





Delivering Full-Text Health Information in Africa

Massey Beveridge, BA M.Phil MD FRCSC DTM&H
Director, Office of International Surgery
University of Toronto



Why is surgery important in poor countries ?

Worldwide, in 2001:

1.1 Million died of Malaria

1.6 Million of TB

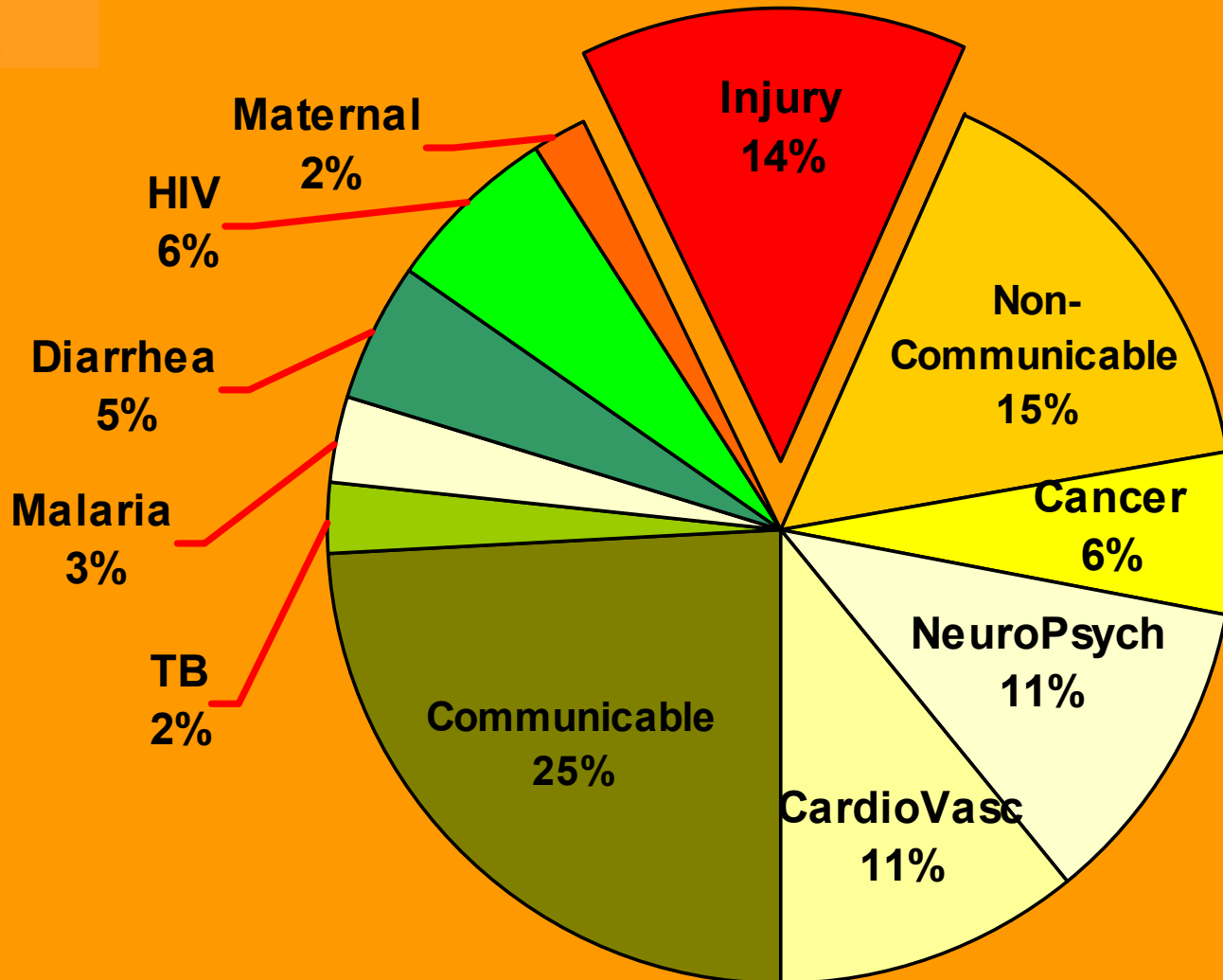
2.0 Million of diarrhea

2.8 Million of HIV/AIDS

5.1 Million died of injury

There is a PANDEMIC of injury

World DALYs lost - by Cause 1999





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 ?



