The Impact of School-based Systems of Care on Youth, Families and Schools

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The Partnership for Kids

Background

- Over the past 2 decades the development of comprehensive systems of care (SOC) for children with severe emotional and behavioral challenges has become an important priority.

- The push for SOC grew from the recognition that services were often inaccessible, restrictive and fragmented (Knitzer, 1982; Stroul & Friedman, 1986).

- SOC are designed to provide a comprehensive spectrum of mental health or other necessary services which are organized into a coordinated network (Stroul & Friedman, 1986).

Background

- A recent report (Foster et al, 2006) found that one in five students are referred by schools for mental health services and that the majority of these services are performed by community-based agencies.

- While the need to link families, schools and community providers to work collaboratively to address the needs of youth with severe emotional and behavioral challenges is clear (Ebert & Keenan, 2004).

- Many systems of care struggle to get schools to the table (Leaf, Shultz, Kiser & Pruitt, 2003).
  - PARK: 45.5% of families had school staff at CST meeting vs 18.9% in our CMHS cohort.

Building a System that Cares: The **PARK** Project, Bridgeport, CT

- The Partnership for Kids, or The PARK Project, is a new way to help children and adolescents, with behavioral and mental health challenges, and their families get needed services that allow them to remain at home, in school and in their own community.
- It is a school-based System of Care, our staff members are located in the schools we target.

What is the **PARK** Project?

- The Partnership for Kids or **PARK** Project is an innovative approach to community-based service delivery through partnership with local schools, families, providers and state agencies, for the purpose of producing positive outcomes for children and youth with serious emotional and behavioral challenges.

- PARK is the first CMHS system of care site in CT which was the 48th state to receive a SOC grant.

- PARK is first system of care community funded for starting a system of care in the school system and working out into the community rather than starting in the community and later going into the schools.

What is the **PARK** Project?

- The **PARK** Project offers programs in collaboration with local agencies and the Bridgeport Board of Education in 7 Bridgeport Schools: **Barnum, Paul Lawrence Dunbar, Luis Munoz Marin, Bridgeport Learning Center at Sheridan School, Wilbur Cross, Garfield and Harding High School.**

The **PARK** Vision and Mission

Vision

Children will live in a safe, caring community that nourishes the development of positive mental health.

Mission

To build a system of care in partnership with home, school, and community so that children with behavioral and mental health challenges can achieve success.
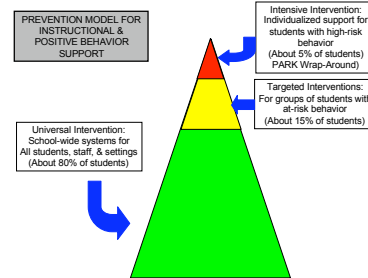
Systems Change

- True partnerships are developed between parents, youth, service agencies, and schools.

- Partners share responsibility and accountability for successes and failures of the system of care.

- Through collaborative partnership with schools, behavioral health is being incorporated into the Bridgeport schools as a necessary part of the learning environment.
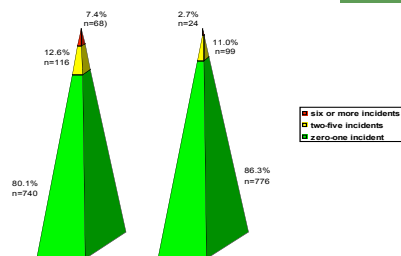

PARK Project

- Comprehensive System of Care
  - Universal Intervention in the Schools
  - Social Marketing Campaign
  - Family Organization
  - Youth Program
  - Wrap-Around Services

Positive Behavioral Interventions and Supports (PBIS)

PREVENTION MODEL FOR INSTRUCTIONAL & POSITIVE BEHAVIOR SUPPORT

Intensive Intervention: Individualized support for students with high-risk behavior (About 5% of students) PARK Wrap-Around)

Targeted Interventions: For groups of students with at-risk behavior (About 15% of students)

Universal Intervention: School-wide systems for All students, staff, & settings (About 80% of students)

PBIS Pyramid – K-8 School

7.4% n=68)
2.7% n=24
12.6% n=116
11.0% n=99
80.1% n=740
86.3% n=776

- six or more incidents
- two-five incidents
- zero-one incident

Results Matter: PBIS

- Reduced number of office referrals in target schools.

