

Muskegon County Youth and Young Adult Inpatient Psychiatric Hospitalization and Connection to HealthWest Services

June 2024

The MYalliance Evaluation Team has identified inpatient psychiatric hospitalizations as an indicator of community functioning based on the hypothesis that increased access to other behavioral health services in the community will lead to a decrease in these types of hospitalizations. In 2018, MYalliance supported the implementation of mobile response stabilization services (MRSS), which it anticipated would divert residents experiencing behavioral health crises from emergency department visits.

Introduction

HealthWest provided Public Sector Consultants (PSC) data on all inpatient psychiatric hospitalizations in Muskegon County among youth and young adults 21 years of age or younger between January 1, 2015, and December 30, 2023. In addition, HealthWest provided PSC data on all youth and young adults enrolled in at least one HealthWest program during that nine-year period. PSC analyzed the hospitalization and program enrollment data to assess the number and rate of hospitalizations among youth and young adults served by HealthWest, the length of hospital stays, and the number of youth and young adults enrolled in a HealthWest program before and/or after their inpatient hospitalization admission date.

HealthWest also provided PSC data on services delivered in that same time period. These data included crisis intervention services provided, dates for the last service received prior to hospitalization, and dates for the first service received after hospital discharge. PSC analyzed this information to assess the annual number of crisis intervention services provided and the youths' and young adults' connection to services before and after inpatient hospitalization.

Additionally, HealthWest provided PSC data on MRSS as a short-term indicator of community functioning within the Muskegon County system of care. MRSS is designed to meet people when and where they are experiencing a behavioral health crisis (e.g., in their home or in the community). As MRSS use and knowledge of its availability increase, preventable home placement disruptions and emergency department visits should decrease.

Inpatient Psychiatric Hospitalization Events

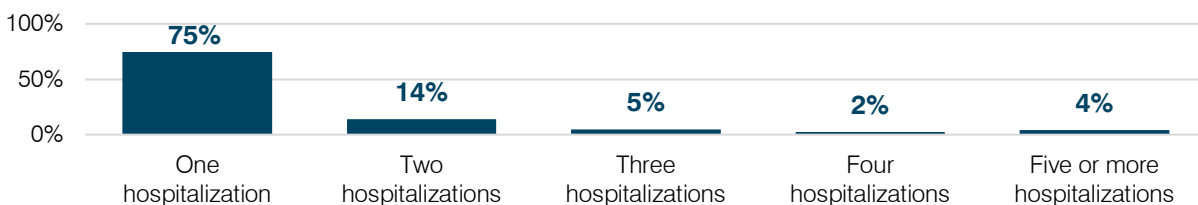
Between 2015 and 2023, there were 9,271 HealthWest program enrollees, up from 8,468 between 2015 and 2022. Of those program enrollees, 800 individuals were hospitalized at least once for psychiatric treatment between January 1, 2015, and December 31, 2023. There were 1,227 separate hospitalizations

among this group of youth and young adults. Enrollees with at least one hospitalization ranged in age from six to 21 years old.

The number of hospitalizations per individual ranged from one to 12. Of the youth and young adults who experienced an inpatient psychiatric hospitalization between 2015 and 2023, three-quarters (75 percent) were hospitalized once, 14 percent were hospitalized twice, and 11 percent were hospitalized three or more times (Exhibit 1).

Of the youth and young adults who experienced an inpatient psychiatric hospitalization between 2015 and 2023, three-quarters (75 percent) were hospitalized once.

