Using the Network to Develop a Successful Implementation Science Proposal: 
Working with HIV Clinics to adopt Addiction Treatments using Implementation Facilitation (WHAT-IF?)

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Yale University Schools of Medicine and Public Health
Outline

• Why Implementation Science?

• Using the Network to respond to an RFA

• What is WHAT-IF?
Outline

• Why Implementation Science?

• Using the Network to respond to an RFA

• What is WHAT-IF?
The latest research shows that we really should do something with all this research
Need for Implementation Science

- Efficacy Studies
- Effectiveness Studies
- Implementation Science
How do we change practice?
Implementation Science

• The study of methods to promote the integration of research findings and evidence into healthcare policy and practice.

• Seeks to understand the behavior of healthcare professionals and other stakeholders as a key variable in the sustainable uptake, adoption, and implementation of evidence-based interventions.
## Implementation Research Outcomes

<table>
<thead>
<tr>
<th>Implementation Outcomes</th>
<th>Service Outcomes</th>
<th>Patient Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acceptability</td>
<td>Efficiency</td>
<td>Satisfaction</td>
</tr>
<tr>
<td>Adoption</td>
<td>Safety</td>
<td>Function</td>
</tr>
<tr>
<td>Appropriateness</td>
<td>Effectiveness</td>
<td>Symptomatology</td>
</tr>
<tr>
<td></td>
<td>(hybrid designs)</td>
<td></td>
</tr>
<tr>
<td>Costs</td>
<td>Equity</td>
<td></td>
</tr>
<tr>
<td>Feasibility</td>
<td>Patient-centeredness</td>
<td></td>
</tr>
<tr>
<td>Fidelity</td>
<td>Timeliness</td>
<td></td>
</tr>
<tr>
<td>Penetration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sustainability</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Outline

• What is Implementation Science?

• Using the Network to respond to an RFA

• What is WHAT-IF?
New England HIV Implementation Science Network (The “Network”)

• Aims to improve HIV prevention and treatment in small urban areas with a high prevalence of HIV by:

  • Stimulating and supporting research and evaluation collaborations across New England

  • Fostering partnerships among agencies, stakeholders, and researchers

  • Focusing on implementation science in small urban areas with a high prevalence of HIV
The Network’s Geographic Spread
The Network is Diverse

- Health Departments
- Addiction Treatment Programs
- HIV Clinics & Community Health Centers
- Community-Based Organizations
- Researchers
- Advocates
- Industry
Integration of Infectious Diseases and Substance Abuse Intervention Services for Individuals Living with HIV (R01)

Activity Code
R01 Research Project Grant

Announcement Type
New

Related Notices
December 7, 2015 - This RFA has been reissued as RFA-DA-16-011.

Funding Opportunity Announcement (FOA) Number
RFA-DA-15-013

Companion Funding Opportunity
None

Number of Applications
See Section III. 3. Additional information on Eligibility.

Catalog of Federal Domestic Assistance (CFDA) Number(s)
93.279

Funding Opportunity Purpose
The goal of this FOA is to develop and test organizational and systems level interventions to determine how best to provide comprehensive, high quality, integrated, sustainable, cost-effective interventions to improve the health outcomes of PLWH with substance use disorders and other comorbid conditions. This FOA will support: 1) multidisciplinary research to enhance the adoption and integration of evidence-based screening and treatment of substance abuse in HIV centers and closely related medical settings; and 2) multidisciplinary research to increase the adoption and integration of HIV testing and linkage to HIV care in addiction treatment settings. In both HIV and addiction treatment settings, research to enhance the adoption and integration of treatment services for comorbid conditions (e.g., confections, psychiatric disorders) is encouraged.
Organizational and systems level interventions
Evidence-based practices (screening & treatment)
Adoption
Sustainable
Applicants are encouraged to develop projects that address the National HIV/AIDS Strategy goal of Increasing Access to Care and Improving Health Outcomes for People Living with HIV, especially implementation research on the integration of services and maintenance of people in clinical care.

Examples of possible research topics include (but are not restricted to):
Developing and testing implementation strategies to disseminate, adopt, and sustain evidence based practices to address substance use disorders in HIV care settings and HIV care in addiction treatment settings; Testing the implementation of elements of a medical home model or other integrated service delivery models consistent with the provisions of the Affordable Care Act.
Pulling a grant together

• The science
• The partners
• The logistics
• The budget
• The timeline
• The details
Using the Network

Challenges
- Limited detailed information
- Restricted number of sites

Facilitators
- Established relationships/investigators
- Willingness to assist on short timeline
- Network Focus on IS
- Appropriate Settings
Engaging HIV Clinics

Opposes involvement

Favors involvement

Competing priorities
Practices already implemented

Incentives for participation
Prior research experience
Interest in changing practice
Trust in researchers
Key Facilitators

• Site PIs and Co-Is
• Jen Edelman
• William Becker
• Peter Friedmann
• Jim Pettinelli
• Tassos Kyriakides
Implementation Science and Site Number

- Increased Power
- Generalizability
- Resource-Intensive Intervention
Outline

• What is Implementation Science?

