Multnomah County

EVALUATION BRIEF:
Examining healthcare costs before and after engagement with the Multnomah Intensive Transition Team, 2017-2018

Introduction

This is a sequel to an earlier report examining M-ITT's impact on service connections and hospital admissions. In this analysis, we examined healthcare costs pre- and post-intervention to estimate the potential fiscal impact of the outcomes seen preiously. Results are only presented here if they were statistically significant, unless otherwise noted. A brief summary of the models and control variables used is at the end of this brief; for full details and further findings, see the full report.

How did M-ITT influence overall healthcare costs?

M-ITT connection was predicted to reduce all* health care costs--behavioral health treatment, primary care, acute care, and so forth--by an average of over $4,900 per client. However, clients who accessed any lower level of care treatment or supportive services** within 7 days of the first M-ITT encounter were predicted to **reduce total costs by nearly $7,300 per client** (versus $4,300 for clients who did not make that connection within 7 days).

*Pharmacy excluded, due to data limitations.

**Any mental health or substance use service that was not acute care or crisis response.

How did M-ITT influence acute care costs specifically?

Reductions were primarily accrued in acute care savings. M-ITT connection predicted reductions in acute care costs of over $7,700 per client, or **reduced by $11,800 per client** who had accessed any lower level of care treatment or supportive services within 7 days of the first M-ITT encounter (versus just over $6,600 for clients who did not make that connection within 7 days).

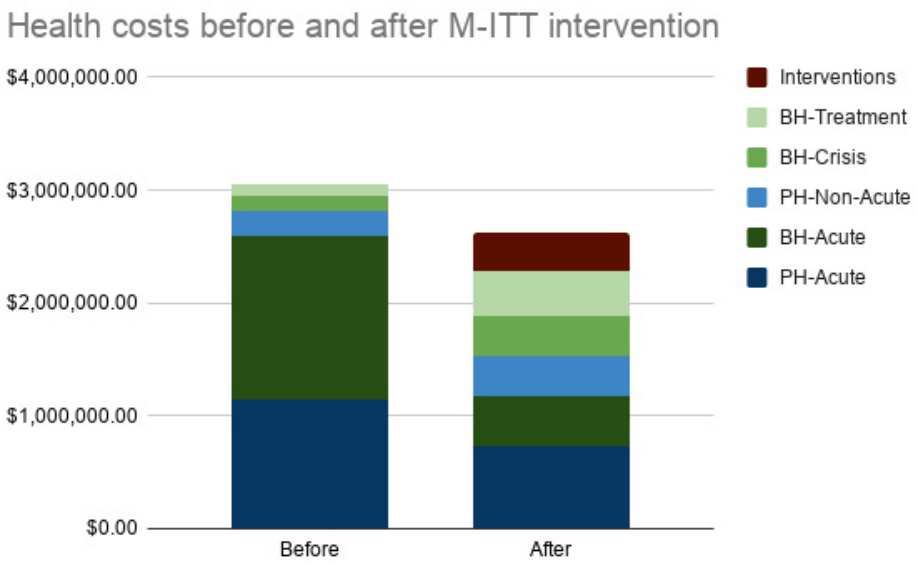
What's the total in "real" dollars saved?

The above estimated average per client cost reductions were the result of multivariate statistical analyses that sought to account for key demographics, SDOH, and comorbidities in order to isolate the relative impact of the interventions specifically. But it can also be helpful to have a sense of the actual total dollars, before and after.

In the six months prior to M-ITT's first client encounters for these 154 episodes of care, there was a combined total of $3,045,685 in healthcare expenditures. In the six months after, there was a combined total of $2,285,579, as well as $345,434 in short-term intervention costs (the costs of M-ITT, non-acute physical healthcare, and non-acute behavioral healthcare in the first 30 days after initial intervention).

Even taking into account the short- and long-term cost of intervention (e.g., long-term behavioral health treatment), total healthcare expenditures were **reduced by over $400,000--nearly 15%**. The savings at the acute care levels were far more substantial--from

$1,453,693 to $448,151 in behavioral health acute costs (a **69%** reduction), and from $1,138,004 to $728,795 in physical health acute costs (a **36%** reduction).



Behavioral health crisis intervention (e.g., M-ITT, walk-in clinic), behavioral health treatment, and non-acute physical healthcare (e.g., primary or specialist care, outside of inpatient or emergency room services) all increased. Considering that the goal of M-ITT is to connect high utilizers of acute care services with healthcare options that are expected to replace acute care utilization, this is not a particularly surpising result--we should reasonably expect this type of tradeoff. However, true to the theory behind the model, the cost of these longer-term services appears to be substantially outweighed by reduced costs at higher levels of care.

We also need to remember that this is a sample of 154 cases, selected by having at least six months of Medicaid coverage before and after meeting M-ITT. M-ITT served over three times as many in these two years. A more robust cost-benefit analysis should consider this, as well as fiscal outcomes in arenas outside healthcare--e.g., criminal justice or employment.

Notes: Results only included above if they met the statistical significance threshold ($p < .10$). Following is a brief overview of the models and variables used in this report. All data is from calendar years 2017 and 2018.

Change in costs: ordinary least squares regression model examined 154 clients who had Health Share coverage for at least 6 months before and 6 months after M-ITT intervention. The two primary variables of interest were M-ITT intervention and service connection within 7 days. Model controlled for age, sex, race/ethnicity, primary language, housing, disability, substance use history, history of SPMI, history of diabetes, and history of heart disease.*

*Five different chronic and acute physical health conditions were initially examined, but due to very low prevalence of three of them, they were omitted from the final analysis.

Costs were clustered in the following ways:

- Physical health acute care: all claims paid by the physical healthcare plans related to inpatient hospitalization, emergency department care, or psychiatric emergency services (PES).
- Behavioral health acute care: all claims paid by Multnomah County related to psychiatric inpatient hospitalization and subacute care.
- Other physical healthcare: anything not included in the physical acute category (primary care, specialist visits, etc.)
- Behavioral health crisis services: M-ITT, walk-in clinic, and so forth; short-term crisis services.
- Behavioral health treatment and other services: any non-acute and non-crisis service; both substance use and mental health treatment, case management, peer support, wraparound, and so forth.

Before and after: costs were divided into pre- and post- in two separate ways.

- For physical health and behavioral health acute care, pre-costs were all those that were incurred from 5 months before the first date M-ITT saw them until 1 month after, and post-costs were from 1 month after to 7 months after. This was to account for M-ITT meeting people who are still in an acute setting, for individuals who transfer through different acute care settings before final discharge, and other such scenarios.
- For behavioral health crisis services, behavioral health treatment, and non-acute physical healthcare costs, pre-costs were those that were incurred from six months before the first date M-ITT saw them until that first date, and post-costs were from 1 month after to 7 months after. Costs incurred during that first 30 days from first date seen were designated as a third category, “intervention costs”--the early costs of M-ITT, primary care engagement, behavioral health treatment engagement, and so forth. While intervention theoretically extends well beyond this early period, it accounts for the most immediate, and potentially most intense, efforts by M-ITT and any other providers, post-hospital.

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