Best Practices in Children's Mental Health:

A Series of Reports Summarizing
the Empirical Research on Selected Topics

Report #1,
"Inpatient Treatment for Children and Adolescents"
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Best Practices in Children's Mental Health: Report #1
Outcome Studies of Inpatient Treatment for Children and Adolescents

This study was undertaken to provide an empirically-based framework for better understanding " best practices" in the area of inpatient treatment for children and adolescents.

Methodology

The research that is available examining inpatient care for children and adolescents focuses primarily on diagnostic categories and demographics. This present literature review examined outcome studies of inpatient treatment programs for children and adolescents from 1975 to 2001. The research revealed a dearth of studies in the last 11 years. Nine studies are included in this report:

A) One meta-analysis.
B) One extensive literature analysis.
C) Seven additional studies published in the 1990's not included in "A" or "B."

Results

Through the course of this investigation, it was clear that few outcomes studies surrounding efficacy of inpatient treatment for children and adolescents were conducted during the last 11 years, which agrees with the findings of other researchers. This report summarizes nine articles. One publication was a meta-analysis, which synthesized and quantified 34 outcome studies from 1975 to 1990 (1). Another analysis reviewed 46 studies, only five of which were outcome studies published in the 1990's (2). Of the seven additional outcome studies included from the 1990's, none were a true experimental design with control group. One study had a waiting-list control group with a comparison group, but did not make random assignment (5). One study was quasi-experimental with two comparison groups (6). Two studies used a pretest/ post-test design (7 & 8). One study was a longitudinal, naturalistic, follow-up study (3), and one a pre-post file analysis (4). One study was qualitative/descriptive over a four-year period (9). Of the seven studies, which were not analyses, five gave followup measures.

The body of outcome research on this topic is quite limited, especially in the following ways:

- Lack of experimental or even quasi-experimental designs.
- Length of stay and treatment protocol frequently not specified in detail.

A good deal of the literature discusses the need for more rigorous research methods in this area, and suggests that a definition of treatment programs requires more detailed clarification.

Inpatient treatment protocols differed, but components tended to include varying degrees of: Behavior modification; milieu-based treatment; individual and family therapy; therapeutic, psycho-educational, and family groups; medication, spiritual awareness and recreational activities.

Aftercare was provided in one program studied; clients received community-based aftercare in two, and two did not discuss aftercare. Six studies gave lengths of stay. The meta-analysis treated length of stay as a correlational variable to determine relationship between length of stay and outcomes. Overall, findings were mixed as to effectiveness; most treatments were effective to some degree. A program of modalities combined with behavior modification was more effective than behavior modification alone.

Conclusions

- Parental involvement is highly correlated with successful outcomes (1, 4, 5, & 7).
- Length of stay is not correlated with successful outcomes (1, 4, & 8).
- Generally, extended hospitalizations provide little added benefit over shorter inpatient programs averaging no more than one month in length and frequently considerably shorter (2 & 8).
- Follow-up at community mental health is highly correlated with successful outcomes and is an integral part of maintaining goals (1, 2, 6, & 7).
- Therapeutic alliance is positively correlated with successful outcomes. Therapeutic alliance was described as containing elements of a good relationship with peers and staff, characterized by intimate confiding, understanding of treatment, empathy, and the subject's sense of collaboration with the treatment process (5).
- Inpatient treatment may increase the risk of suicide up to five years post-discharge, even in youth with no previous suicide attempts (3).
- Placement may exacerbate the sense of failure and anger, and create a sense of loss of connectedness to the family (9).
- Inpatient and residential treatment does not seem any more effective than day treatment, multi-systemic treatment, or community mental health services and is more costly (5 & 6).
- Inpatient care is generally thought of as part of a comprehensive treatment program that includes continued treatment as an outpatient following discharge from the inpatient facility (2 & 6).

Implications

a Caregivers should be alerted to and cognizant of the risks for post-discharge suicide after inpatient hospitalization.

- Programs should include focus on family involvement and establishing good therapeutic alliances.
- Extended hospitalization should be avoided in favor of intense community-based support and treatment, supported by brief inpatient hospitalizations with coordinated aftercare.