- Improved school climate (e.g. reduced exposure to violence, greater discipline, clearer expectations, etc.)

- Allowed clearer identification of students with SED by schools.

Social Marketing

- PARK Project website www.theparkproject.org over 90,000 hits since November 2005.

- Billboards (in Spanish and English) seen by 35,000 people daily for six months (over six million total viewings).

- Movie slide ads seen by 25,000 people daily for 14 weeks (based on estimated two million viewings in 2005-2006).

- Newsletter (*News & Views*) is distributed in English and Spanish versions to target audiences twice a year. Posters placed in all local schools, hospitals, pediatricians' offices, and mental health facilities.

- Estimated 3000 calls to local 211 help line for mental health services during 2005-2006. More than 20% of these calls were made by children under age 18.

Youth Leadership

Youth Unlimited (YU):

- Raises awareness about the mental health crisis for children and adolescents.

- Improves the way school, work, and the community interact with youth.

- Promotes systems change through a strength-based approach to youth and a curriculum for youth meetings.

- Sponsors events, including parent/child training on Seven Habits of Highly Effective Families.

- Develops communications tools such as a website, youth BLOGS, and a youth newsletter.
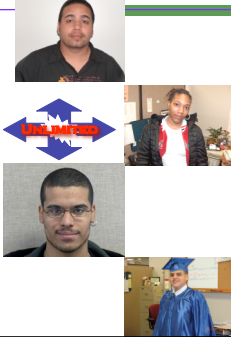
Family Organization

- Support groups conducted in English and Spanish.

- Individual support and assistance provided to families in need.

- Family Advocacy services to enrolled families.

- A Family Leadership Team that guides, coordinates and works to strengthen family network activities and system advocacy efforts.

- A B-PEST Advisory Board that is meeting monthly and in the process of becoming a 501c3.

- A variety of training and educational programs given in English and Spanish.

- Success in enhancing family knowledge, leadership and advocacy skills

Behavioral Health Services

- All families work with highly trained, culturally competent, and caring Care Coordination staff located within the targeted schools.

- Services available to PARK youth and families include:
  - Therapeutic mentors
  - Psychiatrist
  - Therapists
  - Family advocates
  - Therapeutic after-school program
  - Flex funding for emergency needs

- Services available to all in community:
  - Emergency mobile services
  - Child guidance
  - In-home intensive services (IICAPS)

- Successful involvement of nontraditional providers in providing care with successful involvement of natural supports (family, friends, and community supports) in the team process.

- B-PEST/family members seen as partners in the system of care and are utilized by providers to do education and outreach to other families.

Outcome Evaluation

- **Enrollment criteria:**

  - Attending targeted school

  - DSM IV diagnosis

  - In need of multi-agency services

  - At risk for or in out-of-home placement

  - Impairment in school, home and/or community that has lasted longer than 1 year

Sample

- 151 families included in this study.
  - All families enrolled into the PARK Project are invited to participate in outcome study, 71.6% have consented.

  - Data collected from primary caregiver and youth (age 11 and older) by trained interviewers half of whom were parents of children within the system of care.

  - Data on school incidents are collected from schools as part of PBIS evaluation; individual data for youth in outcome study was pulled from PBIS dataset.

  - Families receive a $40 gift card for participation in each interview.

Measures

- **Child and family demographic characteristics:**
  - Age, gender, race, SES, residential status.

- **Child and family risk factors:**
  - Child: history of child maltreatment, inpatient stay or substance abuse.
  - Parent/caregiver: history of mental illness, felony conviction, domestic violence or substance abuse.

Measures

- **Child outcomes**:
  - *Child Behavior Checklist* (CBCL; Achenbach & Edelbrock, 1993), total score.
  - *Behavioral and Emotional Rating Scale-2* (BERS; Epstein 2004), total score – parent and youth report.
  - School Incidents: Frequency of office referrals for behavioral infractions.
- **Parent/Caregiver Outcomes**:
  - *Caregiver Strain Questionnaire* (CGSQ; Brannan, Heflinger & Bickman, 1997).
  - *Parenting Stress Inventory – Short Form* (PSI-SF; Abidin, 1995).
- **Utilization/Cost Outcomes**:
  - Hours and cost of all PARK funded wrap-around services.