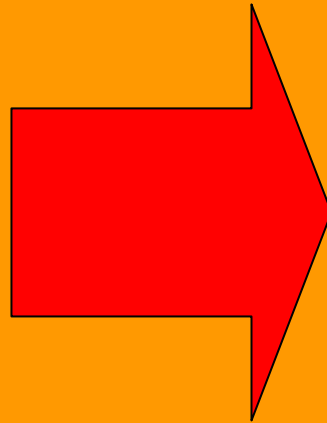
- Go beyond the library
- Clinicians, teachers, researchers
- Able to evaluate & use the information
- Small numbers of key people



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 American Surgeons





The Ptolemy Story





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



Lusaka

Dar-es-Salam

Kampala



Kate Lawrence



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

Maputo

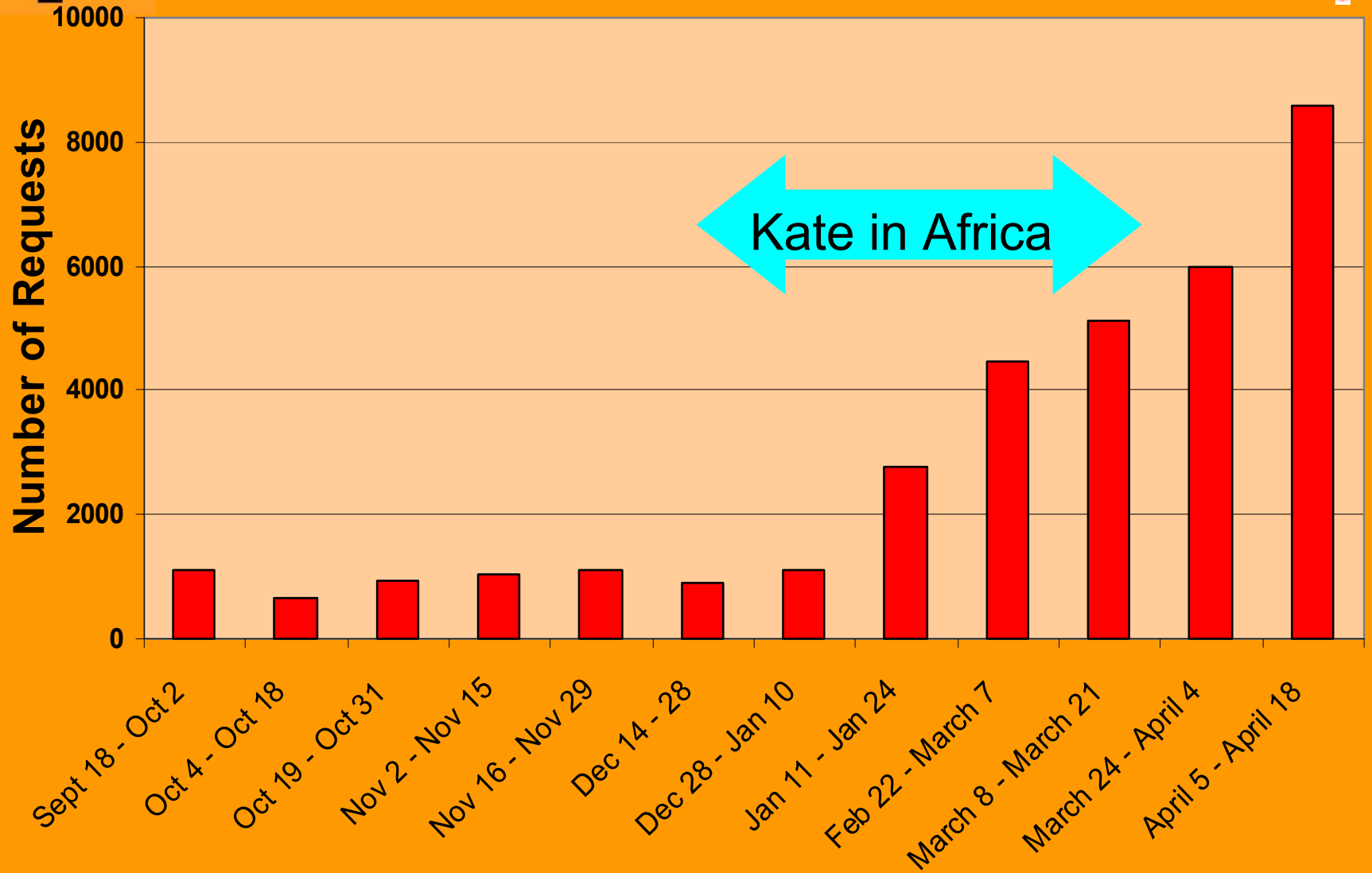
Bulawayo

Mombassa

Nairobi



Ptolemy Visits by Fortnight Sept. 2001 - Apr. 2002

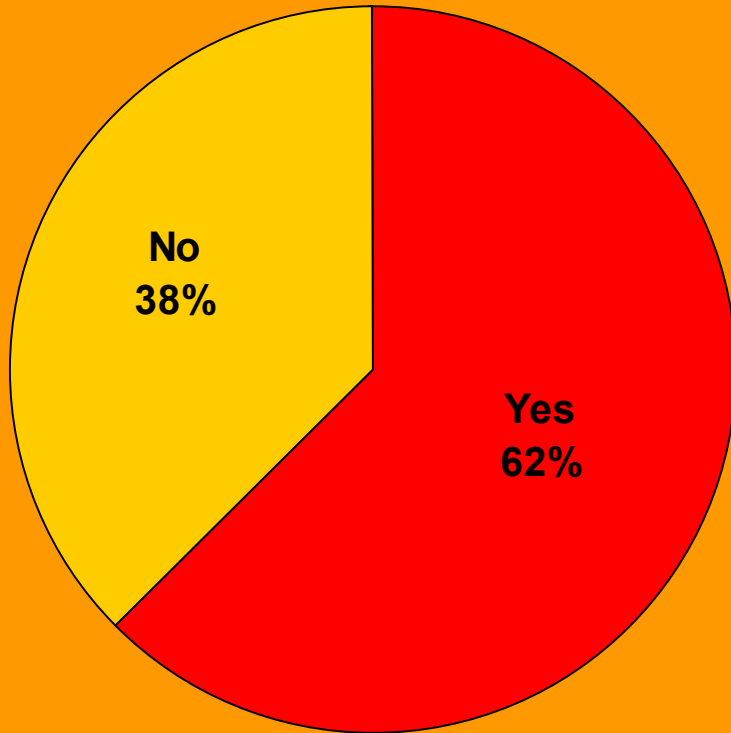




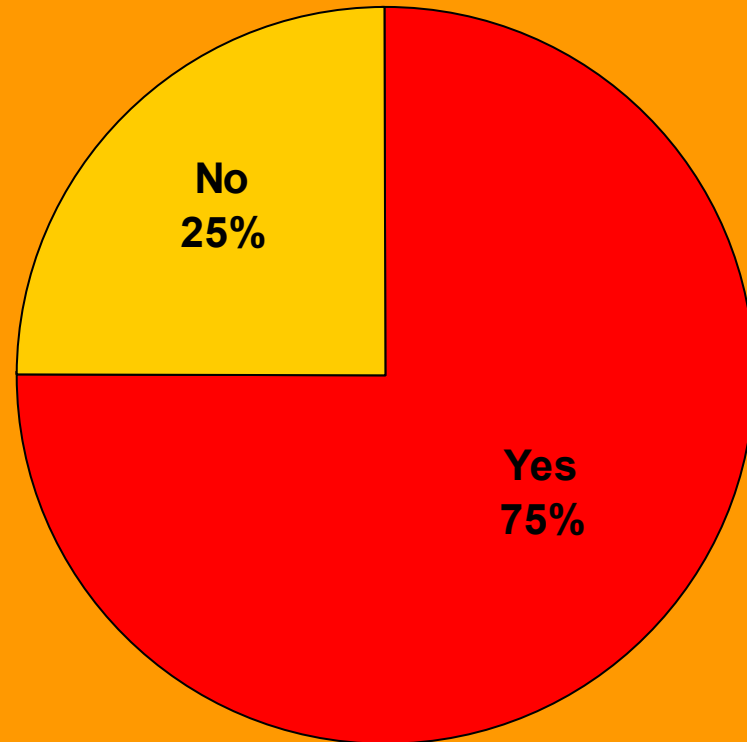
April 2002 Survey



Has Ptolemy changed your practice?



