Delivering Full-Text Health Information in Africa

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Why is surgery important in poor countries?

Worldwide, in 2001:

1.1 Million died of Malaria
1.6 Million of TB
2.0 Million of diarrhea
2.8 Million of HIV/AIDS
5.1 Million died of injury

There is a PANDEMIC of injury
World DALYs lost - by Cause 1999

- Injury: 14%
- Non-Communicable: 15%
- CardioVasc: 11%
- NeuroPsych: 11%
- Communicable: 25%
- Cancer: 6%
- Malaria: 3%
- Diarrhea: 5%
- HIV: 6%
- Maternal: 2%
- TB: 2%
African problems will be solved by Africans

- Know the right questions to ask
- To get practicable answers
- Find solutions that work

Finding solutions = research
Research Capacity

- MD’s are not paid to teach or do research
- System of intangible rewards - Academe
- Access to medical literature is fundamental
- Objective: Change behavior and improve outcomes
- How to engage African Doctors in such a Community of Medical Curiosity?
Knowledge Translation

- Get the right information
- to the right person
- at the right time

To change behavior
Where is the right information?

- Widely dispersed
- “Grey” literature
- Need a very large information base to give individuals access to what they need - University Libraries
- Will increasingly come from poor and middle-income countries
Who are the *right* people?

- Go beyond the library
- Clinicians, teachers, researchers
- Able to evaluate & use the information
- Small numbers of key people
What is the *right* time?

- When a surgeon needs to know something, he needs to know it **Now**
- Usefulness of information is time dependent
- Surgeons are busy
- So convenience is very important - home access
- Rapid spread of Internet among Arrican Surgeons
Talk to the Librarians

Remote access for surgeons in developing countries is:

- Technically possible
- Cheap
- Ethically desirable
- Good for the University
- Valid research
BIOLINE

- Originally a UK - Brasil Cooperation
- Shareware based
- Electronic publication of Journals from developing countries
- Housed at U of T library
- Available free through Ptolemy
- Soon to publish ECAJS
Publisher’s Contracts

- University community defined as, “students, staff, faculty and affiliated researchers…”
- Created mechanism to appoint research affiliates of the Office of International Surgery
- Library dedicated 100 of 50,000 proxy accounts for the project
- Access to >15,000 on-line journals and thousands of texts
- No loss of sales

Any University ought to be able to do this
Inclusion Criteria

- From countries ranked < 65 on Human Development Index
- Sponsored by U of T faculty
- Consent to monitoring of proxy server activity
- Respect copyright laws
- Preference to surgeons
Association of Surgeons of East Africa (ASEA)

- 200 Million people
- Eight Countries
- 400 surgeons

Ethiopia
Kenya
Tanzania
Uganda
Malawi
Mozambique
Zambia
Zimbabwe
The Ptolemy Project

- An ongoing Research Project
- Named after Ptolemy I, the founder of the great library in Alexandria
- Began in August 2001
- Introduced at ASEA meeting in Lusaka, Zambia, Dec 2001
- Surveys in April & August 2002
Objectives

- To provide a group of Surgeons in E Africa with access to the medical literature
- To evaluate the impact this has on their clinical work, teaching and research
- To strengthen an existing medical community
- To publish their journal (ECAJS)
- To improve the methodology for analyzing how they use the resource
- Eventually to demonstrate that improved access to information helps build research communities and improves patient outcomes
Kate Lawrence

- Health Information Systems Specialist
- In Africa for 2 Months
- To Help
  - Get set-up on Ptolemy
  - Learn to use it effectively
- Gather feedback

Maputo  | Bulawayo  | Mombassa  | Nairobi
Ptolemy Visits by Fortnight Sept. 2001 - Apr. 2002

Number of Requests

- Sept 18 - Oct 2
- Oct 4 - Oct 18
- Oct 19 - Oct 31
- Nov 2 - Nov 15
- Nov 16 - Nov 29
- Dec 14 - Dec 28
- Jan 11 - Jan 24
- Feb 22 - March 7
- March 8 - March 21
- March 24 - April 4
- April 5 - April 18

Kate in Africa
April 2002 Survey

Has Ptolemy changed your practice?
- No: 38%
- Yes: 62%

Has Ptolemy helped your research projects?
- No: 25%
- Yes: 75%
August 2002 - Demographics

