

Is Community Stabilization as Effective as Hospitalization for Children with a Mental Health Crisis?

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Background: Psychiatric Hospitalization

- ◆ Widely considered an intervention of last resort
 - Most restrictive and intensive treatment
 - Most expensive
 - ◆ Consumes nearly half of all money spent on adolescent mental health care

Background: Psychiatric Hospitalization

- ◆ Is it effective?
- ◆ Research has focused on clinical outcomes and predictors of hospitalization
 - Reduction in symptoms occurs during hospitalization (Swadi & Bobier, 2005)
 - This decrease does not necessarily persist at follow-up (Dickerson et al., 2001; Sourander & Hannu 2002)

An Alternative

- ◆ There are economic, social and psychological costs of psychiatric hospitalization (Henggeler et al., 1999)
 - ◆ Long-term success is variable (Mayes et al., 2001)
- SO...
- ◆ Current trends emphasize stabilizing youth through community-based treatment

How about Community Stabilization?

- ◆ Less expensive
- ◆ Less restrictive
- ◆ Less disruptive to youths' lives
- ◆ The natural question: How do community stabilization and psychiatric hospitalization compare as crisis interventions?

Community Stabilization vs. Psychiatric Hospitalization

- ✦ The difficulty: comparing the two treatments
 - Youth who have been hospitalized are likely different (i.e., higher level of need) from those who have received community-based treatment
 - Past research comparing the treatments has methodological holes
 - ✦ Historical controls
 - ✦ RCTs with many exclusion criteria

The Present Study

- ✦ Retrospective analysis of outcomes of youth whose mental health crises were treated either in the hospital or in the community
- ✦ Directly, simultaneously compares community stabilization and psychiatric hospitalization, while accounting for different levels of need

Illinois' Crisis Program

- ✦ Screening, Assessment, and Supportive Service (SASS)
 - Authorized by Illinois Children's Mental Health Act of 2003
 - Administered by IL Department of Children & Family Services (DCFS)
 - Partnership between DCFS, Dept of Healthcare & Family Services, and Dept of Human Services
 - Single statewide system to serve children & youth experiencing a MH crisis whose care will require public funding from 1 of the 3 agencies

How SASS Works

- ✦ Call comes in to Crisis and Referral Entry Service (CARES) hotline
- ✦ CARES assesses acuity, age, & insurance
 - Approves admission to SASS program
 - Refers case to SASS provider in child's service area
- ✦ SASS provider screens child within:
 - 90 minutes (emergency)
 - 24 hours (non-emergency)
 - Prior to discharge (if child was hospitalized)

SASS Services

- ✦ Initial decision to hospitalize or stabilize in community
- ✦ Facilitate crisis intervention and stabilization services for up to 90 days
 - Treatment plan for MH services
 - Coordinate outpatient services
- ✦ Facilitate child's admission to psychiatric hospital
 - Participate in hospital staffings & discharge planning
 - Advocate for child during hospitalization
 - Support services for parent, guardian, or caregiver
 - Facilitate post-hospitalization services
- ✦ Develop/execute transition plan at end of 90 days
 - 30 day extensions are possible (& usually approved)

Study Sample

- ✦ All youth who received SASS services during FY05 (n=2541)
- ✦ 2 study groups:
 - *Hospitalization*: The child was hospitalized at any point during his/her SASS episode (n=1760)
 - *Community stabilization* (n=781)
- ✦ Excluded any child whose SASS length of stay was < 4 days

Data & Variables

- ✦ SASS administrative data
 - Childhood Severity of Psychiatric Illness (CSPI) (Lyons, et al., 1997)
 - Treatment setting
 - Demographic characteristics
- ✦ Dependent variable: Change in CSPI score
 - $\Delta CSPI = (Total\ score\ at\ end\ of\ SASS\ episode) - (Total\ score\ at\ beginning\ of\ SASS\ episode)$
- ✦ Key independent variable: Treatment setting (hospitalization or community stabilization)

