Big Thinking from Small Science: Promoting Coordinated Action to Build Knowledge-Informed Systems for Youth and Families

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UW School MH Assessment Research and Training (SMART) Center:
http://education.uw.edu/smart

National Wraparound Initiative: www.nwi.pdx.edu

IOM-NRC Forum on Children’s Cognitive, Affective, and Behavioral Health
Washington, DC

June 16, 2014
System building: The aspiration

Source: Committee on Prevention of Mental Disorders and Substance Abuse Among Children, Youth, and Young Adults, 2009
System building: The aspiration

Interventions by Developmental Phase

- Prior to Conception
  - Pregnancy prevention
- Prenatal
  - Prenatal care
- Infancy
  - Home visiting
- Early Childhood
  - Early childhood interventions
- Childhood
  - Parenting skills training
- Early Adolescence
  - Classroom-based curriculum to prevent substance abuse, aggressive behavior, or risky sex
- Adolescence
  - Prevention of depression
  - Prevention of schizophrenia
- Young Adulthood

- Prevention focused on specific family adversities (Bereavement, divorce, parental psychopathology, parental substance use, parental incarceration)
- Community interventions
- Policy
System building: The aspiration

- Effective Workforce
- Nurturing and Responsive Relationships
- High Quality Supportive Environments
- Targeted Social Emotional Supports
- Intensive Intervention
- Assessment, access, and service that results in positive outcomes for all children
System building: What it often feels like
A few barriers to uptake in real world systems

• Imbalanced resource allocation
• Lack of empirical orientation to policy and practice
• Need for new conceptualizations of uptake and implementation
  – Implementation models for single EBPs versus suites of EBPs
  – “Program drift” and “voltage drop” versus real world dynamism
  – Program “Effect size” versus “Reach”
• Not measuring – and managing – the right things
• Expert models of practice = Workforce “shortages”
The Five Most Costly Children’s Health Conditions (Billions)

- Mental Health Disorders: $8.90
- Asthma: $8.00
- Trauma Related Conditions: $6.10
- Acute Bronchitis: $3.10
- Infectious Diseases: $2.90

Soni, 2009 (AHRQ Research Brief #242)
Imbalance of resource allocation

• Behavioral health services have an overall penetration rate of 9.6%, accounting for 38% of total Medicaid child expenditures ($19.3B)

• Residential treatment and therapeutic group homes account for largest percentage of total expenditures – 19.2% of all expenditures for 3.6% of children using behavioral health services

Imbalance of resource allocation
Washington State Example

- Over **126,000** children and youth received services from three DSHS programs: CA, JRA, and/or MHD.
- **44,900** of these children and youth received at least one mental health service from one of the systems during that year.
- Collectively, the mental health services for those 44,900 young people **cost $169 million**.
- **Half of that expenditure** ($81 million) was spent on the **9 percent** who received mental health care from two or more programs.

Source: WA DSHS, 2004
Flipping the triangle
Lack of empirical orientation

Number of Adult/Youth Clients Served by EBPs as reported by SMHAs

SOURCE: NASMHPD Research Institute; Bruns, Hensley, Kerns, & Hoagwood, 2014
National Rate of EBP Use
As a function of number of adults with SMI / Youth with SED
Initiatives to Support EBP Implementation

“What initiatives, if any, are you implementing to promote the adoption of EBPs?”

SOURCE: NASMHPD Research Institute; Bruns, Hensley, Kerns, & Hoagwood, 2014
SMHA Data and Research Use

Question not asked

Does the SMHA conduct research/evaluations on client outcomes?

Has your SMHA implemented a statewide client outcomes monitoring system?

Has the SMHA integrated its client datasets with client datasets from other agencies?

Does the SMHA produce a directory of research and/or evaluation projects?

Does the SMHA operate a Research Center/Institute?

SOURCE: NASMHPD Research Institute; Bruns, Hensley, Kerns, & Hoagwood, 2014
Outdated concepts?