Has Ptolemy helped your research projects?





August 2002 - Demographics



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

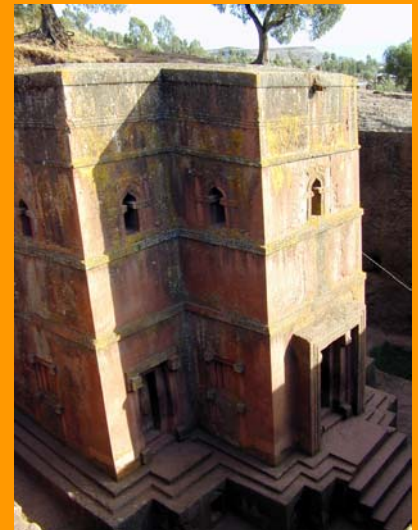


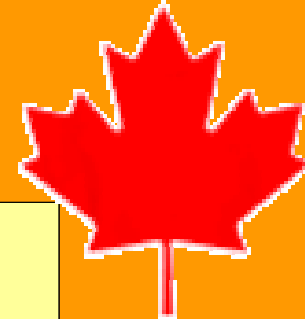


August 2002 - Survey

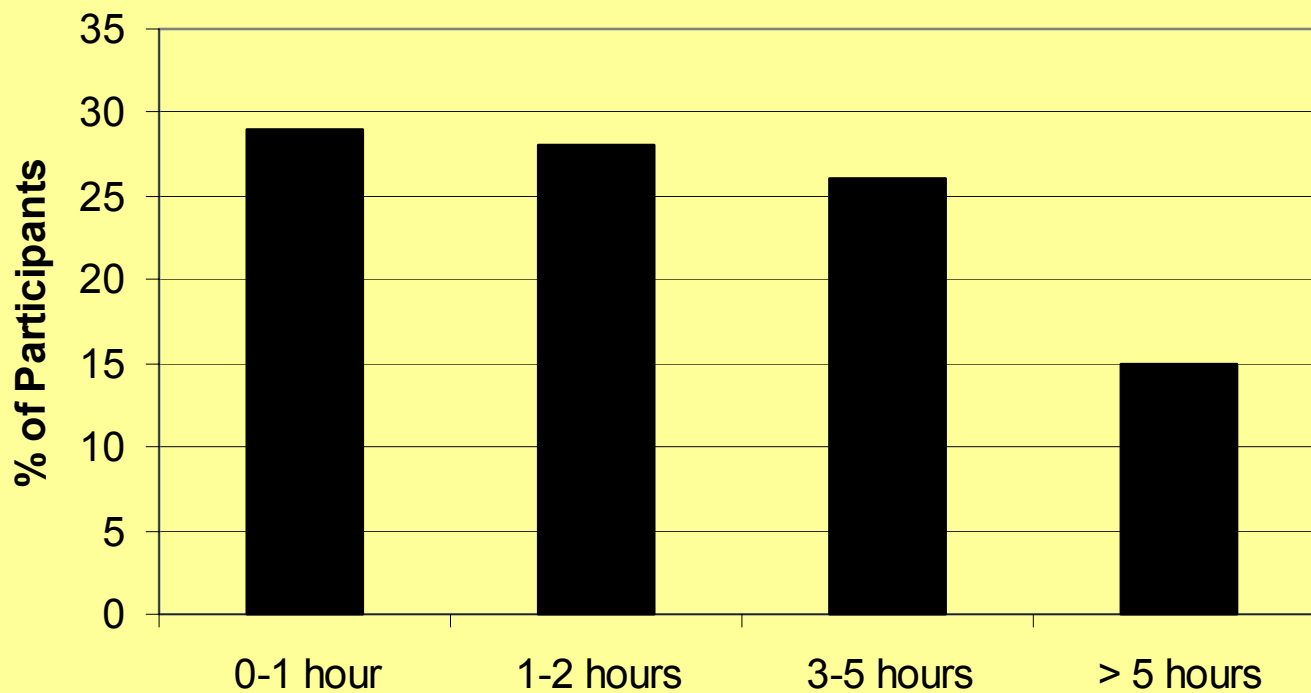


- 30 exclusions
 - 13 internet problems
 - 6 members < 1 week
 - 4 “unavailable” during survey period
 - 7 no consent
- 53 of remaining 67 responded
(79%)