- Recruited 118 participants, 21 left = 97
- 78 from Africa, 69 from ASEA Countries
- 58 Surgeons
  - 51 Teach Surgery
  - 42 Do Research
August 2002 - Survey

- 30 exclusions
  - 13 internet problems
  - 6 members < 1 week
  - 4 “unavailable” during survey period
  - 7 no consent

- 53 of remaining 67 responded
  (79%)
68% spend more than 1 hour/week browsing Ptolemy
Monthly cost of Internet access for Ptolemy Participants (including telephone charges)

Median Cost $42/month; Only 31% from log-on from work
Relevance of Ptolemy to different areas of practice

- Not applicable
- Not relevant
- Somewhat relevant
- Relevant
- Very Relevant

Clinical | Teaching | Research
Impact of Ptolemy on different areas of practice

- Clinical
- Teaching
- Research

Legend:
- Not Applicable
- Not Enhanced
- Somewhat enhanced
- Enhanced
- Greatly Enhanced
Comments from Participants

Up until I joined the Ptolemy Project I was only using abstracts for my work. This made life difficult and my Ph.D. I certainly regretted going back home to Africa as I thought my academic career was over. I now know that I will be up to date and I will certainly come up with innovative research proposals. - Dr. John Chisi (Malawi)

I am writing my dissertation for Masters in Public Health and Ptolemy is assisting me at just the correct time. – Dr Muhsin Sherrif (Tanzania)

I am very much interested in medical education, especially clinical education. The Ptolemy Project helped me to find relevant information about the subject. It should be noted that, due to financial difficulties, we do not subscribe any medical education journals. - Dr. Paulo Garrido (Mozambique)

I do my hernia operations differently just for starters. - Dr. Jatrik Biswas
Comments from Participants

Our library is poor in Lusaka, Zambia. No journals or books. Ptolemy opened for me new world of knowledge. Like a child in a toy shop. It is difficult to stop once you start browsing. Unfortunately Internet connection is often very poor and downloading or opening page is difficult. That is the time when I stop. Preparing lecture in Wound Healing I performed almost entirely from Ptolemy. Dr. Goran Jovic (Zambia)

My research on areas of developmental biology has received tremendous boost particularly that one is able to get full articles as opposed to other sources such as PubMed where only abstracts may be available. Dr. Ray Macharia (Kenya)

I did not have access to most journal articles full text, and if I needed a paper badly, I would have to ask a colleague from Europe or North America to search, print and fax me the article. It would take forever and I could not use this method too often. Now if I want a paper I download it off my computer. The only hitch is a slow and unreliable internet link.... and I don’t have to go to the library where services are usually slow and crowded. Dr. Olive Kobusingye (Uganda)

...no digital divide as long as Ptolemy is there. I have been able to acess all I need from the library. - Dr S K Sharif, Provincial Medical Officer, Mombassa, Tanzania
Ptolemy - Strengths

- Very popular
- Well-used
- Personal service (Kate and Kirsteen)
- Delivers information to the people who need it, when and where they can use it
- Builds a Community of users
- Could be duplicated widely.....
Ptolemy - Weaknesses

- Expensive & unreliable internet connections in Africa
- Limited size
- Need to improve URL analysis
- Needs funding
Ptolemy Costs
(Canadian $)

First research assistant KL (part-time) $17,000 1 yr
1 laptop 5,000
Trip to Africa KL 10,000
New Research assistant KB (part-time) 17,000 /yr
Office expenses 1,000 /yr

Total $50,000

Wish list: African Coordinator
Improved URL data analysis
Comparison

**Ptolemy**
- Research Project
- 100 Participants
- Library Based
- Home access
- Well-defined users
- Electronic publishing (Bioline)
- Cheap and readily replicable

**HINARI**
- Service Project
- 100/468 participants (BMJ)
- Publisher based
- Institutions only
- Broad audience
- ? May not reach end users
- ? Cost
Future Directions

- Engage Ptolemy Participants in a Delphi Process to establish priorities for surgical development in E Africa (an electronic community of medical curiosity)
- Increase number of participants
- Insert Ptolemy clause in Publisher’s agreements
- Incorporate COSECSA curriculum
- Develop better tools to analyze how participants use the resource
- Persuade other Universities to build partnerships with colleagues in developing countries and help them get library access
To Participate
Write Ms. Kirsteen Burton

www.utoronto.ca/ois and link to Ptolemy