Expanded Testing and Treatment for Optimal HIV Outcomes

Low Prevalence Areas with Concentrated Epidemics

Key research questions

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Introduction

• Definitions
  – Prevalence <1% in general population
  – High risk population subgroups with higher prevalence

• Examples
  – Downtown Eastside Vancouver (IDU)
  – Ukraine (IDU)
  – Sex workers (Cambodia, Mumbai)
  – MSM (Peru, Bangkok)
Special Considerations

• Know your epidemic
  – Core transmitters
  – Groups at risk
  – Routes of transmission
• Understanding role of acute infection
• Feasibility of access
  – Legal status of behaviors and populations
  – Geographic concentration/identification
• Role of stigmatization and marginalization
• The Rule of Julio
  – Be opportunistic and synergistic
Research Questions
Seeking Populations

• How to identify at-risk populations

• How to access at-risk populations

• How to engage at-risk populations

• How to retain at-risk populations
  – HIV Positive, HIV negative
Research Questions
HIV Testing Strategies

• What are the most acceptable, feasible, effective and cost-effective testing and counselling methods?
• How to achieve high take-up?
• What is the optimal frequency of HIV testing?
  – Specific populations
• How will acute HIV infection be diagnosed?
• Could additional prevention enhancements be included in the testing process?
  – HIV specific
  – Others
• Could other interventions be added
  – TB, STD, immunizations, nutrition, hepatitis screening
Research Related Questions
Linkage

• What are optimal methods to link HIV positive individuals to care
  – Incentives
  – Integrated services
  – Low threshold services
  – Social support
  – Peer/family support programs
  – New technologies
  – Optimal subject tracking systems
    • unique identifiers

• What are optimal methods to link HIV negative individuals to standard care and repeat testing
  – Substance abuse treatment, STD, TB, Malaria
Major Treatment Question
“The Threshold”

• What is the relative impact of different levels of effective treatment coverage on HIV incidence?

• Will subpopulation studies demonstrate the validity of the concept of universal treatment
  – Vancouver experience
  – MSMs, IVDUs, sex workers, LGBT
  – Geographic hot spots
  – Displaced persons

• Will the demonstration of decreased incidence cause funding agencies to increase their investment in expanded therapy in the developing world?
Research Questions
HIV Treatment Strategies

• What are the most appropriate treatment and monitoring approaches?
• What are the effects of different treatment strategies on clinical prognosis including drug resistance?
• How could other HIV related and non-HIV interventions be combined with ART provision?
Research Questions
Health Services

• What is the most appropriate approach to treatment provision?
  – Venue and delivery method
• Are vertical or integrated approaches (population specific services) more effective?
• What are the resource requirements for a enhanced test and treat program?
• Are there adverse effects on other health services?
Research Questions
Effects of Enhanced Test and Treat on HIV Transmission

- What is effect of ART on HIV transmissibility, and what messages can be given to patients on ART?
- What is contribution of different stages of infection to HIV transmission?
- What is population-level effect of enhanced test and treat on HIV incidence?
- What level of treatment coverage/adherence is needed to achieve maximal effects on incidence?
- What is cost-effectiveness of enhanced test and treat in different settings and populations?
Research Questions
Outcomes

• HIV Positive
  – Resistance
  – Viral Load
  – CD4 Counts
  – Toxicity
  – Adherence
  – HIV Related and Unrelated Morbidity/Mortality
  – Quality of Life including stigma
  – Behavior
  – Resource utilization

• HIV Negative
  – Incidence
  – Behavior (testing, risk)
  – Resource utilization (hospitalization, mental health, etc)
Other Issues

• Model validation and consensus building
• Models for specific populations/settings
• Modelling of further interventions
• Cost Effectiveness
• Knowledge translation
  – General public
  – Targeted risk groups
  – Funding agencies
• Political impact