• Using the Network to respond to an RFA

• What is WHAT-IF?
WHAT-IF?

Working with HIV Clinics to Adopt Addiction Treatment Using Implementation Facilitation

Grant# R01 DA041067-01
Need for addiction treatment in HIV clinics

• Among HIV-infected patients, substance use is highly prevalent and associated with significant morbidity and mortality

• Effective and safe treatments exist, yet are inconsistently offered in HIV clinics

• Outcomes are better with integrated approaches to treatment
# Evidence-Based Treatments Suitable for HIV Clinics

<table>
<thead>
<tr>
<th>Substance</th>
<th>Medication</th>
<th>Counseling</th>
</tr>
</thead>
</table>
| **Tobacco** | • Bupropion  
• Nicotine replacement therapy  
• Varenicline | • Brief intervention |
| **Alcohol** | • Acamprosate  
• Disulfiram  
• Naltrexone (oral and injectable) | • Brief intervention (at-risk drinkers only)  
• Cognitive behavioral therapy  
• Motivational enhancement therapy |
| **Opioid** | • Buprenorphine  
• Naltrexone (oral and injectable) | • Cognitive behavioral therapy  
• Contingency management  
• Motivational enhancement therapy  
• Drug counseling |
Model for optimal integration of addiction treatment within HIV clinics may vary

Addiction Medicine Specialist Model

Co-management Co-location

HIV Provider Model

Patient-Level:
- Addiction severity
- Comorbid conditions
- Motivation
- Preferences
- Substance type

Provider-Level:
- Attitudes
- Comfort
- Knowledge/Training
- Provider Types
- Time

Organizational-Level:
- Culture
- Practice size
- Reimbursement
- Resources
# Implementation Facilitation

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>External facilitator</td>
<td>Outside content expert who assists site</td>
</tr>
<tr>
<td>Local champion</td>
<td>Local site stakeholder who promotes change</td>
</tr>
<tr>
<td>Provider education and academic detailing</td>
<td>Provision of unbiased peer education</td>
</tr>
<tr>
<td>Stakeholder engagement</td>
<td>Aligning goals of implementation effort and those impacted</td>
</tr>
<tr>
<td>Tailor program to site</td>
<td>Addressing site specific needs</td>
</tr>
<tr>
<td>Performance monitoring and feedback</td>
<td>Assess implementation of screening and treatment efforts to inform site of results</td>
</tr>
<tr>
<td>Formative evaluation</td>
<td>Quantitative and qualitative determination of impact</td>
</tr>
<tr>
<td>Establish a learning collaborative</td>
<td>Shared learning opportunities tailored to stakeholders</td>
</tr>
<tr>
<td>Program marketing</td>
<td>Efforts designed to increase attention to availability of on-site addiction treatment services</td>
</tr>
</tbody>
</table>
WHAT-IF? Working with HIV Clinics to Adopt Addiction Treatment Using Implementation Facilitation

Gabriel Rebick, MD STAR Program, SUNY Downstate
Philip Chan, MD; Jacob Vandenberg, PhD; and Ashley Robinette, MPH Miriam Immunology Center
Deborah Cornman, PhD UConn/Hartford Hospital
Michael Virata, MD Haelen Center, YNHH

David Fiellin, MD (PI) Jeanette Tetrault, MD Lynn Fiellin, MD Evangelia Louizos Jim Dziura, MPH, PhD Denise Esserman, PhD Laura Simone
WHAT-IF?

