

MIT OpenCourseWare
<http://ocw.mit.edu>

HST.939 Designing and Sustaining Technology Innovation for Global Health Practice
Spring 2008

For information about citing these materials or our Terms of Use, visit: <http://ocw.mit.edu/terms>.

Lecture 12: 4/22/08 CIMIT and Toner Lab

Kristian Olson from CIMIT:

Global Health Technology Development and Implementation: A Clinician's Perspective

CIMIT Mission: to improve the effectiveness of health care providers in low-resource settings through the development of targeted technologies and by catalyzing effective training.

TPP: Target product profile

Asking yourself: what is the local health resource?

5 key barriers to effective global health tech development:

1. product management capacity and tech transfer (from academia)
2. lack of a clear path to market (and capacity to weather the timeline)
3. inadequate and unprepared infrastructure
4. need to define TPPs and associated incremental benefit (technology choice)
5. addressing the right question

Start thinking about what the health system will look like when a drug/technology is actually released (since it often takes years) while planning implementation.

Potential difficulties of working with clinicians:

- often blind to their own technological deficits; they're masters of "work-arounds"
- rarely think from a creative solution perspective regarding devices
- not trained in the language of product development
- at risk of continually recreating the inadequate systems they're accustomed to
- often focus on their own fields as priority crises

So for example, instead of asking a clinician "What do you need?" try asking "What pisses you off the most in your practice?"

Thought questions: What other ways might there be to get better information from doctors about what is needed in the field? In what ways is this lack of effective communication of need hindering the development or implementation of critical tools?

Next speaker: name?

Cancer and AIDS

AIDS epidemic reversed the steady upward life expectancy trend that had been going on since 1950 in many undeveloped countries.

Cancer is a truly global problem: present and deadly in countries of all levels of development. In contrast with AIDS, cancer is a chronic disease; patient can be monitored and treatment tailored to condition.

CTCs: circulating tumor cells; very rare, but can be used for prognosis

CTC-chip: processes whole blood, captures CTCs.

Found >5 CTCs/mL in almost 100% of patients of different types of cancers. Challenges the definition/nomenclature of “localized [X] cancer.”

Panel:

- what's the benefit of selling things to the third world rather than donating them?
 - o Selling a product rather than giving it away allows revenue to be generated in the more developed world that can be invested into making the technology less expensive in the third world. Also, “the undeveloped world” is complex and not all countries are the same level of undeveloped.
- So how does that model translate to products that are specialized to undeveloped countries, i.e. can't be marketed in the developed world because they're not needed?
 - o This doesn't really translate.