Implementation Science Terminology and Definitions in Practice

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Making sense implementation science jargon to make it work for me



Lots of frameworks

- CFIR
- Diffusion of innovation
- Blueprint for Dissemination
- OPTIONS Model
- Knowledge Exchange Framework
- Push-Pull Capacity Model
- 4E Framework for Knowledge Disseminations and Utilization
- PRECEED
- RE-AIM

- PRECEDE-PROCEED
- DHAP
- PRISM
- Active Implementation Framework
- Normalization Process Theory
- PHARIHS
- PRISM
- 4Es
- ARC
- Etc. etc.



Complex frameworks - CFIR



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Process

P

Complex definitions

IS: "the scientific study of methods to promote the systematic uptake of research findings and other evidence-based practices into routine practice, and, hence, to improve the quality and effectiveness of health services"





Implementation Science



Where implementation science fits

Search for potentially generalizable findings to inform how to get evidence-based interventions to clients **Clinical scienc** Basic Implementation science Beh vioral science science Public health sciend

Understanding what works on an individual (clinical) or group (public health) level to improve clinical outcomes or reduce disease and morbidity Understanding how to achieve a desired level of delivery of an intervention by service delivery or policy organizations (prescribing an indicated medication every time)

Understanding how to get patients or populations to opta postice (adherence to make tipesset) RC

Components of IS Studies

- What is the **implementation gap** (what intervention is not getting delivered)?
- What are the **constraints** to bridging the gap (or do you need to start a better understanding of the gap)?
- What is the **framework** to guide strategy selection?
- What is the **strategy** and is it clearly specified?
- What is the **change theory** that underpins the strategy why may it work (this underpins the scientific question)?
- How is **external validity** maximized?
- Does the evaluation include components to understand implementation success and to inform further implementation or scale-up?



TB preventive therapy for PWH in Brazil

- Background: Less that 10% of PHW in clinical care in Brazil have received TB preventive therapy. The primary constraint appears to be screening for latent TB infection (with TST)
- Gap: TB preventive therapy in HIV clinics
- Constraint: clinicians not screening for latent TB infection
- Framework: CFIR, relative advantage
- Strategy: Institute reflex IGRA testing when a lab receives a request for annual CD4 counts
- Change theory: choice architecture that shifts screening for latent TB as the default and the test as part of routine laboratory procedure
- External validity: implement as part of routine HIV care in public sector HIV clinics in Brazil.
- Evaluation: primary outcome: proportion of eligible patients receiving IGRA. CFIR constructs to assess implementation (inner and outer settings).



LTC following community HIV testing in SA

- Background: Approximately 40% of clients diagnosed with HIV in community settings in South Africa link to care within 90 days. Those not linking to care fail to receive evidence-based interventions (ART)
- Gap: LTC after community HTS
- Constraints:
 - Transport / travel cost and time
 - Stigma and other psychosocial factors
 - Denial of disease or illness severity
- Framework: social-ecological model
- Strategy: A behavioral intervention to increase LTC through:
 - paying for transport to care
 - providing strengths-based counseling
 - POC CD4 testing with counseling specific to test results
- Change theory:
 - Paying for transport will overcome transport challenges
 - Strengths-based counseling will overcome some psychosocial barriers
 - Counseling on CD4 results will increase understanding of illness severity (information-motivation-behavior theory)
- External validity: All clients ≥18 years old and not in care eligible & recruited
- Evaluation: RCT effectiveness; process measures; fidelity

[USAID OAA-A-12-0028; Hoffmann et al. JAIDS 2017]



Corrections to community care transition SA

- Background: In US as high as 14% of the HIV+ population passes through corrections annually and receive ART while incarcerated but are lost from care during the transition to care after release. Success with transition from corrections to community care was unknown in South Africa.
- Gap: ex-inmates receiving ART while in corrections do not transition in care following release
- Constraints: unknown
- Framework: social-ecological model
- Strategy: formative work to understand the size of the gap and associated system and behavioral factors
- Change theory:
- External validity: all HIV-positive inmates with imminent release eligible
- Evaluation: health system, individual transition in care, qualitative



[CDC GH000515]

Health facility-based HTS in South Africa

- Background: Health facility-based HTS leads to a high proportion of LTC but appears to be underutilized with only 15% of eligible clients offered HTS. Human resources and clinic space appear to be major constraints.
- Gap: Health facility-based HTS delivery
- Constraint: (multiple) human resources and clinic space
- Framework: Patient-centered care / task shifting
- Strategy: Client HIV self-testing in booths in clinic
- Change theory: Shifting an HIV screening test from health care workers to clients will overcome the human resources constraint on HTS
- External validity: implemented in general public clinics in SA
- Evaluation: Assessment of testing and implementation.



[USAID OAA-A-14-00060; CDC Innovation Challenge]

What implementation science is not

- An approach to deliver an intervention
- A trial an error approach until something is being implemented
- A vague set of constructs to refer to until something good happens
- An opportunity to prove something can be implemented