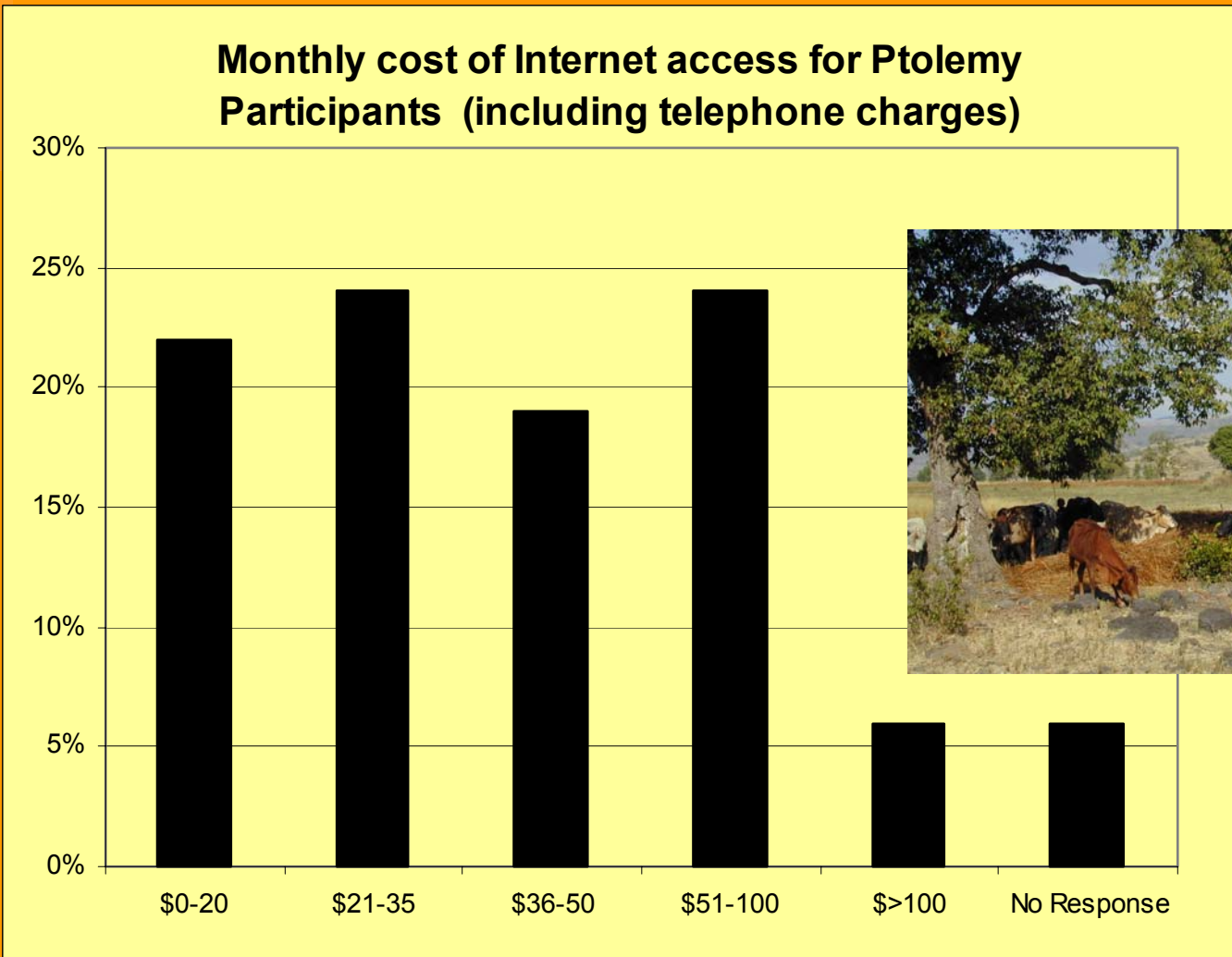




Weekly time Ptolemy Participants spent on-line



