Ontario Centre of Excellence
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Mental Health

Centre d'excellence de l'Ontario
en santé mentale des
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Evidence In-Sight:
Optimal Length of Stay in Residential Treatment for High Risk Youth

Date: April, 2012

The following Evidence In-Sight report involved a non-systematic search and summary of the research and grey literature. These findings are intended to inform the requesting organization, in a timely fashion, rather than providing an exhaustive search or systematic review. This report reflects the literature and evidence available at the time of writing. As new evidence emerges, knowledge on evidence-informed practices can evolve. It may be useful to re-examine and update the evidence over time and/or as new findings emerge.

Evidence In-Sight primarily presents research findings, along with consultations with experts where feasible and constructive. Since scientific research represents only one type of evidence, we encourage you to combine these findings with the expertise of practitioners and the experiences of children, youth and families to develop the best evidence-informed practices for your setting.

While this report may describe best practices or models of evidence-informed programs, Evidence In-Sight does not include direct recommendations or endorsement of a particular practice or program.

This report was researched and written to address the questions:

- According to the literature, is three months the optimal length of stay for high risk youth in residential treatment?
- Is there evidence or guidelines about the optimal length of stay in residential treatment?

We prepared the report given the contextual information provided in our first communications (see Overview of inquiry). We are available at any time to discuss potential next steps.

We appreciate your responding to a brief satisfaction survey that the Centre will e-mail to you within two weeks. We would also like to schedule a brief phone call to assess your satisfaction with the information provided in the report. Please let us know when you would be available to schedule a 15-minute phone conversation.

Thank you for contacting Evidence In-Sight. Please do not hesitate to follow up or contact us at evidenceinsight@cheo.on.ca or by phone at 613-737-2297.

1. Overview of inquiry

This inquiry comes from an agency in Ontario that offers residential treatment programs for high risk youth. These youth often demonstrate problematic externalizing behaviour, aggression, mental health issues and/or substance abuse issues. In addition, many are involved with the Children's Aid Society. The requesting agency is interested in the optimal length of stay for children in residential programs. They are specifically wondering if there is strong evidence indicating that shorter stays (e.g., three months) lead to more positive outcomes compared to longer stays (e.g. one year or more). In addition, they would like to know what the literature states in a general sense about the factors to consider when deciding on the optimal length of stay for youth in residential treatment.

2. Summary of findings

- Residential treatment has been scrutinized because of its high cost and restrictive nature, but research suggests that this modality fills a crucial niche by providing treatment for high risk children and youth who cannot live at home and have failed to improve in community based settings.
- Length of stay is not a good indication of treatment outcome when considered on its own, but a number of other factors are associated with positive treatment outcomes including family involvement during treatment, the availability of a supportive home environment and the opportunity to continue treatment in community-based services after leaving the residential program.
- The research generally indicates that the optimal length of stay depends on a number of individual and environmental factors such as severity of symptoms at intake (children with less severe conditions upon intake tend to be discharged sooner than children with more severe conditions), family-related factors, and the intensity of services provided in the program.
- Short term residential treatment programs can be effective, but discharge planning is essential and should be incorporated into treatment, and staff must be able to provide intensive brief therapies in the residential setting.
- The availability of step-down community-based services at discharge is very important to the possible efficacy of short term residential treatment.
- Evidence supporting longer stays in residential treatment is reflective of the severity of one's condition at intake and also during treatment, particularly for children and youth with a dual-diagnosis or who experience a psychiatric emergency while in treatment.

3. Answer search strategy

- Search tools: EBSCO Host (Medline, PsycInfo, CINAHL), PubMed, Google Scholar
- Various combinations of the following search terms were used: residential treatment, substance abuse treatment, long term, short term, outcomes, trajectory, optimal length of stay, children and youth, adolescents

4. Findings

Residential programs are defined as "out-of-home, twenty-four-hour facilities that vary by therapeutic modalities, placement settings, program components and treatment populations" (Noftle et al., p. 66, 2011). These types of settings are under scrutiny in the field of child and youth mental health because of questions about cost-benefit and ideal treatment settings. First, a residential service is a very expensive form of treatment on a per episode basis. Second, mental health services strive to use the least restrictive settings, and a residential program is considered restrictive

(Helgerson et al., 2005). Thus, the necessity of these programs has come into question when home or community-based alternatives are available, and might yield equally satisfactory outcomes.

