Early Childhood Mental Health Outcome Evaluation

Beth Anthony, Ph.D. & Rob Fischer, Ph.D.
Center on Urban Poverty & Community Development

Rebekah Dorman, Ph.D.
Cuyahoga County Office of Early Childhood/Invest in Children

Zero to Three National Training Institute
December 11, 2014
Evaluation Questions

1. What are the characteristics of the children and families served?
2. Do children show improved functioning following treatment?
3. For whom are ECMH services most effective?
Sample

• Administrative records from 6 local agencies
  – Agencies varied in size and number of children served
• Cases opened b/t Jan 2007 - Dec 2012
  – 2 agencies stopped offering ECMH services as part of this initiative on June 30, 2011
• N=930
Main Findings

1. ECMH efforts are bringing about behavioral improvements and relationship benefits

2. Better outcomes associated with treatment completion
Sample Characteristics

• Across agencies:
  – Children served ~60% male
  – Children b/t 24-35 months old
  – Vast majority living w/ biological parent
  – ~ 50% parented by 2 caregivers
  – 1.3% (Agency B) - 28.6% (Agency C) of parents already referred/involved in mental health services
Child Welfare Involvement Cont.

• Report of child maltreatment
  – Before (N=923) ECMH = 39%
  – During (n=756) ECMH = 13%
  – After (n=215) ECMH = 13%

• Substantiated/Indicated report
  – Before ECMH = 12%
  – During ECMH = 2%
  – After ECMH = 2%
Axis I Diagnoses

- Regulatory = 10.0 - 51.7%
- Affect = 5.0 - 40.1%
- Adjustment = 6.7 - 19.7%
- Traumatic Stress = 2.7 - 6.7%
- Sleep = 0.0 - 3.3%
- Relating & Communicating = 1.0 - 11.7%
Axis II Diagnoses

• Relationship = 0.0 – 57.7%
• Axis I & II = 0.0 – 53.3%
Service Dosage

• Variability in average # of months in ECMH
  – Overall sample $M = 8.0$ ($SD=6.3$)
  • $M= 4.3$ ($SD=2.9$) to $M=10.7$ ($SD=8.1$)

• Across all agencies
  – 42.9% of children received < 6 months ECMH
  – 35.5% of children received between 6-11 months
Service Dosage Continued

• Variability in average # of hours in ECMH
  – Overall sample $M = 33.9$ ($SD=44.8$)
    • $M= 20.4$ ($SD=16.4$) to $M=119.7$ ($SD=103.9$)

• Across all agencies
  – 37.4% of children received < 15 hours ECMH
  – 26.6% of children received between 15-29 hours
Reason for Case Closure (%)

• Across agencies
  – Between 14.5-66.7% of cases ‘completed treatment’ (M=30.0%)
• % of Families who withdrew from ECMH
  – 11.7-53.6%, M=28.7%
• Other reasons for non-completion
  – Child transitioned to other program
  – Unable to locate family
  – Family declined service
Finding #1

- Parents reported statistically significant reductions in child **internalizing** and **externalizing** problems following treatment.
  - 6.5% reduction in internalizing behaviors
  - 8.5% reduction in externalizing behaviors
  - 8.3% reduction in total behavior problems
CBCL Internalizing Subscale

Mean Internalizing T-score Values

- **Baseline** - Light Blue
- **Follow-up** - Dark Blue

<table>
<thead>
<tr>
<th>Agency</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agency A</td>
<td>105</td>
</tr>
<tr>
<td>Agency B</td>
<td>68</td>
</tr>
<tr>
<td>Agency C</td>
<td>83</td>
</tr>
<tr>
<td>Agency D</td>
<td>46</td>
</tr>
<tr>
<td>Agency E</td>
<td>187</td>
</tr>
<tr>
<td>Agency F</td>
<td>50</td>
</tr>
</tbody>
</table>
CBCL Externalizing Subscale

Mean Externalizing T-score Values

- Agency A (N=105)
- Agency B (N=68)
- Agency C (N=83)
- Agency D (N=46)
- Agency E (N=187)
- Agency F (N=50)

Baseline vs. Follow-up
CBCL Total Scale

Mean Total T-score Values

Agency A (N=105)  
Agency B (N=68)  
Agency C (N=83)  
Agency D (N=46)  
Agency E (N=187)  
Agency F (N=50)  

Baseline  
Follow-up
Categorical Change Across Agencies

Baseline
Follow-up
Baseline
Follow-up
Baseline
Follow-up
Internalizing (N=522)
Externalizing (N=522)
Total (N=522)
Finding #2

• Parent-child relationship functioning, as reported by ECMH therapists, improved significantly following treatment.
PIR-GAS Change

![Bar chart showing mean PIR-GAS scores for different groups.](chart.png)

- **A (N=105)**
- **B (N=68)**
- **C (N=83)**
- **D (N=46)**
- **E (N=187)**

Legend:
- **Baseline**
- **Follow-up**
PIR-GAS Distributions

Baseline mode

Follow-up mode
Finding #3

• Outcomes for cases that completed treatment were significantly better
  – On average, families who completed treatment saw an additional 7.7 point decline in internalizing problems,
  – 11.5 point decline in externalizing problems,
  – and a 10.8 point improvement in parent-child relationship functioning
Finding #4

• “Significant improvement” related to:
  – Number of service units (in hours) received
  – Treatment completion
  – Child gender
  – # of caregivers
For whom is ECMH most effective?

• Created baseline – follow-up change scores for each outcome

• Explored characteristics of children who made gains in excess of 1.5 $SD$ of the change score mean on each outcome
  – CBCL internalizing subscale = 32 children
  – CBCL externalizing subscale = 41 children
  – CBCL total scale = 35 children
  – PIR-GAS = 35 children
Total Sample vs. Children who Made Significant Gains

• On average
  – Received more hours of ECMH
  – More likely to complete treatment
  – More likely to be female
  – More likely to come from 2 caregiver households

• For PIR-GAS only
  – Younger than total sample
General Conclusions

- Variability across agencies at each agency
- ECMH efforts associated with behavioral improvements, relationship benefits
- Better outcomes associated with treatment completion
- Significant proportion of children within subclinical CBCL threshold at baseline
Implications for the System

• Consensus across agencies
  – What does “completed treatment” mean?
  – Diagnoses

• Improve data collection methods
  – Are we capturing the ‘right’ data?

• Are we reaching the children most in need?

• Should agencies specialize in treatment modalities or particular diagnoses?

• Referral sources
Thank you!

Questions?
Contact: exa136@case.edu