Best Practices in Children's Mental Health: Report # 1
Results of Inpatient and Residential Treatments for Youth With Severe Emotional Disorders

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Citation	Type of Study	Treatment Model	Pertinent Findings
1) Pfeiffer, S.I. & Strzelecki, B.A. (1990). Inpatient psychiatric treatment of children and adolescents: A review of outcome studies. Journal of the American Academy of Child and Adolescent Psychiatry. 29, (6), 847-853.	Meta-analysis of outcome studies of child and adolescent residential treatment and inpatient psychiatric hospitalizations reported in the literature from 1975 to 1990. The 34 studies were found in 18 journals. Twenty-three studies were designed as post-discharge follow-ups, whereas the remaining 11 studies evaluated patient status at the time of discharge.	Models included those in all studies synthesized and quantified, described as "specialized." Only four studies looked at treatment models/interventions: planned discharge, therapeutic alliance, completion of treatment program, and cognitive-based problem-solving skills training. The meta-analysis described treatment as a construct that requires a more detailed and extensive exploration. Specific lengths of stay were not delineated, but rather length of stay (LOS) was treated as a correlational variable to determine relationship between LOS and outcomes.	Specialized treatment during psychiatric hospitalization, provision of aftercare services, and family involvement contribute to favorable outcome. Aftercare ensures the transfer and generalization of treatment gains to the discharged patient's environment. One paper indicated that **positive effects of inpatient treatment are undone when aftercare services are not available.** Three studies reported that the long-term effects of inpatient and residential treatment programs, assessed by the rate of recidivism, remain disappointing. The severity of psychopathology, extent of organicity, degree of family challenges, and the presence of florid antisocial features were all associated with negative outcome. IQ and **LOS yielded only modest relationships to favorable patient outcome.** Three studies suggested a modest positive relationship between LOS and patient outcome and four studies found no relationship between LOS and patient *outcome. The analysis provided strong support for* aftercare and family involvement. Aftercare yielded an outcome value of 1.00, which means that in 100% of the cases, aftercare predicted a favorable post discharge status. Family involvement (value of 0.70) indicates that in 70% of the cases, family involvement predicted a favorable post-discharge status.

			Analysis indicated need for more detailed clarification of treatment models.
2) Bloom, B. (2000). Brief inpatient treatment for psychiatric disorders. Crisis Interventions and Time-limited Treatment, 5, (3), 241-247	Literature review of 46 studies on inpatient psychiatric treatment. Fifteen studies were outcome studies, including the Pfeiffer mea-analysis. Five studies were published in the 1990's. Two of the 15 were in the early 1970's prior to the Pfeiffer meta-analysis. Six studies, from 1976 to 1979, were not included in the Pfeiffer analysis.	Studies reviewed included a variety of models, stated in study titles referenced, but not specified in the review. Focus on the review was to examine added benefit of extended hospitalization over short-term hospitalization. LOS for "brief hospitalization" was described as from one week to one month. LOS for time-unlimited hospitalization is assumed to have varied with studies, but was not delineated in the review.	Outcome studies of inpatient psychiatric treatment programs for children, adolescents, and adults, have generally found that **extended hospitalization provides little added benefit over shorter inpatient treatment programs averaging no more than one month in length and frequently considerably shorter.** As a consequence, brief hospitalizations have become the standard of inpatient care and are increasingly thought of in the large context of treatment programs that include post-discharge outpatient follow up and clinical management. Both specialized treatment during psychiatric hospitalization and provision of aftercare services contribute to favorable outcomes. However, the definition of specialized treatment requires more detailed clarification.
3) Goldstein, **D.;** Daniel, S.; Reboussin, D.; Reboussin, B.; Frazier, P.; & Kelley, A. (1999). Suicide attempts among formerly hospitalized adolescents; a prospective naturalistic study of risk during the first 5 years after discharge. Journal of the American Academy of Child and Adolescent Psychiatry, 38,,_(i6), 660-671.	Longitudinal, naturalistic, repeated-assessment study. Data were collected on four standard indices at intake assessment and thereafter for five years at six to eight month intervals, using alternative forms: psychiatric interviews and self-report questionnaires. (n = 180)	Treatment model and LOS not reported. Study objective was to examine risk for suicide attempts among adolescents during the first 5 years after discharge from an inpatient psychiatric unit.	**Approximately 25% of adolescents attempted suicide within the first five years after discharge. The first six months to one year after discharge represented the period of highest risk." Diagnostic** groups were not significantly related to later suicidal behavior. Trait anxiety and associated feelings of agitation increase the risk for suicidality over and beyond that associated with psychiatric diagnosis. **With statistical adjustment for previous suicide attempts, attempts were still high after hospitalization, with several attempts by patients never before attempted. Given the relationship between history of suicidal behavior and future attempts, it is notable that** a **significant number of adolescents without a history of suicide attempts prior to their psychiatric hospitalization made their**