Chambers, Glasgow, & Stange (2013). The Dynamic Sustainability Framework. *Implementation Science, 8*: 117

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A. ‘Program Drift’

B. ‘Voltage Drop’
Program “Reach” vs. effect size

FIGURE 3. Projected CBT and Stepped Collaborative Care Flow Diagrams Specifying Target Populations for PTSD Prevention (Diagram B)

## Solutions?

<table>
<thead>
<tr>
<th>Barrier</th>
<th>Solution(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overreliance on institutional care</td>
<td>State Medicaid strategies: Research-based care coordination, multi-modal EBTs</td>
</tr>
</tbody>
</table>
| Lack of uptake of manualized EBT                 | • Common factors/elements into the real world  
• State Centers of Excellence  
• Relevance mapping → program selection  
• Research-based quality frameworks |
| Complexity borne of multiple EBTs                | Cross-EBP fidelity measurement                                               |
| Expert-driven systems, lack of engagement        | Family engagement strategies, Family/youth peer support                     |
| Workforce shortages                               | Train and support indigenous helpers                                         |
| Lack of knowledge about best system solutions     | Funding for state-level research, child BH specific health reform effects, etc. |
Reducing costs through research-based care coordination

- **Georgia** – Comparing youth out-of-home placements in the 6 months pre-CME engagement to the 3-8 months post-CME engagement showed:
  - 86% reduction in inpatient hospitalization for CME youth meeting PRTF waiver criteria
  - 89% reduction in inpatient hospitalization for other high need youth enrolled in CME
  - 73% reduction in PRTF stays for CME youth meeting PRTF waiver criteria
  - 62% reduction in PRTF stays for other high need youth enrolled in CME

- **New Jersey** –
  - Savings of $40 million from 2007 to 2010 by reducing the use of acute inpatient psychiatric services
  - Residential treatment budget was reduced by 15% during the same time period, and length of stay in residential treatment centers decreased by 25%

- **Maine** –
  - Experienced 30% net reductions in Medicaid spending, comprised of decreases in PRTF and inpatient psychiatric with increases in targeted case management and home- and community-based services

Customization Strategies in Medicaid

- **Cover a broad array** of behavioral health home and community-based services
  - E.g., NJ: Mobile response and stabilization; therapeutic group home care; treatment homes/therapeutic foster care; intensive care management using Wraparound process; behavioral assistance; intensive in-home/community services; transportation; youth support and development

- **Cover evidence-based practices**, e.g. Trauma-Focused Cognitive Behavioral Therapy, Multisystemic Therapy, Functional Family Therapy, Multidimensional Treatment Foster Care (growing number of states)
  - Incorporate intensive care coordination using **Wraparound** approach for children with serious behavioral health challenges
  - Require that every child has a **designated primary care provider** and coordination between physical and behavioral health care providers
  - Require coordination with child welfare system and with Part C, CSHCN

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Efficacy of EBTs may be due to confounds in “Usual Care” comparison groups

<table>
<thead>
<tr>
<th>“Usual Care” Effect Size</th>
<th>LARGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>“UC” is a bona fide treatment</td>
<td></td>
</tr>
<tr>
<td>Quality/amount of supervision</td>
<td></td>
</tr>
<tr>
<td>Therapist caseload</td>
<td></td>
</tr>
<tr>
<td>Specialized training provided</td>
<td></td>
</tr>
<tr>
<td>Treatment from a researcher</td>
<td></td>
</tr>
</tbody>
</table>

To get larger effects, adopt the common factors of EBTs

- Enhance current systems
- Treatment based on evidence
- Effective, specialized training
- High-quality supervision
- Treat to target, measure progress
- Lower caseloads
WA State JJRA

• Integrated Treatment Model
  – JRA's **Integrated Treatment Model** is a research-based treatment approach that utilizes cognitive-behavioral and family therapy principles. The model is tailored for use in both residential and parole programs in the JRA continuum of care.

• **Residential care**
• **Functional Family Parole**
• **Residential Treatment and Care Program**
• **Mentoring Program**
Mindfulness Skills for decreasing impulsiveness and rigid thinking, and for increasing awareness of thoughts and feelings.

Emotion Regulation Skills for understanding the function of emotions and for managing difficult emotions.

Distress Tolerance Skills for managing stress and accepting life’s sometimes painful realities.

Interpersonal Effectiveness Skills & Social Skills for pro-social assertiveness, managing conflict, and building healthy relationships.

Moral Reasoning Skills for making mature decisions when faced with difficult dilemmas.

Anger Management Skills for managing anger without engaging in aggressive behavior.

These skills also provide critical “soft skills” necessary for obtaining and maintaining employment.
JRA ITM
Functional Family Parole

- Parole staff work with families to address the role each member has in generating and ultimately resolving "problem behavior."
- The primary theoretical foundation for this section of the model come from James Alexander, PhD and Thomas Sexton, PhD in *Functional Family Therapy*, a research-based family intervention considered a "Blueprint" model from the Center for the Study and Prevention of Violence.
- Functional Family Parole counselors work to engage and motivate all family members by creating a balanced alliance with each, and creating a family focus for treatment.
- Early interventions reduce blame and negativity among family members and instill hope for change.
- Families are also referred to needed services in the community that match family interaction styles and provide continued support for the family once the youth is no longer on parole.
Effects of Functional Family Parole on Re-Arrest and Employment for Youth in Washington State

EXECUTIVE SUMMARY

Barbara A. Lucenko, PhD, Lijian He, PhD, David Mancuso, PhD, and Barbara Felver, MES, MPA

In collaboration with Bob Salsbury, Juvenile Rehabilitation Administration

NOTE: See Technical Appendix for Methods and Definitions: http://www.dshs.wa.gov/lda/.

