case studies and general discussions. GCN does provide text message notifications, but it is intended for use with computers. This "is based on feedback during the design process that the wealth of data required for patient management would demand a screen size larger than those present in mobile phones" (120). The design team had four weeks of iterative user-centered design fieldwork. It has 125 register users **between Ghana** and the US, Mali, Nigeria, South Africa, and the UK. The system has been used for 39 consultations.

OneTouch MedicareLine (ML) provides a hot-line and text messaging service to Ghanaian doctors. It "initiated by a **public health researcher and social entrepreneur**" (118). The **goal is to enable physician-to-physician formal and informal medical consultation and address the economic barrier of the cost of mobile airtime**. It provides free calls between any registered physicians and surgeons **within Ghana**. "Approximately 1700 of 2000 doctors in the [Ghana Medical Association] have enrolled, with over 2 million calls made to date" (120). Interestingly, the researchers intended to do a social networking platform but abandoned that idea after 7 weeks of site visits (120-121).

In their **analysis**, the authors observe, "Both purportedly wanted to develop a solution that would work for all Ghanaian doctors, but GCN focused on connectivity in the rural North using innovative technology while ML focused on building communication in the urban South using proven technology" (121). Both projects were lead by U.S. research universities but GNC had US corporate research as a partner and ML a social entrepreneurship program. (122) Both worked with U.S. nonprofit Ghana Physicians and Surgeons Foundation (GPSF), but "GCN emphasized the role of GPSF throughout the course of its lifetime whereas ML stopped working with U.S. doctors in order to focus explicitly on the Ghanaian context" (122). Table 3 on page 127 provides an excellent summary of the program implications based on how the problem was framed.

Connection to Other Readings/Discussions

I think this was an excellent article demonstrating some of the contextual challenges in ICT4D work. While both projects were meant for similar audiences, and even though the GCN included user-centered design, their project was designed to address a much smaller target audience (doctors in hospitals, doing formal consultations, with computer access), involved much more design work, and will take much longer and much more money to scale. The background of two leads for ML definitely yielded a more contextually appropriate (this is where public health comes in) and scalable (this is where social entrepreneurship is valuable) solution. This is not to say that user-centered design and contextual inquiry is not a valuable method for ICT4D programs – indeed the fact that GCN included Intranet access shows that they did consider some of technical barriers. I do think, though, that this case study shows that in addition to participatory project design and interviews, it is valuable to have an advisory team with varied expertise to lead to an appropriate development program/project.