Reconsidering Implementation

Science: an overview of definitions, objectives, examples, evaluation methods, challenges, and a role for HPTN

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HPTN annual meeting 2014
Implementation Research and Delivery Science
Objectives of Implementation Research and Delivery Science

• Investigates and addresses major bottlenecks that impede delivery of existing effective health solutions.
• Examines not only what is and isn’t working, but how and why implementation is going right or wrong
• Tests approaches to improve implementation
• Priority is for low-tech delivery systems with high potential for sustainability
• Innovation through delivery!
Consider a new childhood vaccine:

**Efficacy**

*Efficacy studies:* Is the vaccine safe & efficacious under tightly controlled conditions?

**Effectiveness**

*Effectiveness studies:* Is the vaccine effective under real-world conditions

**IRDS**

*Studies to Inform scale-up:* How can the vaccine be integrated into existing health systems to ensure adoption/coverage and sustainability
Effectiveness versus IRDS

• Prominence and necessity of in-country stake holders:
  – Community \(\rightarrow\) Government
  – Embedded in decision-making processes
  – Supplement traditional DSMB concerns through study advisory committee
• Opens up the black box (a little)
  – Quick results and lessons learned on an on-going basis
• More overt integration with economics and related disciplines (political science
  – Methods of impact evaluation
  – Efficiency/value for the money
  – Coverage (demand/supply/quality?)
Matching supply and demand with innovative, efficient delivery

“Not tonight, honey, but here’s a voucher.”
IRDS examples

• What are the best ways to optimize service delivery? (most cost effective delivery strategies):
  – Bottlenecks to get services
  – Balance of fixed and mobile clinics
  – Task shifting: best models for training
  – Vertical versus integrated services
  – Systems of distribution (tests, drugs, equipment, personnel)

• How can we improve access to programs?
  – Whom to target
  – Best methods to
    • Identify those who are eligible (encourage on-going screening) according to guidelines, who is likely to transmit
    • Facilitate retention: transport, incentives/vouchers, peer partners
    • Create demand and supply Increase adherence and retention
    • Focus on management and QI

• How can we optimize or amplify the impact of treatment for prevention?
  – Optimal combination of prevention strategies
  – Smooth transition to care and tx
Community IRDS issues for TasP

• Acceptability
• Consent
• Coercion/stigma
• Vulnerable key populations
• Shift delivery system from the facility to the community (including task shifting)
  – Sicker people in facility
• Inevitable prioritization
Rigorous evaluation at scale: Impact Evaluation for IRDS

Are we doing the right things?

• Can we implement more effectively
  – Assess changes in the well-being of individuals, households, communities that can be attributed to a particular intervention, program or policy
  – What would have happened in the absence of the intervention?
  – How would outcomes change if you changed the context in which the program was implemented?
    • What are core versus flexible program components
Impact Evaluation for IRDS
continued

Are we doing the right things the right way?

• Can we and implement more efficiently
  – Economic:
    • Value for the money
    • Cost effectiveness
  – Business: Optimize operations (e.g. time-motion, supply chain)

• What are the constraints to efficient implementation?
Red flag challenge: Academic misalignment and public recognition:

• Academic rewards for research are often divorced from public health solutions
  – Research often yields unsustainable solutions that take years to discover and are therefore unrealistic given urgent public health challenges

• Focus on efficacy and bench discovery over strategies for delivery and health systems research

• Recognition of middle management and community:
  – QI, healthQual
  – Application of science to training and outcomes
HPTN 065: TLC-Plus: A Study to Evaluate the Feasibility of TLC for HIV Prevention in the United States. Chair: Wafaa El-Sadr; Co-Chair: Bernard

- The Linkage-to-Care and Viral Suppression components involve site randomization to test the effectiveness of a financial incentive (FI) intervention compared with the standard of care (SOC).
- The Prevention for Positives component uses individual randomization to compare the SOC plus a computer-delivered intervention with the SOC.
What else can the PTN do?

• Conduct comparative effectiveness studies
• Examine and report on more proximal implementation outcomes (e.g. coverage, quality) over the course of an effectiveness trial
• Embed IRDS questions that will be answered over the course of an effectiveness trial
• Conduct studies powered on these outcomes
  – Faster, cheaper
• Influence systems of reward (management, academia)
  – Letting HIV transform Academia—Embracing Implementation Science. El-Sadr, W., Philip, N. Justman, J. NEJM 370; 18, May 2014
Great References


• Peters, DH, Tran NT, Adam T. Implementation Research in Health: A Practical Guide. The Alliance for Health Policy and Systems Research, WHO 2013