HiV-Link: A mobile phone-based expert consultation platform for HIV/AIDS care in Ethiopia and Uganda

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BACKGROUND
Two thirds of the world’s HIV burden is in Sub-Saharan Africa while only 3% of the world’s trained healthcare workers reside there¹. Non-physicians and healthcare workers are increasingly employed in initiating and monitoring therapy and addressing complications. It is essential that these individuals receive expert support to maximize therapeutic outcome. In contrast to the rudimentary healthcare infrastructure, cellular phone technology and coverage is relatively wide spread and provides a unique opportunity to support medical care providers in the field through remote consultation and mentoring. Parallel pilot studies were conducted to explore the feasibility of mobile phone-based asynchronous expert consultation for HIV/AIDS care in Ethiopia and Uganda.

METHODS²
A web-based platform whereby queries via SMS are processed and archived was developed. 146 physicians, nurses and healthcare workers signed up for expert clinical consultation via HiV-Link in Ethiopia (n=38) and Uganda (n=108). Expert consultants for the Ethiopia project were 3 physicians experts based in Addis Ababa and 2 in US, whereas 5 physician experts based at Mbale Regional Referral Hospital supported by 5 physicians from the UK provided consultation for the Ugandan project.

How HiV-Link Works via Text Message

1. Field healthcare workers texted the HiV-Link system to request an account.
2. An account was created by the system and a welcome text sent to the healthcare worker.
3. Healthcare workers could now test an HiV-Link question to HiV-Link. A case study number is assigned to each question to assure patient confidentiality.
4. HiV-Link physicians experts in Africa, the UK or the US answered as soon as they received the query.
5. Healthcare workers were able to converse back and forth via text with physician experts using the case number as an identifier.
6. Healthcare workers with internet connections were also able to set up an online account at www.hiv-link.com. On the site they could submit cases using a patient profile, review other cases and attach documents.

RESULTS²
66 (45.2%) used the system at least once; 323 patient case queries were texted to the HiV-Link system. Expert response times were <12 (30.9%) and 12-24 hours (60.7%). The breakdown of queries was similar in both Ethiopia and Uganda. 58% questions focused on treatment advice; 19.6% on general HIV information, 18.4% on drug side effects.

CONCLUSIONS
These pilot studies demonstrate that an easy-to-use system linking widespread mobile phone availability in rural Africa to a centralized website permits rapid and clinically useful exchange of information and advice. It also is instructive to medical and government authorities on areas of greatest need for continuing medical education. Although this pilot was within the setting of HIV, it should be expanded to other disease areas in anticipation of similarly positive outcomes.

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¹http://www.aidforafrica.org/blog/world-health-day-how-can-sub-saharan-africa-have-25-percent-of-the-worlds-disease-burden-but-only-3-percent-of-the-worlds-trained-health-workers/
²Gilead data on file.