The Study Period

Pre-period for FFP and No FFP youth (24 months)

INCARCERATION

About one year on average

ADMISSION DATE
Month of Incarceration

RELEASE DATE
Month of Release

Department of Social and Health Services | Planning, Performance and Accountability | Research and Data Analysis Division
FFP youth far less likely to be arrested and more likely to be employed 12 months later

Washington State DSHS (2011)
Meta-Analysis of studies of interventions for juvenile offenders (Lipsey & Chapman, 2011):
Average recidivism effect for Program types

- Discipline
- Deterrence
- Surveillance
- Restorative
- Skill building
- Counseling
- Multiple services

% Recidivism Reduction from .50 Baseline

Chapman & Lipsey, 2011
Recidivism by intervention type within, e.g., counseling approaches

% Recidivism Reduction from .50 Baseline

Chapman & Lipsey, 2011
## Standardized Program Evaluation Protocol (SPEP) for Services to Probation Youth

<table>
<thead>
<tr>
<th></th>
<th>Possible Points</th>
<th>Received Points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary Service:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High average effect service</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>Moderate average effect service</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low average effect service</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Supplemental Service:</strong></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Qualifying supplemental service</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Treatment Amount:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duration</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>% of youth that received target hours of service or more:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0% (0 points)</td>
<td></td>
<td>60% (6 points)</td>
</tr>
<tr>
<td>20% (2 points)</td>
<td></td>
<td>80% (8 points)</td>
</tr>
<tr>
<td>40% (4 points)</td>
<td></td>
<td>100% (10 points)</td>
</tr>
<tr>
<td>Contact Hours</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>% of youth that received target hours of service or more:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0% (0 points)</td>
<td></td>
<td>60% (9 points)</td>
</tr>
<tr>
<td>20% (3 points)</td>
<td></td>
<td>80% (12 points)</td>
</tr>
<tr>
<td>40% (6 points)</td>
<td></td>
<td>100% (15 points)</td>
</tr>
<tr>
<td>Treatment Quality:</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Rated quality of services delivered:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low (5 points)</td>
<td></td>
<td>Medium (10 points)</td>
</tr>
<tr>
<td>Medium (10 points)</td>
<td></td>
<td>High (15 points)</td>
</tr>
<tr>
<td>Youth Risk Level:</td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>% of youth with the target risk score or higher:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25% (5 points)</td>
<td></td>
<td>75% (15 points)</td>
</tr>
<tr>
<td>50% (10 points)</td>
<td></td>
<td>99% (20 points)</td>
</tr>
<tr>
<td><strong>Provider’s Total SPEP Score:</strong></td>
<td>100</td>
<td>[INSERT SCORE]</td>
</tr>
</tbody>
</table>

Points assigned proportionate to the contribution of each factor to recidivism reduction.

Target values from the meta-analysis (generic) OR program manual (manualized).

Chapman & Lipsey, 2011
## Distribution of scores across 66 AZ probation programs

<table>
<thead>
<tr>
<th>Total SPEP Score</th>
<th>Number of Programs</th>
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<tbody>
<tr>
<td>20-29</td>
<td>34.8%</td>
</tr>
<tr>
<td>30-39</td>
<td>6.1%</td>
</tr>
<tr>
<td>40-49</td>
<td>31.8%</td>
</tr>
<tr>
<td>50-59</td>
<td>16.7%</td>
</tr>
<tr>
<td>60-69</td>
<td>4.5%</td>
</tr>
<tr>
<td>70-79</td>
<td>4.5%</td>
</tr>
<tr>
<td>80-85</td>
<td>1.5%</td>
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73% have scores < 50
Actual vs. predicted recidivism for providers with scores ≥ 50 and < 50

6-mo recidivism difference: High score

12-mo recidivism difference: High score

6-mo recidivism difference: Low score

12-mo recidivism difference: Low score
Brief Intervention for School Clinicians: A Modularized Evidenced-informed Mental Health Treatment