			first suicide attempts after their **discharge.** Specifically, 3.8% of previously nonsuicidal adolescents made attempts within six months, 7.8% attempted suicide within one year, and 25.6% attempted suicide within five years after hospitalization. Findings indicate that the high risk for suicidal behavior after hospitalization is not limited to adolescents with previous suicidal behavior.
4) Al Ansari, A; Gouthro, S; Ahmad, K.; & Steele, C. (1996). Hospital-based behavior modification program for adolescents: evaluation and predictors of outcome. Adolescents, 31, (122) 466-478.	Retrospective analysis of performance. Pre and post file analysis of behavior based on points earned in the first four weeks of admission and the last four weeks. No follow-up after discharge. (n = 60)	Behavior modification with positive and punitive consequences applied to adolescent behavior within the context of a token economy (BMP). Targeted behaviors assigned point values and accumulated point totals determined daily privileges. Combined treatment consisting of BMP; individual, family, and group therapy; and medication was utilized in some cases. LOS: Mean = 10-12 weeks.	"BMP was generally beneficial especially for females and nonconduct-disordered patients. Factors such as father's presence and absence of learning problems were associated with better outcome. **Age and length of stay were not correlated with significant improvement.** BMP was effective in reducing frequency of undesirable behaviors for the majority of adolescents. Males with a diagnosis of conduct disorder might require a longer stay for the program to be effective." BMP alone was effective in 26.7% of cases. Combined therapy was effective in 40% of cases.
5) Green, J.; Kroll, L.; Imrie, D; Frances, F.M.; Begum, K; Harrison, L; and Anson, R. (2001). Health gain and outcome predictors during inpatient and related day treatment in child and adolescent psychiatry. Journal of the American Academy of Child and Adolescent Psychiatry. 40, (i3), 325-336.	Quasi-experimental design: One experimental group with two related components, inpatient treatment and day treatment; a waiting-list control condition - no random assignment. Measures of symptoms and adjustment, therapeutic alliance, and family functioning taken from multiple perspectives, including family, teacher, clinician, and independent researcher for inter-rater reliability, at referral, admission, discharge, and six month follow-up.(n = 55)	A program with two related components: Inpatient and day treatment with similar treatment models, which consisted of individualized treatment from range of family-oriented and individual psychological treatments or medication with common elements of ward milieu and specialized hospital school provision. LOS: Median for combined components: 21.6 weeks. LOS for inpatient: 5 days.	Significant (mental) health gain during the course of treatment was found on most measures and sustained to follow-up. There was no symptom change during the waiting-list control condition. Externalizing problems did well if accompanied by good therapeutic alliance. Assessment of health gain from multiple perspectives is possible and valuable. The combination of inpatient and day treatment has significant therapeutic effect. Health gains lie in process variables of therapeutic alliance and family functioning rather than presenting symptom. Gains seemed to generalize to the child's normal social environment at least in the 6 months following hospitalization.

