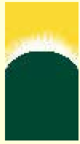

Evaluating Project Connect: Improving juvenile probationers' mental health & substance use service access

Larkin S. McReynolds, PhD
& Gail A. Wasserman, PhD
mcreynol@childpsych.columbia.edu

Research Director, Center for the Promotion of Mental Health in Juvenile Justice
Columbia University, Division of Child Psychiatry/NYSPI
www.promotementalhealth.org

A System of Care for Children's Mental Health: Expanding the Research Base
March 2, 2009
Tampa, FL

The Center provides

- Guidance regarding best practices for psychiatric assessment and referral to juvenile justice agencies
- Help incorporating sound assessments into practice, efficiently and safely
- To date we have provided consultation in
  - over 130 ongoing independent settings (22 states)
  - 5 active technical assistance sites (4 states)
  - sites in development in 2 states
  - active interest from sites in 2 other states
- As of 9/08, we have helped in the assessment of 17,000+ youths (since 1998)

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Research as the ***bridge*** between identifying a problem and its solution

CPMHJJ's research agenda:

- Developing and evaluating instruments that respond to the needs of the field
- Studies on prevalence of disorder and other characteristics: essential for planning
- Studies on developing and evaluating assessment/referral practices and procedures
- Studies on predictors of future JJ contact and impact of risk reduction/diversion programs

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Learning objectives:

1. To increase awareness of the substantial level of mental health and substance use need in justice system youth.
2. To learn about a new intervention that increases mental health service access for juvenile probationers.
3. To learn the importance of expanding the evidence-base of effective programs for juvenile case management.

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Background information

- Juvenile probation settings are under-utilized public health locations in which to identify suicidal and disordered youths and to link them to appropriate MH services.
- Probation officers function as "gatekeepers", linking youth to a range of MH and other services.
- Despite the large number of youths, their elevated risk, and their characteristically low rate of prior MH service access, procedures for identifying MH needs in youths undergoing juvenile probations intake have rarely been examined.
- Recent models of referral decision-making that consider characteristics of youths and gatekeepers have highlighted the critical role of gatekeepers' inservice and professional training (Stiffman et al., 2000).

Project Connect relies on a public health approach to mental health assessment

- **SAMHSA-funded demonstration project**
  - 4 NYS counties (Albany, Broome, Onondaga, Orange)
- Clear protocols for how to move from assessments to treatment
  1. **Cooperative agreements**: probation/mental health
  2. **Program materials to facilitate referral**
     - Decision Trees
     - Local Resource Guides
  3. **Two-day didactic training**
- Proactive case identification
  4. **Systematic screening via sound and accurate instrument** (V-DISC)
- Evaluation of impact of new procedures on practices

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1. Cooperative agreements

- MOU between state and local probation authorities and CPMHJJ
- County-based meetings with probation and mental health authorities (re: referring youths at varied levels of suicide risk to appropriate agencies)
  - Each county designated a 1st response program to coordinate (e.g., mobile mental health, ER)

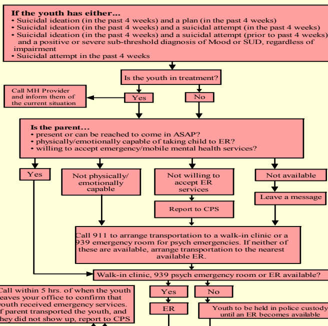
2. Program materials

Decision Trees designated

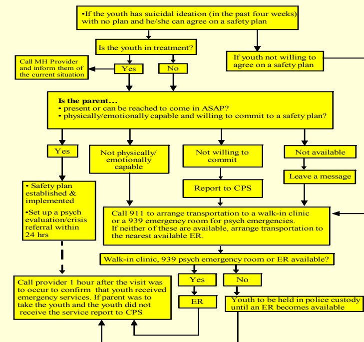
- Disorders that were to prompt referral
  - Class I (Emergency)
    - Recent suicide attempt
    - Ideation + plan or sub-threshold Mood or SU disorder
  - Class II (Crisis)
    - Recent ideation w/o plan or sub-threshold disorder and
    - Can agree on safety plan
  - Class III (Non-Crisis)
    - Any Substance Use Disorder
    - Any Mood Disorder (MDD, Mania, Dysthmia)
    - PTSD
    - Panic Disorder
    - Any of the above, at "Serious" sub-threshold levels
- Defined considerations in implementing a decision
  - E.g., youth already in treatment, parental availability