EXHIBIT 1. Inpatient Psychiatric Hospitalizations per Individual Youth and Young Adult, 2015–2023



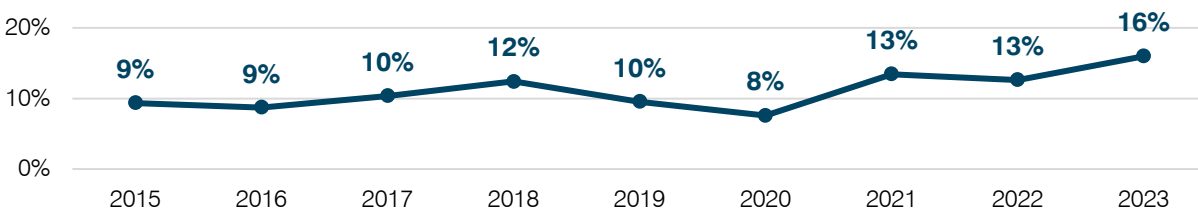
N = 800

Source: Data compiled by HealthWest and analyzed by PSC

The largest number of youth and young adult hospitalizations occurred in 2023, representing 16 percent of all youth and young adult hospitalizations between 2015 and 2023 (Exhibit 2).

The largest number of youth and young adult hospitalizations occurred in 2023, representing 16 percent of all youth and young adult hospitalizations between 2015 and 2023.

EXHIBIT 2. Percentage of Inpatient Psychiatric Hospitalizations by Year, 2015–2023

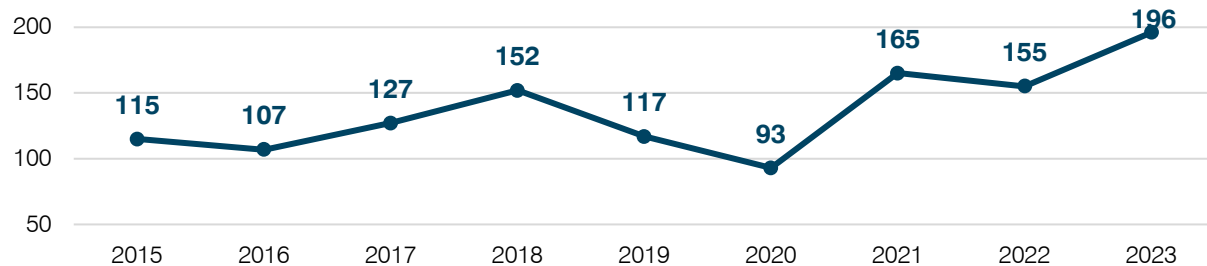


N = 1,227

Source: Data compiled by HealthWest and analyzed by PSC

The number of inpatient psychiatric hospitalizations ranged from a low of 93 in 2020 to a high of 196 in 2023. Between 2015 and 2023, the number of hospitalizations increased 70 percent from 115 to 196. The average number of annual hospitalizations was 136 across the nine years (Exhibit 3).

EXHIBIT 3. Number of Inpatient Psychiatric Hospitalizations by Year



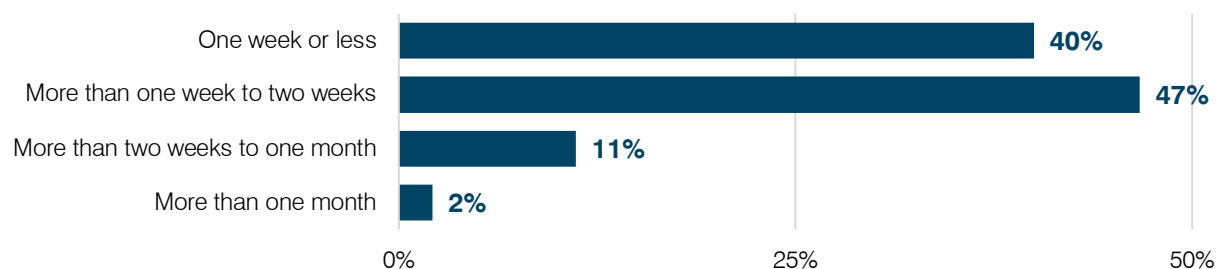
Source: Data compiled by HealthWest and analyzed by PSC

Length of Hospital Stays

From 2015 to 2023, the length of inpatient psychiatric hospitalization stays for all youth and young adults HealthWest served ranged from one day to more than ten months (315 days), with an average stay of ten days. Forty percent of hospitalizations lasted one week or less, and 47 percent lasted eight to 14 days (Exhibit 4).