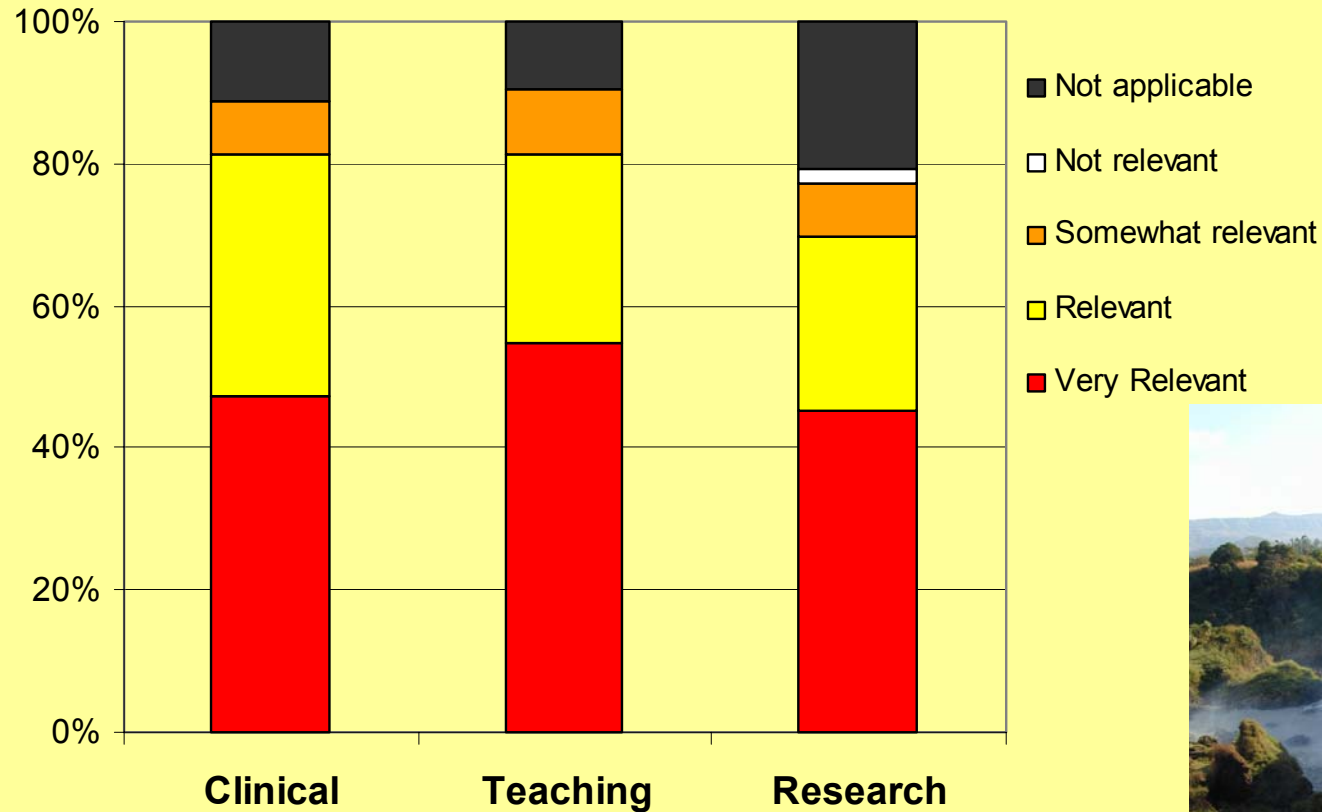
68% spend more than 1 hour/ week browsing Ptolemy

