



Addictions, mental health, and the ER:

A preliminary approach to exploring the connections between behavioral health and emergency healthcare utilization

Snapshot in time: 2015

Population: Multnomah County Health Share enrollees (168,574)

In 2015, 35,711 patients visited the emergency department 82,451 times.

How do we look at the impact of behavioral health?

By visits where substance use or mental health is noted at the time?

14.1% of visits mention substance use

19.2% mention mental health

5.9% mention both

By visits where the patient had at least one ED visit where substance use or mental health was noted in that year?

28.1% of visits are by patients who had at least one ED visit in 2015 that mentioned substance use

38.1% are by patients who had at least one visit that mentioned mental health

19.9% are by patients who fall into both groups

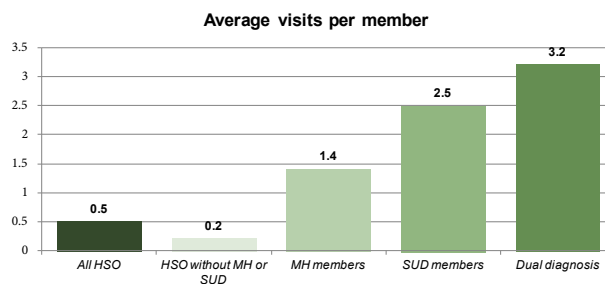
By visits where we know from other healthcare claims throughout the year that the patient has had an identified substance use or mental health diagnosis (substance use or mental health treatment, primary care, etc.)?

35.7% of visits are by patients who had at least one healthcare encounter in 2015 that mentioned substance use

52.4% are by patients who had at least one healthcare encounter that mentioned mental health

27.6% are by patients who fall into both groups

The third approach is called the population-wide approach, and what we will primarily use here. Not all emergency room visits by patients with substance use or mental health issues are necessarily related to those issues. However, consider the following: The average number of ED visits for all HSO members was 0.5, or one visit for every two members. It is important to remember that does not mean that every other member visits the emergency department each year; many members never visit, others visit frequently. For HSO members with mental health diagnoses (with or without substance use), the average is 1.4 visits per person. For those with substance use diagnoses (with or without mental health), the average is 2.5. And for those with both, 3.2. Comparatively, HSO members never identified as having a mental health or substance use diagnosis (in our available records) only average 0.2 visits per person, putting dually-diagnosed members at an average visit rate 16 times higher than those with no mental health or substance use. The stark differences illustrate that, while not all visits may be linked to these diagnoses, there is significant evidence of behavioral health being a major factor in emergency healthcare utilization.



Another way we can examine this is to look more at the distribution of visits to the emergency department, not just the average per person. As mentioned earlier, while the average amount of ED visits per HSO member is 0.5, the majority never visited the ED once. Thus, we next stratified the number of visits by all members:

79% of HSO members had 0 visits during 2015;

11.4% had 1 visit;

6.4% had 2 to 3 visits;

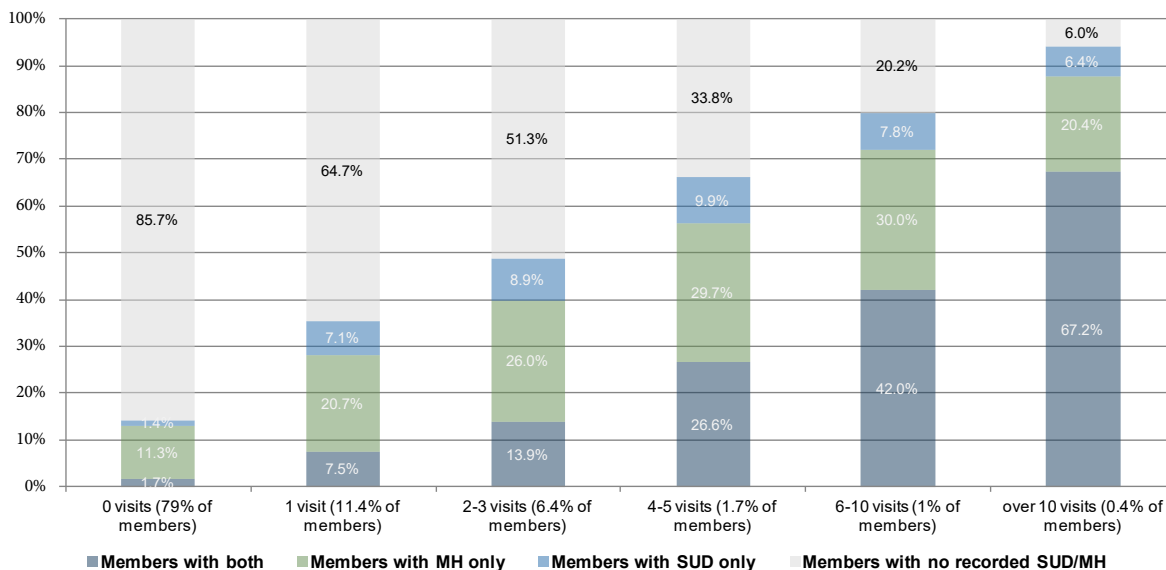
1.7% had 4 to 5 visits;