Forty percent of hospitalizations lasted one week or less, and 47 percent lasted eight to 14 days.

EXHIBIT 4. Length of Hospital Stays for All HealthWest Program Enrollees, 2015–2023



N = 1,227

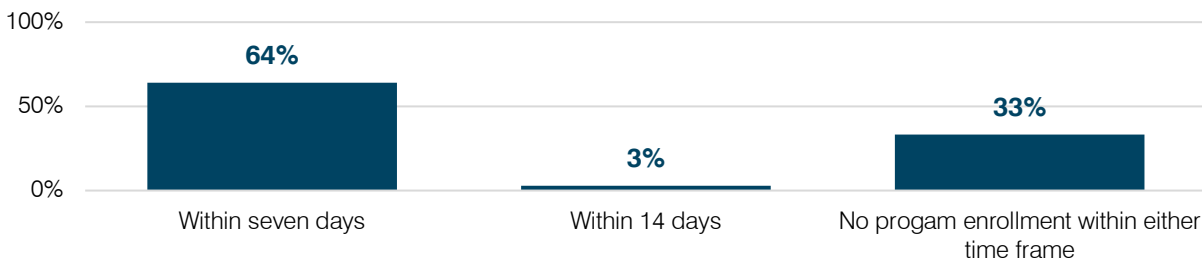
Source: Data compiled by HealthWest and analyzed by PSC

HealthWest Program Enrollment in Relation to Hospitalization

Nearly two-thirds (64 percent) of youth and young adult hospitalizations were among those who were enrolled in a HealthWest program while hospitalized or within seven days of hospital discharge. An additional 3 percent were enrolled within 14 days of hospital discharge (Exhibit 5).

Nearly two-thirds of youth and young adult hospitalizations were among those who were enrolled in a HealthWest program while hospitalized or within seven days of hospital discharge.

EXHIBIT 5. Percentage of Hospitalizations with HealthWest Program Enrollment During Hospitalization or Within Seven and 14 Days of Hospital Discharge, 2015–2023



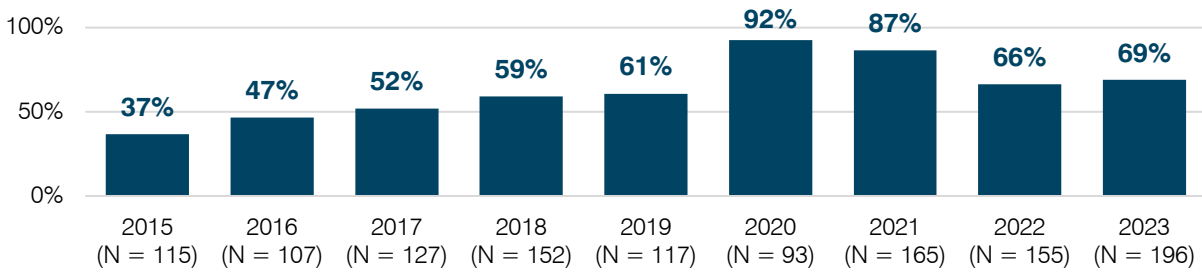
N = 1,227

Source: Data compiled by HealthWest and analyzed by PSC

Note: Data were analyzed with the assumption that no discharge date meant that the youth or young adult remained enrolled in a HealthWest program. The number of days following hospitalization was calculated from the hospital discharge date.

In 2015, only 37 percent of hospitalizations were followed by an enrollment in a HealthWest program within seven days. That percentage increased to around half each year for 2016–2017. In 2018 and 2019, around 60 percent of hospitalizations were among youth and young adults enrolled in a program in the seven days following discharge. In 2020, nearly all (92 percent) of hospitalizations were followed by program enrollment within seven days. This percentage decreased to 87 percent in 2021 and then to 66 percent in 2022. The percentage increases slightly between 2022 and 2023—up to 69 percent (Exhibit 6).