6) Henngeler, S.; Rowland, M.; Randall, J.; Ward, D.M.; Pickrel, S.G.; Cunningham, P.B.; Miller, S.L.; Edwards, J.; Zealberg, J.; Hand, L.D.; and Santos, A.B. (1999). Home-based multisystemic therapy (MST) as an alternative to the hospitalization of youth in psychiatric crisis: clinical ` outcomes. Journal of the American Academy of Child and Adolescent Psychiatry, 38 (ill), 1331-141.	Quasi-experimental design with random assignment to two treatment groups: inpatient hospitalization and home-based MST, with symptomatology assessments and consumer satisfaction taken three times: within 24 hours or recruitment, shortly after the hospitalized youth was released and at completion of MST home-based services. (n = 113), MST (n = 57), psychiatric inpatient (n = 56).	Inpatient: Behaviorally based milieu program with a point system targeting behaviors, with three teams of providers including a psychiatrists, a master's level social worker, special education teacher, and nursing staff. Inpatient LOS: Initial hospitalization for crisis not given. Thereafter, 46% of youth were rehospitalized or placed in alternative, residential type settings with cumulative LOS of 301 days, mean of 5.8 days. 42% received community based care for average of 8.5 hours. MST Program: Family and behavioral, home-based therapy, based on nine core principles with intervention directly embedded in social systems. MST was modified with a larger staff to increase intensity of treatment, focusing on family empowerment, strengths, and community resources. MST condition (LOS = 123 days, with 97.1 direct contact hours)	MST was more effective than emergency hospitalization at decreasing youths' externalizing symptoms and improving their family function and school attendance. Hospitalization was more effective than MST at improving youths' self-esteem. Consumer satisfaction scores were higher in the MST condition. The findings support the view than an intensive, well specified, and empirically supported treatment model, with judicious access to placement, can effectively serve as a family and community-based alternative to emergency psychiatric hospitalization for children and adolescents.
7) Kiser, L.J.; Millsap, P.A.; Hickerson, S.; Heston, J.D.; Nunn, W.; Pruitt, D.B.; and Rohr, M. (1996). Results of one year later: child and adolescent partial hospitalization. Journal of American Academy of Child and Adolescent Psychiatry. 35,(1), 81-91.	Pretest/Post-test design, with no comparison or control group, using three standard instruments to measure levels of clinical status, daily function, utilization of behavioral health services after discharge, and patient/family satisfaction with treatment, with follow-up at one year. Inter-rater reliability by caregivers, teachers, youth, and hospital records. (n = 114)	A "university-affiliated" program, included individual therapy, family therapy, psychotherapy, psycho-educational groups, with more than 50% of program hours spent on activities. Staff included experienced, highly trained clinicians, and low staff-to-patient ratio. LOS: Mean = 115.9 days.	Data show improvement in general functioning that remained evident up to one year post-discharge. Findings indicate positive results in specific areas emphasized in the program, such as family function and use of community-based mental health resources after discharge. Patients showed statistically significant improvement in clinical symptoms. "The parents' attribution of improvement to experience in treatment provide justification for relating improvement to the treatment episode."

8) Shapiro, J.P.; Welker, C.J.; and Pierce, J.L. (1999). An evaluation of residential treatment for youth with mental health and delinquency-related problems. Residential Treatment for Children and Youth, 17. (2), 33-49.	Longitudinal, pretest/post-test design with outcomes based on a variety of self-report and staff-report standard measures at baseline (conducted between 4-6 weeks after admission), and at 3 months, 7.5 months, and 12 months. Measures assessed behavioral and emotional problems, delinquency-related maladjustment, response to psychotherapy, and client satisfaction. (n = 27)	Structured cottage environment with individual therapy aimed at disruptive behavior and conduct-related problems, medication, behavior reinforcement, recreation programs, and twice-weekly spiritual awareness activities. LOS: 12.5 months.	Study results address the issue of optimum length of placement. The question is, how long does placement need to be in order to achieve the benefits it is capable of achieving? There was significant evidence of improvement on 5 measures, suggestive evidence on 3, and no evidence of positive change on 3. Most of the improvement that occurred took place during the first six months of treatment.
9) Pazaratz, D. (1999) An impressionistic evaluation of the efficacy of a residential treatment facility for emotionally disturbed youth. Residential Treatment for Children and Youth 16 (3). 15-29	Qualitative, naturalistic, descriptive, and phenomenological combined with questionnaire designed to study the stakeholders' perceptions of the program over four years. (n = 100)	Youth residential services composed of four homes and three treatment classes utilizing Milieu Therapy to promote skills acquisition and beliefs associated with adaptive behavior. LOS: 9 months.	Adolescents indicated this program differed from other placements because of staff, peers, and community. However, the initial placement exacerbated the sense of failure and anger, and created a sense of loss of connectedness to the family. Staff saw improvement in self-control, social skills, and negotiation skills. Most adolescents reported more support and understanding in dealings with staff than consequences or negative confrontations. Staff did not feel that the milieu worked for all adolescents. They felt that about two thirds of youth changed due to the positive effect of the milieu while a third were viewed as not changing. Some staff believed that some residents merely matured or grew up. Seventy percent of adolescents felt the group homes worked for them and felt group homes must allow a degree of tolerance for acting-out, destructive and aggressive behaviors.