We intended that screening would inform POs about disorder, although if other sources indicated Class I, II, or III status, POs were instructed to follow the appropriate Decision Tree.

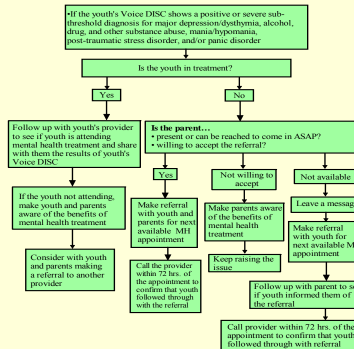
Class I: Immediate Triage/ Emergency Clinical Care



Class II: Crisis – Clinical Evaluation within 24 Hours



Class III: Non-crisis – Clinical Confirmation & Referral for MH Services



2. Additional program materials

- County-based Resource Guides
  - Itemized services available at various MH and SU agency programs
    - staffing
    - payment options
    - hours of operation
    - location

3. Training for POs

- 2-day training in each county that covered
  - Suicidal behavior and correlated risk
  - Specific mental health disorders
  - Evidence-based treatment for those disorders
  - How to use program materials and screening results to increase linkage
  - Effective communication skills with parents and providers
  - Agreed upon referral procedures

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4. Systematic screening via sound and accurate instrument

- After training, all new delinquent intakes were offered screening on the V-DISC

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Evaluation of new procedures on practices

- Baseline: chart review for 3.5 months prior to each county's training date
- Intervention (approx 13 months):
  - Only 1 in 6 youth agreed to screening
    - For 74 screen-neg youth "no action" was to be taken
    - For 19 screen-pos youth pre-established referral protocols to be implemented
  - Youth not screened still were exposed to several aspects of the intervention (e.g., cross-agency cooperative agreements, trained POs, established referral protocols)
- Accordingly, evaluation compares 3 conditions of intervention dosing: Baseline, Not screened (Intervention), and Screen-positive (Intervention-Plus) youth

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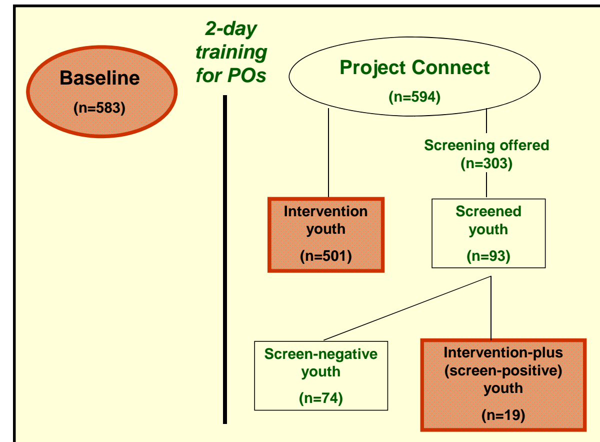

Sample characteristics

- All 3 groups of youth were…
  - mostly male (~70%)
  - ~ 14 yrs old
  - mostly White or African American (~ 45% each)
  - 1/3 charged with interpersonal offenses
  - MHPSR ranged from 10-45%
- Characteristics of 59 POs…
  - primarily White (>85%) and female (>60%)
  - ~39 yrs old, with 8+ yrs as a PO
  - 41% had prior work experience in a mental health setting

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Measuring PO Mental Health Competence

- Most measures administered directly before and after training
  - Mental Health Knowledge (33 items)
  - Self-efficacy
    - 25 5-point Likert items, α among POs = .85
    - How well POs believed they could identify youths' mental health concerns and link them to service providers
    - Adaptation of the Vanderbilt Mental Health Services Efficacy Questionnaire (Bickman, Heflinger, Northrup, Sonnischen, & Schilling, 2004)
  - Perceived competency (12 Likert-scale items)
    - "How well do you think you can identify a youth's anxiety disorder?"

