Evidence Based Practice and Practice Based Evidence – Is It One or the Other?

Centennial Topical Webinar Series

July 17, 2012
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Need All the Evidence We Can Get

We who seek to improve outcomes for children need all the evidence we can get

• To continuously make interventions more effective
• To guide the selection and design of interventions to implement or scale up
• To demonstrate that the work is improving lives
An Inclusive Evidence Base: The New Gold Standard

Evidence from Experimental Evaluations
Evidence from Non-Experimental Evaluations
Evidence from Other Research
Evidence from Practice and Experience

Draw on and synthesize evidence from all these sources:
- to continuously make interventions more effective
- to guide the selection and design of interventions to implement or scale up
- to demonstrate that the work is improving lives and neighborhoods
Using Multiple Methods

The evidence we need can come from:

- experimental evaluations (RCTs)
- non-experimental evaluations
- other research
- practice and experience
## Matching Methods to Purpose

<table>
<thead>
<tr>
<th>PURPOSE</th>
<th>SOURCES of EVIDENCE and METHODS</th>
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<tbody>
<tr>
<td></td>
<td><strong>STANDARDIZED INTERV. WITH CLEAR CAUSAL RELATION TO OUTCOME</strong></td>
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<tr>
<td>Inform resource allocation; selection of intervention to implement, scale up</td>
<td>Use experimental methods, including RCTs, to obtain proof of impact</td>
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<td>Inform efforts to improve quality, achieve greater impact</td>
<td>Analyze RCTs for cross-program effectiveness factors</td>
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<td>Inform intervention design when known interventions not achieving outcomes</td>
<td>Examine this evidence for principles, practices that could inform creation of new interventions</td>
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<tr>
<td>Guide quality of implementation</td>
<td>Analyze for cross-program keys to quality implementation</td>
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Agreement on Measurable Results is Essential

Examples of results in current use

• fewer children in large residential centers,
• fewer children in out-of-state placements,
• fewer child removals with no immediate effect on child safety,
• fewer children returning to DCF custody after having been reunited with family
• fewer children in more than three placements
• more children living with relatives or significant family friends as foster parents
• fewer high school dropouts
• fewer pregnant or parenting teens
Lisbeth B. Schorr
Center for the Study of Social Policy
http://www.cssp.org
Dr. Puneet Sahota
Perspectives

- American Indian/Alaska Native communities have recently faced challenges with evidence-based practice
- Practice-based evidence offered as an alternative
- Youth suicide prevention review project
- Case examples
Definitions

• Evidence based practice
  – Using “best available evidence”
  – Randomized clinical trials as gold standard

• Practice based evidence
  – Real-life practices as basis for inductively developing evidence

• Culturally based interventions
  – Grounded in tradition, “anecdotal evidence”
Definitions (citations)

Evidence-based practice: The Institute of Medicine (IOM) defines evidence-based practice as “the integration of best research evidence with clinical expertise and patient values.” (Institute of Medicine (IOM), Crossing the Quality Chasm: A New Health System for the 21st Century (Washington, D.C.: National Academies Press, 2001)).

American Psychological Association (APA) defines evidence-based practice in psychology as: “the integration of the best available research with clinical expertise in the context of patient characteristics, culture, and preferences.” (APA Presidential Task Force on Evidence-Based Practice, “Evidence-Based Practice in Psychology,” American Psychologist 61, no. 4 (2006))

The APA Presidential Task Force on evidence-based practice further writes, “Evidence derived from clinically relevant research on psychological practices should be based on systematic reviews, reasonable effect sizes, statistical and clinical significance, and a body of supporting evidence. The validity of conclusions from research on interventions is based on a general progression from clinical observation through systematic reviews of randomized clinical trials.” (APA Presidential Task Force on Evidence-Based Practice, “Evidence-Based Practice in Psychology,” American Psychologist 61, no. 4 (2006)).

Practice-based evidence: A “practice-based evidence” approach would use “systems science,” which seeks to take into account all the complicated variables that affect real-life health care practice (Lawrence Green, “Public Health Asks of Systems Science: To Advance Our Evidence-Based Practice, Can You Help Us Get More Practice-Based Evidence?” American Journal of Public Health 96, no. 3 (2006): 406–9.). This approach involves inductively develop evidence based on routine health care practices used on the ground, rather than deductively developing hypotheses and testing them in clinical trials.

Definition of “culturally-based practices”: “those that are grounded in tradition and supported by ‘anecdotal evidence.’” (U.S. Department of Health and Human Services (DHHS), To Live To See the Great Day That Dawns: Preventing Suicide by American Indian and Alaska Native Youth and Young Adults, DHHS Publication SMA (10)-4480, CMHS-NSPL-0196 (Rockville, Md.: Center for Mental Health Services, Substance Abuse, and Mental Health Services Administration, 2010, http://www.sprc.org/library/Suicide_Prevention_Guide.pdf)).