Research demonstrates that youth entering residential treatment settings have increasingly poorer mental health functioning and greater treatment needs (Lyons et al., 2009) compared to residential clients in past years. One study showed that youth entering residential treatment in 2005 were significantly more likely to have substance abuse problems, more than one psychiatric diagnosis, and/or be taking psychotropic medication compared to youth entering treatment in 1995 (Hurley et al., 2005). Therefore, some researchers have suggested that despite the high cost and restrictive setting, residential programs are necessary for youth that have not been successfully treated in a community setting and are too challenging to remain at home (Lyons et al., 2009).

Historically, residential treatment has been long-term. Youth admitted to these programs would stay for a year or more due to chronic conditions and unsuitable home environments (Leitchman, 2008). With advances in pharmaceutical treatment and the promotion of community-based interventions, these long-term stays have become less common. However, there has never been a specified length of stay guiding residential programs.

4.1 Optimal Length of Stay in Residential Treatment

Research examining length of stay in residential treatment shows mixed findings. Some research indicates that less time spent in treatment is related to more positive outcomes, and other research has shown longer stays are more beneficial. Despite these mixed findings, the clear message in the literature indicates that the length of stay is not a good indication of treatment outcome when considered on its own. Regardless of the time spent in treatment, the environment to which a youth is discharged after leaving the residential setting is a more important indicator of the treatment outcome than the amount of time in the residential program (Bates et al., 1997; Baker et al., 1995; Hair, 2005; Lyons et al., 2009).

A number of studies have looked at how symptoms change over time during the course of residential treatment to identify the optimal length of stay, or the point at which the maximum symptom reduction is reached. Rather than specifying an optimal length of stay, research indicates the length of stay depends on a number of individual and environmental factors. For example, the severity of the child's condition, factors related to their family, community resources available, and intensity of residential treatment (Alberta Alcohol and Drug Abuse Commission). In spite of these findings, there are studies suggesting that short-term treatment can be effective.

Evidence for short-term treatment

Noftle et al. (2011) used the Conner's Global Index scale to measure parent perceptions of their child's response to residential treatment (children would go home on most weekends while in treatment). Results showed a drastic reduction in symptoms during the first six weeks of treatment, and showed a plateau in improvement at the 16th week of treatment. The authors concluded that most improvements were made during the first six weeks, and after the 16th week, no major changes were evident. In this study, the only significant findings were based on parent ratings, while teacher and staff ratings of the children's response to treatment using different measures were not significant.

Another study looked at the relationship between length of stay and treatment outcome and found that shorter length of stay was associated with a more favourable outcome (Hussey & Guo, 2002). Shorter length of stay was defined as less

than the median, which was *489 days*. It is important to note that in this study, children who were in treatment for shorter lengths of time also tended to present with less severe conditions at intake. In other words, children with less severe problems were discharged earlier than those with more severe conditions. This finding has been reported in other studies as well (e.g., Baker et al., 2005).

Lyons et al. (2009) evaluated the outcome trajectory of residential treatment compared to six other treatment modalities. Youth in residential treatment improved significantly within six months, and were able to be discharged to an intensive case management service (a 'step down' treatment). Importantly, children who did not have such a program available in their community required a longer stay.

Leitchman et al. (2001) studied 123 adolescents in an intensive residential treatment setting, in which the mean length of stay was 3.5 months. This study specifically tested whether a short term intensive program could be effective. It included sophisticated individual and group therapies resembling the intensive treatment that would be available at an inpatient facility. The program also emphasized family involvement and discharge planning. Adolescents showed significant improvement in 3 months, and these gains were maintained at a 12 month follow up. This study demonstrated that short term residential treatment can be effective. However, this particular residential program emphasized discharge planning and family involvement in treatment, and the majority of adolescents had suitable family environments to return to.

A final example of effective short term treatment comes from a study involving students with serious emotional disturbances placed in residential programs by school districts, for educational purposes (Hoagwood & Cunningham, 1992). In this study, positive outcomes were most likely to be achieved within 15 months, and students staying for shorter lengths of time were more likely to achieve positive outcomes (average length of stay was 18.2 months). The authors noted that there may have been a relationship between length of stay and availability of community services for post residential care. Programs with faster discharge rates may also have had more community based services to deliver lasting positive outcomes.

Therefore, there is research to support the idea that short term residential treatment leads to positive outcomes for youth. Leitchman (2008) summarizes this research by stating that short term residential treatment programs can be effective, but treatment must be administered in such a way that it is possible to continue the treatment in the community, and staff must be able to provide intensive, brief therapies in the residential setting. Lyons et al. (2009) explains that while short term stays are preferable to long term stays, the overall efficacy of a program cannot be understood based only on this. Thus, the availability of community services is very important to the possible efficacy of short term residential treatment.

