Implementation Research and Program Science

James Blanchard, MD, MPH, PhD
Professor and Director
Centre for Global Public Health
Department of Community Health Sciences
University of Manitoba
Science and HIV prevention – a brief history

**Scientific Discovery**
- Characterize viral etiology
- Diagnostic tests
- Modes of transmission
- Early pharmacological Tx

**Preventive Interventions**
- Condoms / Behavioural interventions
- PMTCT

**1st Generation**
- Biology and natural history
  - Foreskin
  - HAART
  - Microbicide
  - Vaccine

**2nd Generation**
- 2005+
  - Circumcision
  - HAART
  - PrEP / PEP
  - Microbicide / Vaccine?
The challenge – converting scientific discovery into impact

• The primary focus of basic scientific discovery is on methods to interrupt HIV transmission at the individual level:
  – Direct person-to-person transmission

• The prevention challenge is how to convert efficacious interventions at the individual level into programs that will have an impact on the epidemic at a population level
Issues in achieving impact

- **Identifying effective interventions:**
  - Distinguishing between efficacy and effectiveness

- **Implementing interventions at sufficient scale:**
  - Retaining effectiveness
  - Efficiency and cost-effectiveness

- **Maximizing population impact:**
  - Setting prevention priorities and optimizing resource allocation according to epidemic characteristics
  - Selecting the right intervention mix
  - Targeting interventions to maximize efficiency and impact
Overview of the Symposium

Day 1

• “Implementation Research”
  – Issues in implementing specific interventions, scaling up and tailoring

• Program Science”
  – Issues of coverage and matching interventions to populations to maximize population impact

Day 2

• “Impact Evaluation”
  – Focuses on methods to evaluate the impact of interventions