Reframing Implementation Science to Address Inequities in Healthcare

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Key Points

• We need better bridges between implementation science and healthcare disparities research

• Infusing implementation science with an equity approach can produce valuable knowledge to help reduce inequities in healthcare
“Of all the forms of inequality, injustice in healthcare is the most shocking and inhumane.”

—Martin Luther King Jr., 1966

Source: Dittmer, 2009: (“The Good Doctors”) MLK Jr. remarks at the 2nd Annual Convention of the Medical Committee for Human Rights, Chicago, March 26, 1966
What are Healthcare Inequities?


SOURCE: Gomes and McGuire, 2001
Quality of Depression Care in U.S. Adults By Race and Ethnicity

<table>
<thead>
<tr>
<th>Race</th>
<th>No Treatment</th>
<th>Adequate Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>40.2%</td>
<td>33%</td>
</tr>
<tr>
<td>Latino</td>
<td>63.7%</td>
<td>22.3%</td>
</tr>
<tr>
<td>Asian</td>
<td>68.7%</td>
<td>13.1%</td>
</tr>
<tr>
<td>Blacks</td>
<td>58.8%</td>
<td>12.1%</td>
</tr>
</tbody>
</table>

Source: Alegria et al. (2008): Data from the Collaborative Psychiatric Epidemiology Surveys
Multiple Populations Face Inequities in Healthcare

- American Indians/Alaska Natives
- Asian Americans
- Blacks or African Americans
- Hispanics or Latinos/as
- Native Hawaiians or Other Pacific Islanders
- Low socio-economic groups
- Geography: urban or rural
- Gender
- Age
- Disability status
- Sexual orientation
- Serious mental illness
Determinants of Healthcare Inequities

Health Care System Factors
- Health services organization, financing, and delivery
- Health care organizational culture, quality improvement

Patient Factors
- Beliefs and preferences
- Race/ethnicity, culture, and familial context
- Education and resources
- Biology

Clinical Encounter
- Provider communication
- Cultural competence

Provider Factors
- Knowledge and attitudes
- Competing demands
- Bias

Cultural Context

Source: Kilbourne et al., AJPH, 2006; 96: 2113-2121
Culture Matters in Health as it Shapes

- Health behaviors (e.g., diet, physical activity)
- Illness experiences
- Client-provider interactions
- Clients interactions with the healthcare system
Healthcare Disparities Research

- Detect → Do disparities exist?
- Understand → Why do disparities exist?
- Intervene → Do interventions work?
- Implement → How to best implement interventions, services and/or policies to eliminate inequities in care?

Source: Baumann (2018); Kilbourne et al., AJPH, 2006; 96: 2113-2121
Implementation Science and Healthcare Disparities Research

• Improve the quality and outcomes of services

• Make treatments generalizable

• Emphasize contextual factors and multi-level approaches

Sources: Cabassa & Baumann (2013)
## Underrepresentation of Hispanics in Clinical Trials for Common Mental Disorders (2001-2010)

<table>
<thead>
<tr>
<th>Disorder</th>
<th>Whites</th>
<th>Hispanics</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADHD</td>
<td>58%</td>
<td>5%</td>
</tr>
<tr>
<td>Major Depression</td>
<td>62%</td>
<td>19%</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>37%</td>
<td>3%</td>
</tr>
<tr>
<td>Bipolar Disorder</td>
<td>71%</td>
<td>1%</td>
</tr>
<tr>
<td>Total</td>
<td>61%</td>
<td>8%</td>
</tr>
</tbody>
</table>

Source: Santiago et al., 2014
• “All that is needed is to culturally adapt interventions”

• “Focus on testing the efficacy and effectiveness of interventions in minority communities”

• “One size fits all: Just scale up interventions, it will improve the quality of care for everyone”

Reframing Implementation Science to Address Healthcare Inequities
Equality

Equity
1. Focus on reach from the very beginning

2. Design and select interventions with implementation in mind

3. Implement what works

4. Develop the science of adaptations

5. Use an equity lens for implementation outcomes
**What?**
- QIs
- ESTs

**How?**
- Implementation Strategies

**Processes**

**Outcomes**
- Implementation Outcomes
  - Feasibility
  - Fidelity
  - Penetration
  - Acceptability
  - Sustainability
  - Uptake
  - Costs

- Service Outcomes*
  - Efficiency
  - Safety
  - Effectiveness
  - Equity
  - Patient-centeredness
  - Timeliness