Evidence for long-term treatment

There is also evidence to suggest that long-term treatment leads to positive outcomes. One study looked at adolescents in residential treatment who were dually-diagnosed with a mental illness and a substance abuse disorder, and compared the effects of short term and long term treatment (Brunette et al., 2001). During treatment, those in the long term program showed that they were more engaged in the treatment process. When examined six months after discharge, adolescents in the long term program were more likely to have achieved full remission from substance abuse, and less

likely to have experienced homelessness compared to those in the short term program. The average length of stay in the long term program was 634 days for those who achieved full recovery, compared to the short term program which was 66 days.

Another study examined the relative efficacy of community outpatient, short term residential and long term residential treatment programs for adolescent substance abuse (Dasinger et al. 2004). Researchers examined drug use at intake, three months, six months and twelve months. Results showed a decrease in drug use for *all* treatment modalities, with the most pronounced decrease occurring within the first three months of treatment. The long term residential programs had the greatest relative effect for decreasing drug use from intake to three months. A relapse effect was evident for adolescents in short term and long term residential treatment, but not for community outpatient treatment. However, drug use at intake was much lower for adolescents in community treatment compared to residential. While there was evidence of a relapse effect, adolescents in the long term residential program showed less of an increase in drug use after three months compared to those in short term residential treatment. Finally, even though an increase in drug use was evident after the initial decrease in the first three months, overall use was much lower compared to rates at intake.

Other evidence supporting longer stays in residential treatment is reflective of the severity of one's condition at intake and also during treatment. For example, Hussey & Guo (2002) noted that children who presented with more severe psychopathology remained in treatment longer than those with less severe symptoms. In another study, children who experienced a psychiatric crisis while in residential treatment stayed on average seven months longer than children who did not have such a crisis (Baker et al., 2005).

Therefore, there is also research suggesting long term residential treatment can be effective for children and youth with substance abuse problems and/or psychiatric problems.

Optimal length of stay

As evident from the previous discussions, short term and long term residential treatment programs have both demonstrated positive outcomes. Research does not show one definitive time frame is optimal for residential treatment. However, there are a number of clear themes that are evident. These are:

- Length of stay on its own is not a good predictor of a treatment program's overall efficacy, as it is not a child-based outcome (Lyons et al., 2009).
- Length of stay varies based on the type of program, the program's primary purpose, the participant's functioning at intake, their level of commitment, the intensity of treatment and extent to which the program can facilitate discharge planning (Alberta Alcohol and Drug Abuse Commission; Lyons et al., 2009).
- Many children and youth in residential programs, short and long term alike, demonstrate improvements in functioning while in the programs. However, improvement during treatment is not likely to be predictive of functioning after discharge (Bates et al., 1997).
- The optimal length of stay is, in part, a function of the availability and intensity of community services available to youth when transitioning back into the community (Bates et al., 1997; Lyons et al., 2009).
- Keeping in mind the importance of the environment at discharge, it appears that the most substantial improvements are made during the first few months in a residential program (Lyons et al., 2009; Noflte et al., 2011).

- If children and youth transition from residential treatment into a supportive environment, they are more likely to show positive long term outcomes. Similarly, family involvement in treatment is also predictive of positive outcomes (Walter & Petr, 2008).

5. Next steps and other resources

Knowing what works and receiving training on an evidence-informed practice or program is not sufficient to actually achieve the outcomes that previous evaluations indicate are possible. A program that has been shown to improve mental health outcomes for children and youth but that is poorly implemented will not achieve successful outcomes (Fixsen et al, 2005). In order for a program to be evidence-informed, it needs to be applied with fidelity to the design and it needs to be implemented using supportive "drivers" related to staff competency, organizational leadership and organizational capacity. These drivers include assessing and monitoring the outcomes of your practice using evaluation or performance measurement frameworks, which are particularly important when there is insufficient evidence in the literature to guide clinical decisions. Choosing a practice is an initial step toward implementation, but the implementation drivers are essential to ensure that the program reaches appropriate clients, that outcomes are successful and that clinical staff members are successful in their work.

The Ontario Centre of Excellence for Child and Youth Mental Health has a number of resources and services available to support agencies with implementation, evaluation, knowledge mobilization, youth engagement and family engagement. For more information, visit:

http://www.excellenceforchildandyouth.ca/what-we-do or check out the Centre's resource hub at http://www.excellenceforchildandyouth.ca/resource-hub.

For general mental health information, including links to resources for families:

http://www.ementalhealth.ca

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