

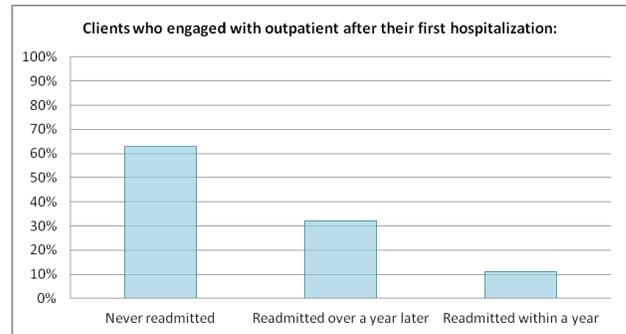
Does length of stay in psychiatric hospital admissions impact the likelihood of readmission for children?

Not as much as outpatient engagement does.

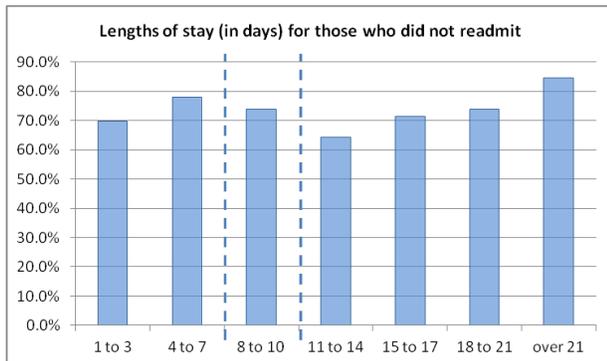
In a 5-year sample of 653 admissions by 489 youth clients¹, length of stay had no significant impact on readmission within a 12-month period. However, engaging with outpatient² reduced the predicted risk of rehospitalization by 51%.³⁴

63% of those who never readmitted had engaged in outpatient after their hospitalization. 32% of those who did readmit, but beyond the 12-month window, had also engaged in outpatient. Only 11% of those readmitted within a year had engaged with outpatient.

Furthermore, 35% of clients who had multiple admissions did not readmit after their first recorded outpatient engagement, breaking their hospitalization cycle.



Unfortunately, there was no good measure available to control for severity of diagnosis, which may affect our ability to assess length of stay the most—for example, a longer stay may appear to lead to higher rehospitalization rates because longer stays are given to more severe cases at higher risk of rehospitalization to begin with. However, a longer stay could also lead to better outcomes. These competing possibilities make insignificant results hardly surprising.⁵ While primary diagnosis groups were used as a control, it is an imperfect measure, given that symptom severity can vary greatly within these.



When examining lengths of stay for clients who did not readmit within a year, we see potential “cut points” emerge—points where patterns change. This may relate to the severity issue—that there are different ideal lengths of stay for lower-acuity vs. higher-acuity clients, and trying to determine that from one sample where both are represented in unknown proportions is difficult. For example, any client whose severity warrants as long as an 11 to 14 day stay may do better with a three-week stay; a lower-severity client’s ideal may fall in the 4 to 7 day range, rather than 1 to 3.

In conclusion: multiple variations of this model were run to retest the results, and length of stay was consistently either insignificant or representing a very small (<5%>) change in risk across the different iterations. However, outpatient engagement had a consistently significant and large-scale impact.⁶ While length of stay is inconclusive until severity can be also be analyzed and understood, it does appear that outpatient engagement is a strong strategy to reducing rehospitalization for many clients.

¹ Two-thirds of the clients had only one hospitalization; the other third had two or more during the five-year period.

² Engagement was defined as completing a service action plan at an outpatient agency.

³ Controls included age, race, gender, hospital, and primary diagnosis. Cox multiple-event survival analysis was used, and early insurance termination was accounted for.

⁴ The majority of patients were seen at Legacy Emanuel (422 admissions) and Providence Portland (201 admissions). Legacy’s rehospitalization rate was 27%, whereas Providence’s was 22%. This rate included rehospitalizations that occurred outside of these hospitals as well after discharge; i.e., a patient discharged at Legacy who was seen at Providence within the next 12 months would count toward Legacy’s readmission rate, as the originator of care.

⁵ CASII level of care scores were available for a small subset of clients. This group was analyzed as well, but due to the small size and nonrepresentativeness of the sample, results should be taken with caution. Each day in the hospital reduced the risk of readmission by 4%; outpatient decreased the risk by 70%. Increases in level of care increased the risk by an average of 20%, lending weight to the idea that severity is an important consideration.

⁶ The sample was also stratified by diagnosis group—these conclusions generally held there as well, with some exception. However, due to the small number of clients in some of the diagnosis groups, these results are not presented here.