Working with HIV Clinics to Adopt Addiction Treatment Using Implementation Facilitation

Aim 1- To use mixed methods to identify evidence, context, and facilitation-related barriers and facilitators to the integration of addiction treatments to help tailor an Implementation Facilitation for each clinic

Aim 2- To assess the impact of Implementation Facilitation on:
   ◦ a) organizational and provider readiness to deliver addiction treatments,
   ◦ b) the provision of addiction treatments,
   ◦ c) changes in organizational models used to deliver addiction treatments

Aim 3- To evaluate the impact of Implementation Facilitation on antiretroviral receipt, viral suppression and retention in HIV care among patients eligible for addiction treatment
**WHAT-IF?**

**Working with HIV Clinics to Adopt Addiction Treatment Using Implementation Facilitation**

- **Four sites:**
  - SUNY Downstate Medical Center
  - Yale-New Haven Hospital Haelen Center
  - Hartford Hospital
  - Miriam Hospital Immunology Center

- **Stepped wedge design:**

<table>
<thead>
<tr>
<th>Clinic 1</th>
<th>Control</th>
<th>Control</th>
<th>Control</th>
<th>Control</th>
<th>IF</th>
<th>Evaluation</th>
<th>Maintenance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinic 2</td>
<td>Control</td>
<td>Control</td>
<td>Control</td>
<td>IF</td>
<td>Evaluation</td>
<td>Maintenance</td>
<td>Maintenance</td>
</tr>
<tr>
<td>Clinic 3</td>
<td>Control</td>
<td>Control</td>
<td>IF</td>
<td>Evaluation</td>
<td>Maintenance</td>
<td>Maintenance</td>
<td>Maintenance</td>
</tr>
<tr>
<td>Clinic 4</td>
<td>Control</td>
<td>IF</td>
<td>Evaluation</td>
<td>Maintenance</td>
<td>Maintenance</td>
<td>Maintenance</td>
<td>Maintenance</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time Point</th>
<th>Baseline</th>
<th>6 months</th>
<th>12 months</th>
<th>18 months</th>
<th>24 months</th>
<th>36 months</th>
<th>48 months</th>
</tr>
</thead>
</table>

*IF= Implementation Facilitation*
Hybrid Designs

Curran GM et al Med Care 2012.
Hybrid Type 3

• Testing an implementation intervention/strategy while observing/gathering information on the intervention and related outcomes

• Implementation emphasized over effectiveness
WHAT-IF?

Working with HIV Clinics to Adopt Addiction Treatment Using Implementation Facilitation
Promoting Action on Research Implementation in Health Services framework (PARiHS)

Formative Evaluation

- Grounded in PARiHS framework: context, evidence, facilitation
- Focus groups with patient and clinic staff/administrators
- Surveys with clinic staff/administrators:
  - Organizational readiness to change assessment (ORCA)
Research article

Organizational readiness to change assessment (ORCA): Development of an instrument based on the Promoting Action on Research in Health Services (PARIHS) framework

Christian D Helfrich*†1,2, Yu-Fang Li†1,3, Nancy D Sharp†1,2 and Anne E Sales†4
May be used for: 1) prognosis, 2) diagnosis, and 3) evaluation

Previously applied to integrating HCV care in addiction treatment settings

We adapted to inquire about provision of medications and counseling for tobacco, alcohol and opioid use disorders

• e.g., In my opinion, increasing prescribing of medications to promote smoking cessation in my HIV clinic will improve outcomes among patients who smoke cigarettes
## Assessments

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Data Source</th>
<th>Baseline Control</th>
<th>6 months Evaluation</th>
<th>12 month Maintenance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational readiness to change assessment</td>
<td>Survey</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Provider readiness to prescribe/refer for each medication and counseling</td>
<td>Survey</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Screening for each condition</td>
<td>Electronic Medical Record</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Use of each medication and counseling</td>
<td>Electronic Medical Record</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Patient demographic information</td>
<td>Electronic Medical Record</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Receipt of antiretroviral therapy</td>
<td>Electronic Medical Record</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Tobacco, alcohol and opioid use disorders</td>
<td>Electronic Medical Record</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Psychiatric diagnoses</td>
<td>Electronic Medical Record</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Clinic visits</td>
<td>Electronic Medical Record</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Lab values</td>
<td>Electronic Medical Record</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
Behavioral Health Integration in Medical Care Instrument

- Program structure
- Program milieu
- Clinical process: assessment
- Clinical process: treatment
- Continuity of care
- Staffing
- Training
Initial Lessons

- Determining baseline “denominator” of treatment-eligible patients is complicated by low screening practices.

- Clinics vary in provision of treatments supporting the need for tailored evaluations.

- Institutional review board and ClinicalTrials.gov not used to Implementation Science protocols.
  - e.g. IRB approval needs to address multiple types of participants and data sources.

- Streamlining data extraction from diverse electronic medical records requires validation and close partnership with information technology members.
Summary

• Implementation science provides tools for systematically evaluating factors impacting use of evidence-based practices in clinical settings

• The New England HIV Implementation Science Network provides a platform for conducting implementation science-focused work

• The NIH (i.e. NIDA) offers funding opportunities for addressing HIV prevention and treatment
Questions?

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