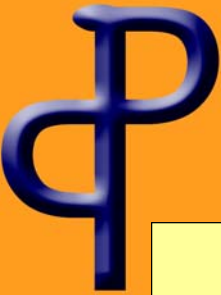


Median Cost \$42/month; Only 31% from log-on from work

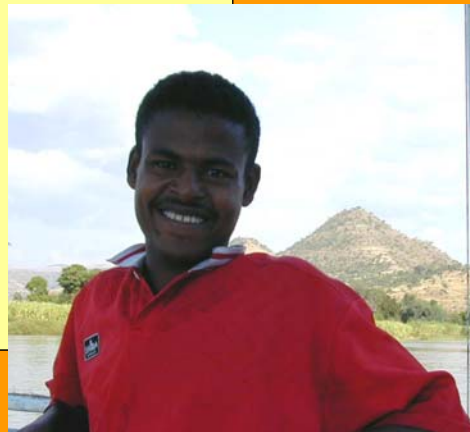
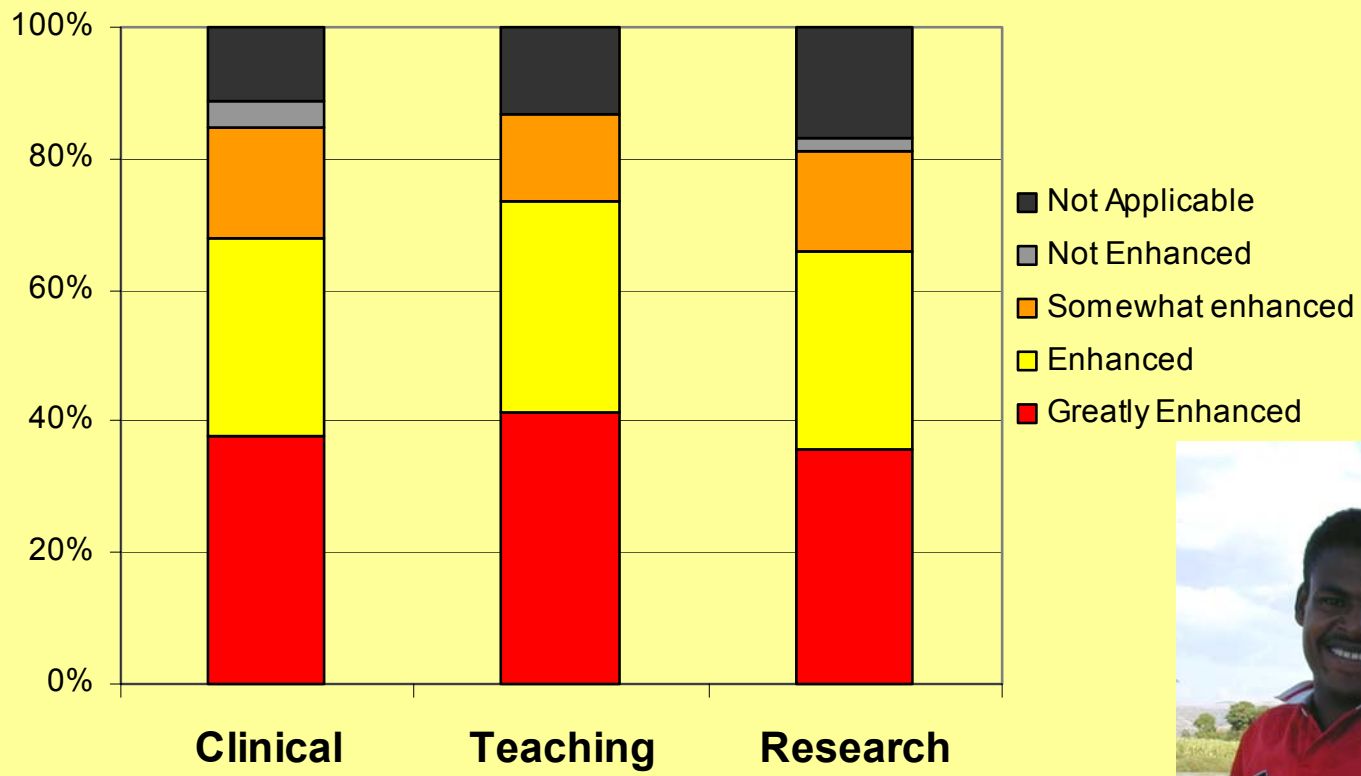


Relevance of Ptolemy to different areas of practice





Impact of Ptolemy on different areas of practice





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 access 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 COSECOSA 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