1% had 6 to 10 visits;

0.4% had over 10 visits.

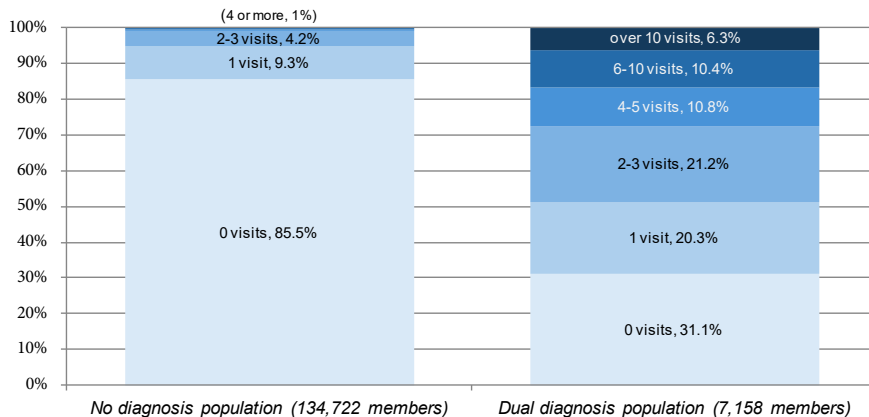
How do those without a diagnosed substance use or mental health disorder compare to those members who have one, or both, of those? As seen below, members with higher numbers of ED visits within the year disproportionately skew toward those with substance use diagnoses, mental health diagnoses, or both. For example, while those with both types of diagnoses comprise less than 2% of those who never visited the ED during the year, they are close to 70% of those who visited over 10 times, and almost every member in this category (94%) had at least one type of diagnosis.

Frequency of ED visits by HSO members, 2015



Comparison: total population with no MH/SUD vs. those with both

Or, alternatively, since our populations are very different in size, we can also compare the population of members with no mental health or substance use to those with either or both. If we compare HSO members with no recorded behavioral health diagnosis to those that have both types of diagnosis, we see a stark difference. While 31.1% of the dually-diagnosed members never visited the ED in 2015, over 25% had four or more visits. Comparatively, 85.5% of non-diagnosed members never visited the ED, and only 1% had 4 or more visits.



In conclusion:

These numbers are intended to comprise a foundation from which to further explore the intersections between emergency healthcare and behavioral health in the future: to evaluate the impact of different interventions, explore the prevalence of different diagnoses, assess what factors are significant in predicting ED visits, and so forth. When considering the different approaches we can use, it also opens conversations about the use of behavioral health screenings in emergency settings and the potential interplay between behavioral health and seemingly unrelated physical health diagnoses.

Methods: identified ED visits by relevant revenue code, place of service, and/or CPT code. Identified behavioral health diagnoses using ICD-9 (290-319) and ICD-10 (F01-F99) among all claims diagnosis fields, with the exclusion of nicotine. Some diagnoses outside these ranges may also be relevant, however, and should be considered in the future. Observation care and inpatient hospitalization are omitted, except where they are tied to an emergency department code.

Limitations: results are not stratified by age--substance use is rare under age 12, and true percentages of visits should omit young children. Due to 42 CFR (2), we (Multnomah County) do not know every person who has had a substance use-related encounter with Health Share, prior to 2016's benefit transition; the population may be even larger. This approach also does not take into account how many people have not ever been formally diagnosed. Some small discrepancies in HSO eligibility files may affect the total denominator in the population approach. Because this approach counted days, if someone visited two EDs in one day, it would count as one visit; conversely, if someone received services in the same ED two days in a row *without* leaving and they had flagged codes billed separately on both days, they may count as two visits. It is hoped that these scenarios balance one another, but further investigation would be helpful.