Demographic Characteristics of Youth

- 64% of the youth are male.

- The average age is 11.7 years (SD=3.5):
  - Under 7 years   8.6%
  - 7-9 years   19.9%
  - 10-12 years   19.9%
  - 13-15 years   39.7%
  - Over 15 years   11.9%

- The majority of the youth are children of color:
  - African American   33.1%
  - Caucasian   11.7%
  - Latino   53.1%
  - Other   1.5%

Family Context

- 75% meet the Federal Poverty Guidelines; 89% are Medicaid Eligible.

- Fifty-six percent of the youth are in the custody of their mother only; 15 percent are in the custody of 2 parents.

- Twenty-five percent of the parents identify Spanish as their primary language.

Presenting Problems
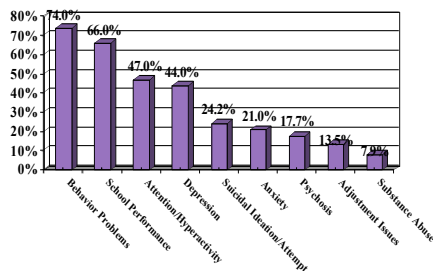
Clinical Status

- 89 percent of the youth have clear or significant impairment in functioning as measured by the CGAS (0=51.33)

- DSM Primary Diagnosis (n=151)

Adjustment Disorders	14.9%
Anxiety Disorders	3.4%
Attention Deficit Hyperactivity	34.1%
Behavior Disorders	42.6%
Learning Disorders	2.8%
Mood Disorders	26.7%
Psychotic Disorders	8.0%
Substance Abuse Disorders	1.7%
Pervasive Developmental Disorders	3.4%
Personality Disorders	0.6%
Other	3.2%

Outcomes

- PARK youth and families demonstrated improvements from baseline to 18-month follow-up including:
  - Reductions in problem behaviors (CBCL; p=.000).
    - Internalizing p=.000; Externalizing p=.000.
  - Improvements in functioning (CIS; p=.001).
  - Reductions in depression (RADS: p=.000).
  - Reductions in anxiety (RCMAS: p=.008).
  - Increase in strengths (BERS-2C – total: p=.000).
  - Reductions in caregiver strain (CGSQ: p=.000).
  - Reductions in school office referrals (p=.000).
- Examination of the unique contributions of different program components.

Data Analysis

- In the analyses we controlled for child and family risk factors:
  - Child: history of maltreatment and history of psychiatric inpatient stay
  - Family: domestic violence, biological parent with a history of mental illness, biological parent with a history of substance abuse and biological parent with a history of a felony conviction.

- Conducted longitudinal multi-level modeling

- Predictors included both dosage of each service type and also cost of each service type

Hypothesis 1 – Youth Measures

BERS2 Youth Report, BERS2 Parent Report, CBCL

Predicting Baseline

- Service Costs & Hours will be predictive of youth measures after controlling for child and family risk factors

Predicting Change over time

- Service Costs & Hours will be predictive of change in youth measures over time (slope), after controlling for child and family risk factors

Hypothesis 1 – Results: BERS2 Youth Report

Predicting BERS2 Youth Report Baseline
- Strength Index-BERS Youth (20.30% variance explained)
  - Therapeutic Mentoring Hours (p < .05)
  - Therapeutic Mentoring Costs (p < .05)
  - After-school Hours (p < .05)
  - Outpatient Therapy Hours (p < .05)
  - Outpatient Therapy Costs (p < .05)
  - Total Hours (p < .05)
  - Total Costs (p < .05)

Predicting Change in BERS2 Youth Report Over Time
- Strength Index-BERS Youth (2.37% variance explained)
  - Family Advocacy Costs (p < .05)
  - Care Coordination Costs (p < .05)

Hypothesis 1 – Results: BERS2 - Parent Report

Predicting BERS2 Parent Report Baseline
- School Functioning Standard Score (21.78% variance explained)
  - Advocacy Hours (p < .05)
  - Therapeutic Mentoring Hours (p < .05)
  - After-school Hours (p < .05)
  - Care Coordination Hours (p < .05)
  - Outpatient Therapy Hours (p < .05)
  - Total Hours (p < .05)