- Patient Outcomes
  - Satisfaction
  - Function
  - Health status/symptoms

*Institute of Medicine Standards of Care

Source: Proctor et al 2008 Admin. & Pol. in Mental Health Services
Focus On Reach From The Beginning

Communities
Settings
Providers
Clients

Processes

What?
QIs
ESTs

How?
Implementation Strategies

Implementation
Outcomes
- Feasibility
- Fidelity
- Penetration
- Acceptability
- Sustainability
- Uptake
- Costs

Service Outcomes*
- Efficiency
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Patient Outcomes
- Satisfaction
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Implementation Research Methods

Attention to Reach

**Community:** Two cities with different service systems

**Setting:** Supportive Housing to bring the intervention to people’s doors steps

**Provider:** Use of peer specialists to deliver intervention. They bring trust, credibility, hope, and feasibility

**Client:** Diverse pool of people with serious mental illness who are overweight or obese (BMI > 25) with few exclusionary criteria to resemble actual clients in this setting
Design and Select Interventions with Implementation in Mind

- Partner with stakeholders from the very beginning
- Focus on end-users at all levels
- Consider the ecology of practice

WHAT?

QIs
ESTs

Sources: Glasgow et al. (2012); Cabassa et al. (2016)
Health and Wellness Photovoice Project
What is Photovoice?

• A participatory action research method that entrusts people with cameras to document their everyday lives and inform social action

• Goals:
  – Enable people to record, reflect, and illustrate their lived experiences through photographs and narratives
  – Promote a critical dialogue and knowledge about community issues
  – Reach change agents and policymakers

Source: Wang et al., 2004
Study Aims:
• Engage clients in a dialogue about their physical health and wellness
• Generate community knowledge to inform the implementation of health interventions in housing agencies

Sample:
• Purposive sample of 16 tenants at 2 supportive housing agencies in NYC

Methods:
• Six weekly sessions were conducted at each agency
• Each session included:
  • Short individual photo-elicitation interviews
  • Group dialogue discussions

Source: Cabassa et al., Qual Health Research, 2013, 23:618-630
Lessons Learned

• Photovoice generated information about clients’ preferences for health interventions:
  – Format: peer-based
  – Content: weight loss, physical activity
  – Methods: experiential learning, skills acquisition
  – Setting: Supportive housing

• Participatory methods are useful for the selection and development of interventions
Trajectory of Projects with Implementation in Mind

1. Health and Wellness Photovoice Project
2. Pilot Testing a Healthy Lifestyle Intervention in Supportive Housing
3. Hybrid Effectiveness/Implementation Trial in Supportive Housing
Implement What Works

HOW?

Implementation Strategies

- Increase trust, partnerships and ownership
- Build capacity, resources collaborative networks
- Test implementation strategies
Outcomes: CEP better than RS on:

- Mental Health-related quality of life
- Increasing Physical Activity
- Reducing risk factors for homelessness
- Shifted services use for depression away from hospital and specialty care into primary care

Sources: Wells et al., 2013
Compilation Implementation Strategies

- Re-structure
- Finance
- Quality Management
- Educate
- Attend to Policy Context
- Plan
- Facilitate

Source: Powell et al., 2012
Science of Adaptation

Adaptation

**WHAT?**
- QIs
- ESTs

**HOW?**
- Implementation Strategies

**Context**

**Why**
- Distinct sociocultural context
- Threat to social validity

**What**
- Surface and/or deeper level
- Context

**How**
- Systematic and collaborative
- Document (pre, during, post)

**Impact**
- On implementation, services and/or client outcomes.

Sources: Cabassa & Baumann (2013); Rabin et al., 2018; Stirman et al., 2017
Make Adaptations Systematic and Visible

• Document the process and methods of adaptation
  – Clarify the process, steps and methods used to enhance fit
  – Document the how, what and why of adaptations
  – Systematically study the links between adaptations and outcomes

• Use existing adaptation models and/or guidelines
Common Characteristics of Adaptation Frameworks

- Follow a systematic, step-wise process
- Iterative approach
- Data driven: Move from formative to evaluation research
- Combine top-down and bottom up approaches.
- Some involve stakeholders

Sources: Baumann, Cabassa & Stirman, 2018; Barrera et al., 2013; Ferrer-Wreder et al., 2012
System for Coding and Tracking of Adaptations

Framework for Reporting Adaptations and Modifications-Expanded:

**WHEN** did the modification occur?
- Pre-implementation/planning/pilot implementation
- Implementation
- Scale up
- Maintenance/Sustainment

**WHAT is modified?**
- Modifications made to content itself, or that impact how aspects of the treatment are delivered
- Contextual - Modifications made to the way the overall treatment is delivered
  - Modifications made to the way that staff are trained in or how the intervention is evaluated
- Training and Evaluation - Modifications made to the way that staff are trained in or how the intervention is evaluated
- Implementation and scale-up activities - Modifications to the strategies used to implement or spread the intervention

**At what LEVEL OF DELIVERY (for whom/what is the modification made?)**
- Individual
- Target Intervention Group/Cohort/Individuals that share a particular characteristic
- Individual practitioner
- Clinic/unit level
- Organization
- Network
- System/Community

**What is the NATURE of the content modification?**
- Tailoring/tweaking/ refining
- Changes in packaging or materials
- Adding elements
- Removing/slopping elements
- Shortening/condensing (pacing/timing)
- Lengthening/ extending (pacing/timing)
- Substituting
- Reordering of intervention modules or segments
- Spreading (breaking up session content over multiple sessions)
- Integrating parts of the intervention into another framework (e.g., selecting elements)
- Integrating another treatment into EBP (not using the whole protocol and integrating other techniques into a general EBP approach)
- Repeating elements or modules
- Loosening structure
- Departing from the intervention ("drift") followed by a return to protocol within the encounter
- Drift from protocol without returning

**Relationship Fidelity/core elements?**
- Fidelity Consistent/Core elements or functions preserved
- Fidelity inconsistent/Core elements or functions changed
- Unknown

**REASONS**

<table>
<thead>
<tr>
<th>SOCIOPOLITICAL</th>
<th>ORGANIZATION/SETTING</th>
<th>PROVIDER</th>
<th>RECIPIENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Existing Laws</td>
<td>- Available resources (funds, staffing, technology, space)</td>
<td>- Race</td>
<td>- Race; Ethnicity</td>
</tr>
<tr>
<td>- Existing Mandates</td>
<td>- Existing Policies</td>
<td>- Ethnicity</td>
<td>- Gender identity</td>
</tr>
<tr>
<td>- Existing Policies</td>
<td>- Existing Regulations</td>
<td>- Sexual/gender identity</td>
<td>- Sexual Orientation</td>
</tr>
<tr>
<td>- Political Climate</td>
<td>- Funding Policies</td>
<td>- First spoken languages</td>
<td>- Access to resources</td>
</tr>
<tr>
<td>- Historical Context</td>
<td>- Societal/Cultural Norms</td>
<td>- Previous Training and Skills</td>
<td>- Cognitive capacity</td>
</tr>
<tr>
<td>- Societal/Cultural Norms</td>
<td>- Funding or Resource Allocation/Availability</td>
<td>- Preferences</td>
<td>- Physical capacity</td>
</tr>
<tr>
<td>- Funding or Resource Allocation/Availability</td>
<td>- Race</td>
<td>- Clinical Judgement</td>
<td>- Crisis and emergent circumstances</td>
</tr>
</tbody>
</table>

Source: Stirman et al, 2019
Example of Documenting Adaptations

<table>
<thead>
<tr>
<th>Session</th>
<th>By whom</th>
<th>Why</th>
<th>What was done (Add, cut, modify)</th>
<th>When</th>
<th>Perceived impact</th>
<th>Changes to fidelity measure</th>
</tr>
</thead>
</table>

Sources: Rabin et al., 2018; Stirman et al., 2017
Use an Equity Lens for Implementation Outcomes

- Implementation
  - Outcomes
    - Feasibility
    - Fidelity
    - Penetration
    - Acceptability
    - Sustainability
    - Uptake
    - Costs
Example of Questions

• Do organizations that serve large populations of racial/ethnic minorities achieve the same implementation outcomes (e.g., fidelity, cost, sustainability) as those that serve predominantly non-Hispanic Whites?

• What factors contribute to inequities in implementation outcomes between organizations serving different populations?

• Which implementation strategies produce more equitable implementation outcomes among organizations serving different populations?
Future Areas of Inquiries

- Achieve inclusion and representation
- Reconfigure the intervention development and refinement process
- Expand the science of adaptation
- Invest in implementation trials that focus on reducing healthcare disparities
Thank You // Gracias

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