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County MHPS Rating (US HRSA, SAMHSA)

1. The area is a rational area for the delivery of MH services
2. One of the following conditions prevails:
   - The area has either
     - Population-to-core-MH-professional ≥ 6,000:1 and a population-to-psychiatrist ≥ 20,000:1
     - Population-to-core-MH-professional ≥ 9,000:1
     - Population-to-psychiatrist ≥ 30,000:1
   - The area has unusually high needs for mental health services, and has
     - Population-to-core-MH-professional ≥ 4,500:1 and a population-to-psychiatrist ≥ 15,000:1
     - Population-to-core-MH-professional ≥ 6,000:1
     - Population-to-psychiatrist ≥ 20,000:1
3. MH professionals in contiguous areas are over-utilized, excessively distant or inaccessible to residents of the area under consideration

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Who was identified in **Baseline**?

- Logistic regression considering youth and PO characteristics, PO MH competency, and county MHPS Rating

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Independent contributions to MH identification in BL

Measure	OR	Sig.
Control variables		< .001
Receiving Rx at opening	3.15	< .01
Youth characteristics		< .08
Repeat offender	2.36	< .01
PO characteristics		< .05
PO MH Competency		< .001
Pre PC Knowledge	1.06	< .01
County MHPS Rating		< .001
Partial vs. No Shortage	14.1	< .001

Wasserman, McReynolds, Whited, Keating, Musabegovic, & Huo, (2008), Administration and Policy in Mental Health

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In Baseline, characteristics of youths, POs, and the mental health system predict identification

- Repeat offenders were almost 2.5 times as likely to be newly identified
- For every item increase in a PO's knowledge score, the youth on that PO's caseload were 6% more likely to be newly identified
- JDs in counties designated as not having a shortage of mental health professionals, compared to those in a shortage county, were more than 14 times as likely to be newly identified

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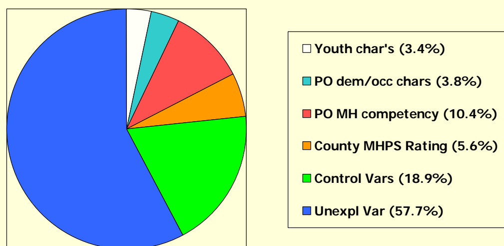
During Baseline, MH identification relates to a range of factors (42.3% of variance explained)



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Baseline and Post-training comparisons

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Systematic screening significantly increased the rate of new MH/SU referrals, with and without screening

	Baseline	Intervention	Intervention-plus
Already in Tx	n=83	n=71	n=7
Suppl. referral	60.2%	49.3%	71.4%
No suppl. referral	39.8%	50.7%	28.6%
Not in Tx	n=500	n=430	n=12
New referral [a, b]	27.4%	21.4%	83.3%
No referral	72.6%	78.6%	16.7%

[a] Baseline vs. Intervention-plus comparison significant [$\chi^2_{(1)} = 17.91$, $p < .001$]
[b] Intervention vs. Intervention-plus comparison significant [$\chi^2_{(1)} = 25.23$, $p < .001$]

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During Intervention, POs were significantly more likely to implement referrals and to confirm service initiation

	Baseline	Intervention	Intervention-Plus
Justice referred youth [a]	n=187	n=127	n=15
PO implement referral [b] ***	35.3%	61.4%	46.7%
PO confirm initiation [b] *	43.9%	60.6%	66.7%