EXHIBIT 6. Percentage of Hospitalizations with Program Enrollment within the Seven Days Following Hospitalization, by Year



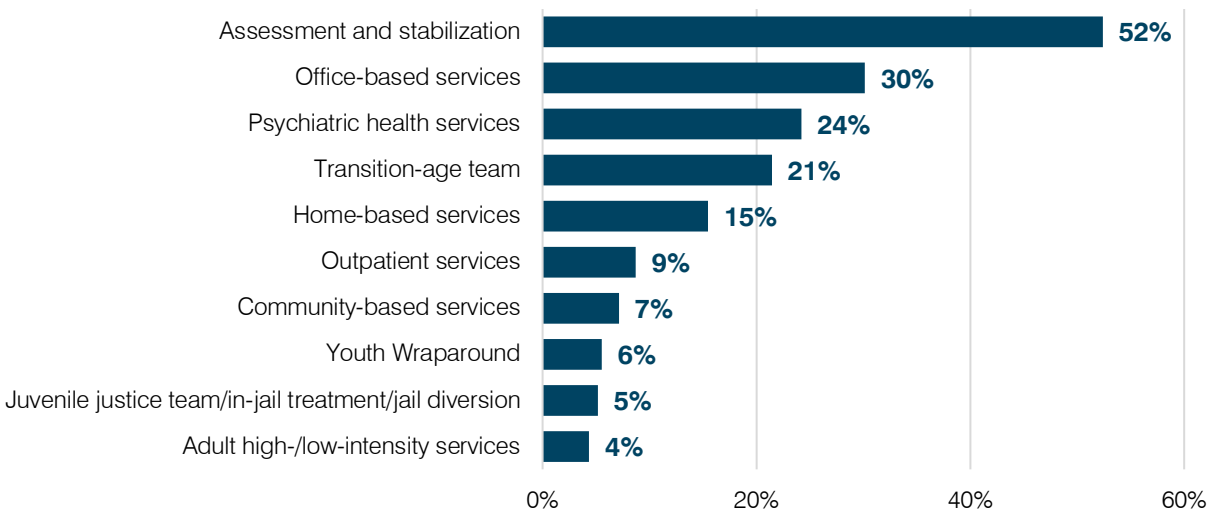
N varies by year.

Source: Data compiled by HealthWest and analyzed by PSC

Note: Hospital admission date was used to determine the year in which the hospitalization took place.

Two hundred and fifty-two individuals were newly enrolled in a HealthWest program following their first inpatient psychiatric hospitalizations between 2015 and 2023. Of the program enrollments that occurred after a hospitalization, more than half were for assessment and stabilization services (52 percent), nearly one-third for office-based services (30 percent), and nearly a quarter were for psychiatric health services (24 percent) (Exhibit 7).

EXHIBIT 7. Top Ten Program Enrollment Types Following Hospital Discharge, 2015–2023



N = 252

Source: Data compiled by HealthWest and analyzed by PSC

Note: Percentages total more than 100 because youth and young adults may be enrolled in more than one program.

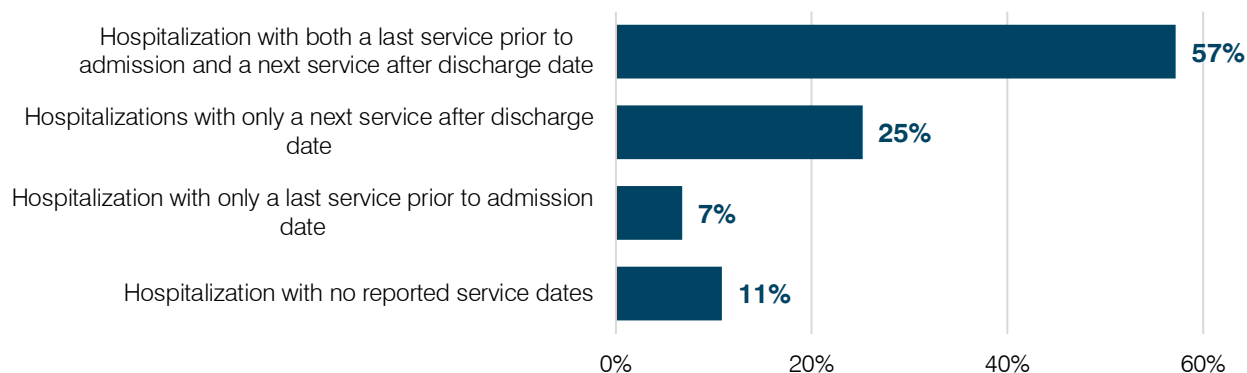
Connecting Patients with HealthWest Services