For more information, please feel free to contact Puneet at puneet.sahota@yahoo.com.
Challenges

• Historical trauma
• Community values of benefit to all
• Limited resources for evaluation
• Locally-developed approaches
• Fidelity of program adaptations
Evaluation Strategies

• Expanding definition of “evidence”
  – Change over time
  – Quantitative data
  – Qualitative data

• Consortia for evaluation
  – Help with generalizability for local programs

• Intermediate outcomes
  – Short-term, cost-effective to measure
Case Example

• Practice-Based Evidence: Building Effectiveness from the Ground Up
• Developed strategies for documenting the effectiveness of services at Native American Youth and Family Center (NAYA) in Portland, OR
• Community-defined measures of success
• Community based participatory research
Relationship of NAYA-identified outcomes to existing evidence

- Community-mindedness
  - Lower depression
  - Lower alcohol use
  - Lower antisocial behavior
  - Lower levels of internalizing behaviors
  - Reduced suicide
  - School success
  - Increased school belongingness
  - Anti-drug adherence
    - Higher self-esteem
    - Higher social functioning
    - Increased resilience
    - Better physical health
    - Better psychological health
    - Better health practices
  - Increased physical activity
  - Consistent use birth control
    - Lower gang involvement
    - Perception of less neighborhood disorder
    - Better athletic performance
    - Increased hopefulness
    - Higher levels of employment
    - Decreased likelihood of hurting someone

Outcomes in red are NAYA-identified outcomes; all items in right column are outcomes from the research literature.
Acknowledgments

- Sarah Kastelic
- Terry Cross
- National Indian Child Welfare Association
- Key informants in suicide prevention study
Dr. Lawrence Palinkas
Presentation Aims

• Answer the question by drawing from 3 separate studies to examine the following
  – Approach to evidence and practice
  – Importance of research evidence
  – Use of evidence-based practices
Mixed Methods Study of a Statewide EBP Implementation

- PI: Gregory Aarons

- Co-Is: Mark Chaffin, Deborah Hecht, Jane Silovsky, Lawrence Palinkas
  - Funded by National Institute of Mental Health (R01MH072961)
Study Objectives

• Identify factors that impede or facilitate the real-world implementation of SafeCare® (SC), an EBP intended to reduce child abuse and neglect in child welfare-involved families.

• Examine the impact of implementation on organizations and staff.

• Examine the effect of organizational factors on working alliance and client outcomes.
Methods

• One-on-One Interviews
  – Participants:
    • Clinical case managers (n=15)
  – Structure: Semi-structured using interview guide
  – Issues
    • Knowledge, attitudes and behavior (use) of the SC model
    • Fidelity to or adaptation of the SC model in practice
    • Factors that facilitated or impeded use of SC
    • Likelihood of using SC at completion of study
EBP Agent – End User Interactions

• Access to resources
  – Propagators provide short-term funding for services and personnel
  – Clinicians provide access to study participants.

• Exchange of knowledge
  – Propagators provided a **global evidence-based** approach to services found to be effective with other populations in other settings, thereby enhancing its generalizability to the target populations of the two projects.
  – Clinicians provided a **local practice-based** knowledge of the specific needs of clients in the research sites as well as experience addressing these needs through long-established treatment strategies.

Innovation and the Use of Research Evidence in Public Youth-Serving Systems

– PI: Lawrence A. Palinkas, Ph.D.
  • University of Southern California
– Co-PI: Patricia Chamberlain, Ph.D.
  • Oregon Social Learning Center
– Co-PI: C. Hendricks Brown, Ph.D.
  • University of Miami
– Funded by the William T. Grant Foundation No. 10648
Study Objectives

- **Phase I**
  - **Aim 1.** Understand and measure the use of research evidence by decision makers of public youth-serving agencies.
  - **Aim 2.** Identify factors that predict the use of research evidence.

- **Phase II**
  - **Aim 1.** Prospectively identify factors that predict the use of research evidence.
  - **Aim 2.** Prospectively determine whether use of research evidence predicts stage of EBP implementation.
## Methods

- **Qualitative**
  - Focus group with Southern California child welfare directors (n = 8)
  - Semi-structured interviews with probation officers (n = 10) and mental health dept directors (n = 8)
  - Participant observation of 4 CDT meetings

- **Quantitative**
  - Development of instruments to measure use of research evidence and cultural exchanges among key stakeholders
  - Data collected from 164 systems leaders and staff (38.5% Child Welfare) participating in a RCT of an implementation strategy for scaling up MTFC (Cal-40 Study) using new survey instruments
  - Matching with data collected from Cal-40 Study
## Results

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<tr>
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<th>Administrators (n = 130)</th>
<th>Staff (n = 11)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Access research evidence</td>
<td>2.87</td>
<td>0.48</td>
</tr>
<tr>
<td>Evaluate evidence validity, reliability and relevance</td>
<td>3.74</td>
<td>0.43</td>
</tr>
<tr>
<td>Use evidence</td>
<td>3.26</td>
<td>0.44</td>
</tr>
<tr>
<td>Ignore evidence</td>
<td>3.17</td>
<td>0.37</td>
</tr>
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* p < 0.01
Child STEPS Clinic Treatment Project
Dissemination and Implementation Study

- **PI:** John Weisz, Ph.D.
  - DIS PI: Lawrence A. Palinkas, Ph.D.