...and these types of PO practices are likely to increase access to MH/SU services

[a] Justice referred youth received either a new or supplemental referral.
[b] Baseline vs. Intervention comparison significant

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Other PO practices impacted by Project Connect

	Baseline (n=583)	Intervention (n=501)	Intervention-Plus (n=19)
Refer for non-MH/SU services [a] ***	29.7%	16.2%	36.8%
MH/SU services in PO's supervision plan [b] ***, [c] ***	31.7%	29.1%	89.5%

During Intervention, POs decreased referrals for non-MH services.
POs of screen-positive youth more likely to include MH services included in their supervision plans.

[a] Intervention vs. Baseline comparison significant
[b] Intervention-Plus vs. Baseline comparison significant
[c] Intervention-Plus vs. Intervention comparison significant

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Intervention and Intervention-plus youth more likely to access mental health services

	Baseline	Intervention	Intervention-plus
Justice referred youth [a]	n=187	n=127	n=15
Youth accessed MH/SU services [b] ***, [c] *	51.3%	75.6%	86.7%

[a] Justice referred youth received either a new or supplemental referral
[b] Baseline vs. Intervention comparison significant
[c] Baseline vs. Intervention-plus comparison significant

Note: The lack of difference in service access between Intervention-plus and Intervention youth likely a consequence of a "ceiling effect".

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Even with adjustment, Intervention youth were nearly 3x as likely to access MH/SU services

Measure	OR
Control variables	
Weeks chart open for review	1.01
Youth characteristics	
Male	0.73
Age	0.80
AA vs White	0.48 *
Hispanic vs White	0.34 *
First-time offender	0.99
Interpersonal offense	1.27
PO post-graduate degree (Y/N)	2.00 *
Residence in a county with a MH professional shortage	0.91
Intervention (vs. Baseline) Condition	2.71 ***

n=280 youth with 45 POs

* p<.05
*** p<.001

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Examining the contribution of secular trend to the observed impact of Project Connect

- We employed a pre-post study design to compare of Baseline and Intervention conditions
  - A limitation of this design is that observed intervention effects could be attributable to historical changes in external events (e.g., differences in the way public mental health services are funded)
  - To address the possibility of a secular trend, we employed a staggered protocol
- During the analyses phase…
  - For the primary outcome of interest (MH access), regressions were analyzed by Wave, with each analysis including a term designating "county".

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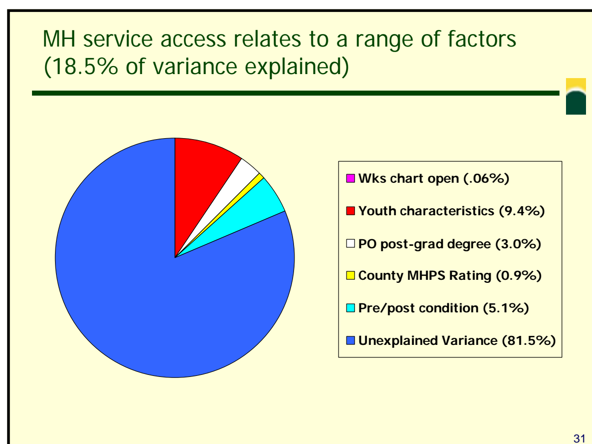

Conclusions

- Baseline
  - Characteristics of youths, POs, and the mental health system predict identification
- Project Connect
  - Significantly increased the rate of new MH/SU referrals
  - POs of screen-positive youth more likely to indicate MH/SU service needs in supervision plans
  - Even without screening, Project Connect improved PO practices that support service linkage
    - POs more likely to **implement referrals** and to **confirm service initiation**
    - Even with adjustment (and without screening), Intervention youth nearly three times as likely to **access MH/SU services**
- Increased service access regardless of which county we examined, when the intervention took place, and whether or not a participating county experienced a shortage in mental health professionals.

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