Predicting Change in BERS2 Over Time
- School Functioning Standard Score (3.1% variance explained)
  - Advocacy Hours (p < .05)
  - Therapeutic Mentoring Hours (p < .05)
  - After-school Hours (p < .05)
  - Care Coordination Hours (p < .05)

Hypothesis 1 – Results: BERS2, Parent Report

School Functioning Standard Score - With Hours of Service
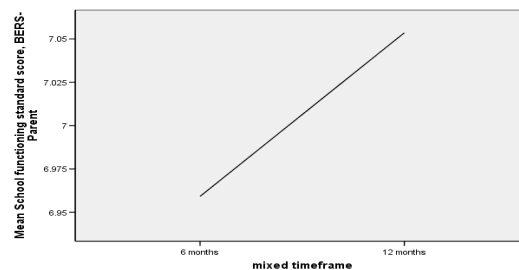
Hypothesis 2 – Family Measures

Caregiver Strain Questionnaire

Predicting Baseline
- Service Costs & Hours will be predictive of family measures after controlling for child and family risk factors
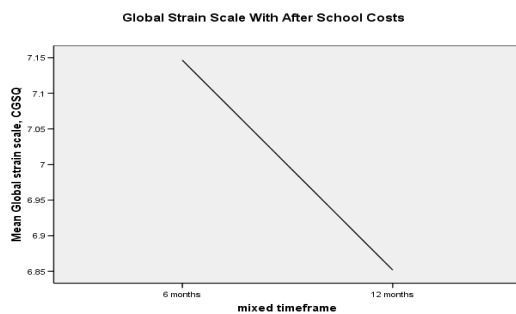
Predicting Change over time
- Service Costs & Hours will be predictive of change in family measures over time (slope), after controlling for child and family risk factors

Hypothesis 2 – Results: Caregiver Strain

Predicting Change in CGSQ Over Time
- Global Strain Scale (15.50% variance explained)
  - Therapeutic Mentoring Costs ($p < .05$)
  - After-school Costs ($p < .05$)
  - Total Costs ($p < .05$)

Hypothesis 2 – Results: Caregiver Strain

Global Strain Scale With After School Costs

Hypothesis 3 – School Measures

Predicting Baseline
- Service Costs & Hours will be predictive of school measures after controlling for child and family risk factors

Predicting Change over time
- Service Costs & Hours will be predictive of school measures over time (slope), after controlling for child and family risk factors

Hypothesis 3 – Results: School Incidents

- **Predicting Change in Average Number of Incidents Over Time**
  - Therapeutic Mentoring Costs ($p < .05$) (6.4% variance explained)

Summary

- Universal intervention has helped to improve climate at schools so that overall behavioral problems are reduced.
  - This has enabled cleared identification of youth with serious emotional and behavioral challenges.

- School-based wrap-around has increased the participation of school staff in service planning for individual youth and families.
  - This result is consistent with research that showed that there is a higher level of interconnectedness within school based systems of care (Nordess, 2003).

Summary, cont.

- Consistent with findings from many systems of care, participation in PARK wrap-around has led to:
  - Reduction in problem behaviors.
  - Reduction in youth reported symptoms of depression and anxiety.
  - Increase in identified strengths.
  - Reduction in parenting stress and strain.

- In this school-based system of care we have also seen a significant reduction in office referrals for these youth with severe emotional and behavioral challenges.

Summary, cont.

- Important to understand whether there are any unique contributions of the different components of the system of care. In examining change overtime we have learned that:
  - Increases in youth reported strengths are related to dosage of care coordination and family advocacy services.
  - Increases in parent reported strengths in the area of school functioning are related to dosage of care coordination, family advocacy, therapeutic mentoring and after-school services.
  - Decreases in parenting strain are related to overall dosage of services and dosage of therapeutic mentoring and after-school services.
  - Decreases in school office referrals are related to costs of therapeutic mentoring services.

Limitations

- No comparison group.

- Assessments only provider by youth and parent/caregiver.

- Not able to capture utilization of services not funded by the system of care.

Implications

- This paper gives a beginning understanding of the impact of particular services for families within a school-based system of care.
  - Within our system of care these results are helping to inform our sustainability planning.

- Continued research to understand what families receive in a system of care and how these services impact them are needed for program and policy decision-making.