THE BIOMEDICAL AND THE SOCIAL IN HIV PREVENTION

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Knowledge that counts

- *Traditional knowledge handed down from generation to generation helped to save ancient tribes on India's Andaman and Nicobar Islands from the worst of the tsunami, anthropologists say.*
  - BBC News, 20 January 2005
- *The Bush Administration today announced a plan to expand U.S. tsunami detection and warning capabilities as part of the Global Earth Observation System of Systems (GEOSS), the international effort to develop a comprehensive, sustained and integrated Earth observation system. The plan commits a total of $37.5 million over the next two years.*
  - Office of Science and Technology Policy, Executive Office of the President, Washington, D.C., 14 January 2005, http://dssresources.com/news/531.php

Prevention priorities, international

- Global Fund To Fight AIDS, Tuberculosis and Malaria
  - MSM– US$19 million (2.1% of the US$903 million total)
  - sex workers – US$29 million (3.2%)
  - people who inject drugs – US$31 million (3.5%)

Prevention priorities, national

- Canadian Institutes of Health Research
  - $98,830,449 to HIV/AIDS research overall
    - $22,451,362 contain the word “prevention” in funded abstracts, and
      - $9,678,007 also contain “IDU”
      - $2,351,934 contain “sex work”, and
      - $2,168,525 contain “men who have sex with men”
    - 9.7% of the research budget for grants mentioning HIV prevention also make any mention of MSM in a country where 51% of the epidemic is concentrated among gay and bisexual men
      - Source: http://webapps.cihr-irsc.gc.ca/cfdd/

Prevention at AIDS conferences

- Last 5 international AIDS conferences
  - Barcelona 2002, Bangkok 2004, Toronto 2006, Mexico City 2008, Vienna 2010
  - 13 of the 21 speakers treated prevention primarily or exclusively as a biomedical technology
  - 3 spoke on IDU
  - 2 on women (1 of whom looked at sex work)
  - 1 on MSM
  - 1 on social interventions
- 2010 conference abstracts
  - 2.6% MSM, 4.5% IDU, 3.0% sex work, 1.1% trans

Population science vs everyday practice

- insurance industry constructs the category of the high-risk driver as male and under the age of 25
- yet this finding offers little of value to young men, or even to other drivers who encounter young male drivers on the road, on how to drive safely or even reduce driving risk in any way.

Problems of actuarial reasoning

- younger men who have older partners have higher rates of seroconversion compared with those who do not
  - (a finding precedented by research on age-mixing in African heterosexual transmission and among injection drug users)
- So the average gay man is to select only young, white, HIV-negative partners who are exclusive tops and all will be well?
  - Fortunately men will continue to love, care for, and have sex with men across age, sex, race and sero-status lines

Limits to “treatment-is-prevention”

- Problems of equating viral load results in blood, semen and vaginal secretions
- Viral blips
  - activation by other chronic conditions, HSV, HPV
  - syphilis & gonorrhoea outbreaks esp. among HIV+ men

Reaching undetectability

- Who is undetectable? Ontario example:
  - In a context of universal medicare & first-world access to treatment (including many dedicated clinics for HIV treatment):

~9,300 HIV+ people do not know they have HIV infection	35%
1,700 diagnosed but not in care, i.e. have not had a viral load test	6%
3,440 in care but not on ARV	13%
3,630 in care, on ARV, and have detectable viral load	14%
8,470 have undetectable viral load	32%

“Undetectability” ≠ 0

- in a population of 10,000 serodiscordant couples over 10 years, there would still be:
  - 215 transmissions from HIV-positive women to HIV-negative men
  - 425 transmissions from HIV-positive men to HIV-negative women
  - 3,524 transmissions from HIV-positive men to HIV-negative men
    - Source: Wilson DP, Law MG, Grulich AE, Cooper DA, Kaldor JM: Relation between HIV viral load and infectiousness. *Lancet 2008, 372(9635):314-320.*

Treatment as prevention in practice

- "men who engaged in unprotected anal sex increased their endorsement of these [treatment is prevention] beliefs" over time
  - Kalichman, et al. 2007; Begley, et al. 2008
- UAI among HIV+ men ***not*** associated with actual viral load
  - Rawstorne, et al. 2007; Crepaz, et al. 2009.
- UAI associated with non-adherence to medication
  - Joseph, et al. 2010.

HIV prevention as techno-fix

- Despite modernist faith in technological solutions, current status of biotech:
  - Nothing so far in 25 years of vaccine research
  - Circumcision: At most, negligible potential impact in Canada
    - Majority already circumcised
    - Greatest effectiveness with smallest risk category: heterosexual men
    - Does not protect women with HIV-positive male partners
    - Of marginal value to less than 10% of gay men

Techno-fixes

- Nothing so far with microbicides
- PEP/PrEP
  - PrEP effectiveness has mixed results; supplement to condoms
  - Presumes easy and rapid access for at-risk populations
  - Presumes good adherence among people who likely believe themselves to be HIV-negative
  - Risk of creating drug resistance in people at sero-conversion
  - Highly beneficial to big pharma; not so much to government & taxpayers
- What works? The condom (rather ancient technology)

techno-fixes vs social solutions

- What has been the most effective proven HIV prevention change to date?
  - The community mobilization of LGBT communities in the 1980s and 1990s to adopt condom use
- What do we need to know now?
  - The ways that people are socially organized and networked
    - Ron Stall's *syndemics*
    - circuits, micro-cultures, social niches and social networks at the leading edges of the epidemic

What do we need to know now?

- popular strategies and folk wisdoms
  - inconsistent assumptions and interpretations of the "rules of the game" governing sexual interactions
- Socio-historical movement of sexual and drug cultures
  - e.g. rapid virtualization of the sexuality of a wired generation
  - Practices of sero-sorting, sero-adaptation, barebacking, etc

What do we need to know now?

- dynamics of popular mobilization to advance health
  - LGBT worlds increasingly fragmenting into smaller scenes and groups?
    - to delineate the smaller scenes, micro cultures, tribes and subsets of at risk populations so that their discourses and concerns might be better addressed
    - providing virtual space to develop community engagement
      - Barry D Adam, James Murray, Suzanne Ross, Jason Oliver, Stephen G Lincoln, and Vicki Rynard. 2011. "Hivstigma.com, an innovative web-supported stigma-reduction intervention for gay and bisexual men" *Health Education Research 26 (5):795-807*.

What do we need to know now?

- institutional sources of HIV discourses
  - Messaging coming from schools, mass media, churches and mosques, the judiciary, biomedicine and the internet
- Popular understandings of HIV technologies and messages

For the published article

- Barry D Adam. 2011. "Epistemic fault lines in biomedical and social approaches to HIV prevention" *Journal of the International AIDS Society 14 (Supplement 2):S2.*