CSPI Domains & Scoring

- ✦ Symptoms
 - Neuropsychiatric
 - Emotional
 - Conduct
 - Oppositional behavior
 - Impulsivity
 - Contextual & temporal consistency of symptoms
- ✦ Risk factors
 - Suicide
 - Danger to others
 - Elopement
 - Crime/delinquency
 - Sexual aggression
- ✦ Functioning
 - School
 - Family
 - Peer
- ✦ Comorbidity
 - Adjustment to trauma
 - Medical
 - Substance abuse
 - Severity of abuse, neglect
 - Sexual development
 - LD/DD
- ✦ 3-7 items per domain
- ✦ Item scores range from 0 (no evidence) to 3 (severe)
- ✦ Range of overall score = [0, 63]

Demographic Characteristics

	Hospitalized (n=1760)	CS (n=781)
Mean (SD) age	13.5 (3.4)	13.0 (3.5)
Male, %	51.6	50.9
Nonwhite, %	48.1	46.5
Ward of state, %	14.1	12.7
Previous SASS episode, %	7.0	5.8
Mean (SD) LOS, days	73 (29)	70 (31)

Demographic Characteristics

	Hospitalized (n=1760)	CS (n=781)
Regions		
Cook, %	30.0	9.8
Northern, %	15.7	7.7
Central, %	19.5	10.3
Southern, %	4.0	3.0

CSPI Scores at Beginning and End of SASS Episode

	Hospitalized (n=1760)	CS (n=781)	T
Mean (SD) CSPI at Start of Episode	19.2 (7.2)	13.4 (6.0)	19.6*
Mean (SD) CSPI at End of Episode	14.2 (7.3)	11.4 (6.3)	9.3*
Mean Δ CSPI Score	-5.0 (7.3)	-2.0 (5.5)	-10.2*

A negative change score reflects a reduction in severity

* p<.001

Comparing the Groups: Methods

- ✦ Propensity score analysis: Statistical matching of individuals across treatment types to allow for direct comparisons of outcomes
- ✦ Matched Hospitalization and Community Stabilization groups on demographic and clinical variables until a valid comparison could be made
- ✦ Multiple linear regression, adjusting for covariates in descriptive table

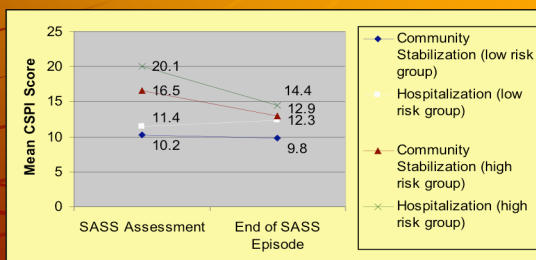
Comparing the Groups: Results

- ✦ For the full sample, Community Stabilization was associated with significantly better outcomes (i.e., reduction in total CSPI score) compared to Psychiatric Hospitalization
- ✦ $B = -0.664$, 95% CI = $[-1.344, -0.126]$, $t = -2.06$, $p = .037$

Subgroup Analysis

- ✦ We divided the sample into 2 subgroups:
 - Those predicted by the CSPI to be hospitalized ("High Risk")
 - Those predicted to be served in the community ("Low Risk")
- ✦ Re-ran propensity score and multiple linear regression analyses separately for each subgroup

Results of Analysis by Risk Subgroup



Limitations

- ✦ Improvement in CSPI score may reflect regression to the mean
- ✦ Results may not be generalizable to other states

Next Steps

- ✦ Test for regression to the mean effect using a difference-in-difference model
- ✦ Test for SASS provider effects

(Preliminary) Implications

- ✦ Community stabilization is more effective for children with less severe mental health crises
- ✦ Hospitalization is more effective for children with more severe mental health crises
- ✦ Risk assessment for children in crisis, particularly prior to hospitalization, is worthwhile