- **Co-Is:** MacArthur Research Network on Youth Mental Health
  - Funded by the John D. and Catherine T. MacArthur Foundation
CTP Study Objectives

- Compare effectiveness of 3 approaches to treating depression, anxiety, and conduct disorders in 8-13 yr olds
  - Usual Clinical Care
  - Standard Manual Treatment (SMT)
  - Modular Manual Treatment (MMT)
  - **Why modular?**
    1. Single disorder cases are rare; comorbidity is common
    2. Children don’t stay put; problems shift during episode of care
    3. Clinicians dislike rigidity & single focus; may not be sustainable
    4. Modular mirrors what clinicians do with EBTs in practice, BUT provides structure and logic for decision-making
Coefficient Estimates for Group by Log-day for Overall Scores (Youth + Parent-report Random Effects Analyses; N=174 for Each Analysis) and Diagnostic change from pre- to post-treatment by study condition

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<tr>
<th>Rater</th>
<th>SMT vs UC</th>
<th>MMT vs UC</th>
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<tr>
<td></td>
<td>Interaction</td>
<td>p-value</td>
</tr>
<tr>
<td>Brief Problem Checklist Internalizing Score</td>
<td>0.014</td>
<td>.852</td>
</tr>
<tr>
<td>Brief Problem Checklist Externalizing Score</td>
<td>0.059</td>
<td>.424</td>
</tr>
<tr>
<td>Brief Problem Checklist Total Score</td>
<td>0.070</td>
<td>.569</td>
</tr>
<tr>
<td>Mean Severity Rating on Top Three Problems</td>
<td>-0.043</td>
<td>.578</td>
</tr>
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(Source: Weisz et al., 2012)
DIS Study Objectives

• Conduct a process and implementation evaluation of SMT and MMT in the Clinic Treatment Project.

• Identify characteristics of community-based mental health clinics that facilitate or impede the dissemination and implementation of evidence-based practice.
DIS Data Collection

- Participant observation at training sessions and clinics, key informant interviews.
- Semi-structured interviews with clinicians, clinical directors/managers, and CTP clinical supervisors.
- Member checking focus groups with therapists and clinical supervisors.
Why was MMT so successful?

• Therapists supported its use
  – They liked the structure
  – They found it useful (process)
  – They believed it works (outcomes)

• They came to like it after trying it
  – Initial skepticism about lack of efficacy and concerns about a lack of control over treatment were dispelled.
  – Improved morale because they were learning something new.

• MMT was more consistent with therapist priorities.
  – Gave them greater flexibility to pick modules and techniques based on unique needs of client.
  – Did not interfere with the therapeutic alliance.
  – All therapists, including those in SMT condition, plan to use protocols in the future, but more selectively than in CTP.
Why was MMT so successful?

• MMT allowed for more exchanges between therapists and researchers.
  – Association with investigators was viewed by therapists and clinic directors as a benefit to participating in the CTP.
  – Everyone loved the training and supervision and many thought the supervision was the best part.
  – MMT allowed for more accommodation and negotiation than SMT.
    • Both therapists and supervisors felt that MMT approach gave them more “license” to negotiate/exchange.
Cultural Exchange

• A theory and a method for conducting translational research and facilitating research translation.

• A transaction and transformation of knowledge, attitudes and practices (KAP) of individuals or groups representing different cultural systems
  – Global culture of Evidence-Based Practice
  – Local culture of Practice-Based Evidence

• A process and product of debate and compromise
  (Palinkas, Allred & Landsverk, 2005)
Cultural Exchange in Research Translation

STAGE I
Cultural Assessment

Global researcher Culture (EBP)

Local Practitioner Culture (PBE)

Engagement

STAGE II
Cultural Accommodation

Global researcher culture

EBP adaptation

Local Practitioner Culture

STAGE III
Cultural Integration

New global/local Culture

Communication
 Collaboration
 Compromise
Conclusions

• Approach
  – Evidence-Based Practice offers a global approach to services delivery that can be transferred from one setting to another.
  – Practice-Based Evidence offers a local approach to services delivery that is specific to a setting and its population.
Conclusions

• Evidence
  – Systems leaders acknowledge importance of evidence obtained through rigorous procedures (e.g., RCTs)
  – Line staff acknowledge importance of evidence obtained through personal experience (their own or people they know)
Conclusions

• Use
  – Evidence-Based Practice offers structure, professional identity, consistency, and measureable outcomes to services delivery.
  – Practice-Based Evidence offers control, familiarity, and adaptability to services delivery.
  – Modular approaches like the one used in the CTP may offer the best of both worlds.
Conclusions

• So is it one or the other?
• According to the following definition, the answer is not one or the other but **both**

“Evidenced-based medicine is the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients. The practice of evidence-based medicine means integrating individual clinical expertise with the best available external clinical evidence from systematic research.”


• **Having both may require a transformation of the organizational cultures of researchers and practitioners**
Thank you!

Questions?

For more information, please contact me at palinkas@usc.edu
Discussion
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