Collaborative Team:
US Department of Education/IES, UW, Seattle Public Schools, Seattle/KC Public Health and Community Partners
Group Health Cooperative, International Community Health Services, Navos, Neighborcare, Seattle Children's' Hospital, Swedish Hospital, Sound Mental Health

BRISC
Brief Intervention for School Clinicians
BRISC Common Factors

1. Agenda Setting
2. Problem Solving Framework
3. Progress Monitoring and Feedback
   - Weekly stress rating - generally and then related to identified problem (0=low to 10=high)
   - Useful in identifying targets to address /monitoring progress (i.e. it’s like a ruler to measure change)
4. Practice Exercises
   - Tracking targets—moves from therapy to real life application
   - Helps identify barriers to change
Wraparound + Managing and Adapting Practice (WRAP+MAP)

Coordinating research-based treatment elements into an individualized care coordination model for youths with complex and overlapping mental health needs (Bruns, Walker, Bernstein, Daleiden, & Chorpita, 2013)
Care Coordinators Rate Usefulness of MAP Tools Almost as Highly as Therapists
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<td>Lack of knowledge about best system solutions</td>
<td>Funding for state-level research, child BH specific health reform effects, etc.</td>
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Promoting uptake of EBPs in real world systems

STATE CENTERS OF EXCELLENCE
Beginning in 2012 the Children’s Administration collaborated with the University of Washington Division of Public Behavioral Health and Justice Policy to:

- Oversee and administer provider trainings on core EBPs
- Conduct fidelity monitoring and quality assurance for providers contracted to provide the selected EBPs
- Provide expert consultation on EBP implementation, sustainability and data analysis

The CA-UW EBP Partnership is guided by a conceptual model based on the conceptual model of implementation research developed by Proctor et al. (2009)

- The model distinguishes but links key implementation processes and outcomes
Priority EBPs selected based on alignment with core outcomes and coverage of CA population
Theory of Change for the CA-UW EBP Partnership Regarding Use of Evidence-Based Practices

Implementation Strategies
(Examples)

System Strategies:
• Outreach
• Education
• Legislation
• Data analysis

Organizational Strategies:
• Centralized EBP purveyor
• EBP referral guidelines
• Provider tracking database
• Agency readiness assessment

Individual Strategies:
• Initial and booster EBP trainings
• Coaching and supervision
• Fidelity monitoring
• Provider certification and tracking

Evidence-Based Program Models
• Incredible Years
• SafeCare
• Positive Parenting Program
• Parent-Child Interaction Therapy (PCIT)
• Functional Family Therapy
• Homebuilders

Outcomes

System & Organizational
• Motivated and educated workforce
• Clear expectations
• Clear incentives
• Provider readiness
• Adequate supply of EBPs
• Adequate referrals to EBPs

Implementation & Service
• Fidelity to EBP model
• Acceptability of EBP
• Accessibility
• Efficiency
• Effectiveness
• Cost-effectiveness

Child, Youth & Family
• Child Safety
• Safely reduced out of home placements
• Improved Well-Being
• High Satisfaction
• Fewer placement changes
• Improved Functioning
• Reduced Symptoms

Based on Proctor et al., 2009
Specific strategies and products that extend from the conceptual model

- A unified approach to EBP fidelity supports and monitoring
- The “Guidance Tool”
  - Detailed set of EBP referral guidelines for use by CA social workers
- The “Toolkit” – Provider fidelity tracking database using consistent categories
  - Facilitates compliance and provision of technical assistance
- Structured EBP readiness assessment
  - Used by Children’s Administration regional staff persons during contract negotiations
- EBP Staff Selection Guide
  - Pre-Training Agreement signed by provider agency rep in advance of EBP training
- Enhancements to existing suite of EBPs
  - E.g., Motivational enhancement training
- Data analysis and use of information to inform programming
  - E.g., differential rates of EBP use across regions
Measuring fidelity to multiple EBPs in a statewide service improvement initiative

- Standardized, cross-intervention fidelity monitoring strategy
- Maintains adherence to specific requirements of model developers
- Provides consistent information needed to manage comprehensive implementation of EBPs for a statewide child welfare system
  - Adequacy of referrals
  - Provider compliance
  - Provider competence
EBP Quality Assurance Plan
Promoting accountability and feedback

**Monthly Fidelity Check**

**Compliance**
- Attendance at required supervision/consultation groups
- Submitting tapes and/or self-assessments for review

**Competence**
- Dosage
- Skills
- Essential elements

**Insufficient Fidelity**

**Technical Assistance Support**
Consultant provides TA support specified for the area that needs improvement. Provider has three months to demonstrate necessary improvement.

- Status of TA Support Plan:
  - In Process (continue on TA plan)
  - Resolved (return to monthly fidelity check)
  - Moved to Formal

**Formal Improvement Plan**
Notice of formal improvement plan given to Children’s Administration. Provider is given an additional three months to demonstrate improvement.

- Status of Formal Plan:
  - In Process
  - Resolved
  - CA reaches decision about contract status

*If not sufficient cases, fidelity cannot be assessed. CA is notified.*
### Key states’ efforts to roll out evidence-based practices (EBPs) and quality improvement (QI) initiatives in children’s mental health

<table>
<thead>
<tr>
<th></th>
<th>California</th>
<th>Colorado</th>
<th>Hawaii</th>
<th>Michigan</th>
<th>New York</th>
<th>Ohio</th>
<th>Oklahoma</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Authority</strong></td>
<td>California State Department of Mental Health (6, 32)</td>
<td>State and local administrators (6, 33, 34)</td>
<td>Hawaii Department of Health (9)</td>
<td>State Department of Community Health (6, 11, 12, 35)</td>
<td>New York State Office of Mental Health (9, 10)</td>
<td>Ohio Department of Mental Health (36, 37)</td>
<td>Department of Human Services (38, 39)</td>
</tr>
<tr>
<td><strong>3. Setting</strong></td>
<td>Partnering with non-profit agencies and community-based organizations in the public mental health system, Community Development Teams (CDTs) have been formed. This model involves provision of information, incentives, training, consultation, and technical assistance in implementing EBPs.</td>
<td>The Center for Effective Interventions (CEI), an academic entity, collaborates with local state forces, and provider agencies to promote the development of EBPs.</td>
<td>The Empirical Basis to Services Task Force of the Child and Adolescent Mental Health Division and the University of Hawaii provide statewide trainings in treatments targeting specific need areas.</td>
<td>University evaluators and community providers have formed a partnership to promote statewide continuous improvement through data and outcome monitoring across providers, practitioners, and families.</td>
<td>Through a state-academic partnership, the Evidence-Based Treatment Dissemination Center (EBTDC) serves as a coordinating center for improving assessment, training clinicians on EBPs, incentivizing the use of EBPs, and identifying community advocates.</td>
<td>Consumer advocacy groups, local mental health boards, private research entities, and a provider trade association have formed 7 Coordinating Centers of Excellence (CCOE), which provide technical assistance in promoting the adoption and implementation of EBPs throughout the state.</td>
<td>Oklahoma State Children Services System collaborated with a network of non-profit organizations to conduct a statewide randomized effectiveness trial of an evidence-based intervention to reduce child neglect.</td>
</tr>
</tbody>
</table>

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Hoagwood et al. (in press). Characterizing Clinic Adoption of Child Mental Health Initiatives in New York State. *Psychiatric Services*
Summary of major points

• States are the major potential locus for building evidence based systems as well as improving uptake of EBP

• Incentives are needed for translating major Medicaid and other federal reform efforts into development of research based state systems
  – Are Legislation and Litigation what is needed?

• Funding is needed for “macro level” state research:
  – Impact of child BH-specific Medicaid customization efforts
  – State-level system building efforts – currently lots of n=1 experimentation going on
  – Greater consistency and relevance of state data reporting would help this cause

• Research also needed on strategies for taking evidence to scale:
  – E.g., Peer support, task shifting, common elements, QI frameworks, workforce efforts
A “Knowledge Informed Systems” Framework

**Systems/States**
- System wide CQI/Outcomes Systems
  - Disparities analyses
  - Review of plans of care
  - Consistent measures – beyond HEDIS (incl. penetration of services by type)
- Higher education certification/placement strategies
- Fiscal incentives for EIP/CQI
- Family/youth advocacy organizations
- State Center of Excellence
- Relevance mapping for EBP selection
- Waiver programs and case rate financing
- Cross-agency coordination/”Children’s Cabinet”

**Organizations**
- Leadership/Climate and Culture
- Business Training and Communities of Practice
- Incentives for EIP use
- Subsidies for training/coaching
- Implementation supports
  - Staff selection, Data systems, Supervision

**Services/Providers** *(What providers do)*
- Common Elements/Modularized EBP Models
- Manualized EBPs
- “Common Factors”
  - Family Engagement/Alliance
  - Cultural/Linguistic Competence
- Family/Youth Support
- Care Coordination/Wraparound (complex needs)

**Youth/Families**
- Family-driven, Youth-guided
- Timely and efficient
- Coordinated, based on effectiveness
- Individualized
- Culturally/linguistically competent
- Home & community based as possible

**FOCUS ON POSITIVE OUTCOMES**