In addition to program enrollment data, HealthWest collects information on the date of youths' and young adults' last service prior to hospitalization and first service after hospital discharge.¹

Nearly 60 percent of inpatient hospitalizations were both preceded and followed by a HealthWest service (57 percent), but one-quarter only received a service following their hospitalization and not before (Exhibit 8).

Nearly 60 of inpatient hospitalizations were both preceded and followed by a HealthWest service, but one-quarter only received a service following their hospitalization and not before.

EXHIBIT 8. Youth and Young Adults Receiving HealthWest Services Prior to and After Hospital Admission



N = 1,227

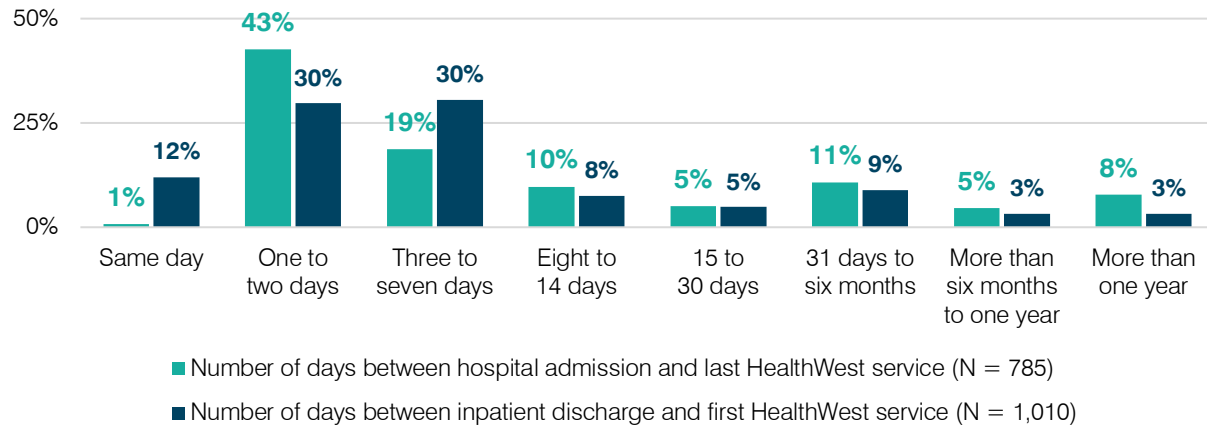
Source: Data compiled by HealthWest and analyzed by PSC

Of inpatient psychiatric hospitalizations that were preceded by a HealthWest service, over 60 percent occurred within seven days before the patient was admitted. Of hospitalizations that were followed by a service, nearly three-quarters (72 percent) were followed by a HealthWest service within seven days of hospital discharge (Exhibit 9).

Nearly three-quarters (72 percent) were followed by a HealthWest service within seven days of hospital discharge.

¹ The service date data had a few inconsistencies with the enrollment data provided by HealthWest; some program enrollees did not have a corresponding last service date prior to hospitalization and/or first service date after discharge, and some youth and young adults who did have these service dates did not have any corresponding program enrollment information. These two data sets are thus analyzed separately in this report.

EXHIBIT 9. Number of Days Between Hospital Admission and Last HealthWest Service and Between Inpatient Discharge and First HealthWest Service



N varies by data point.

Source: Data compiled by HealthWest and analyzed by PSC

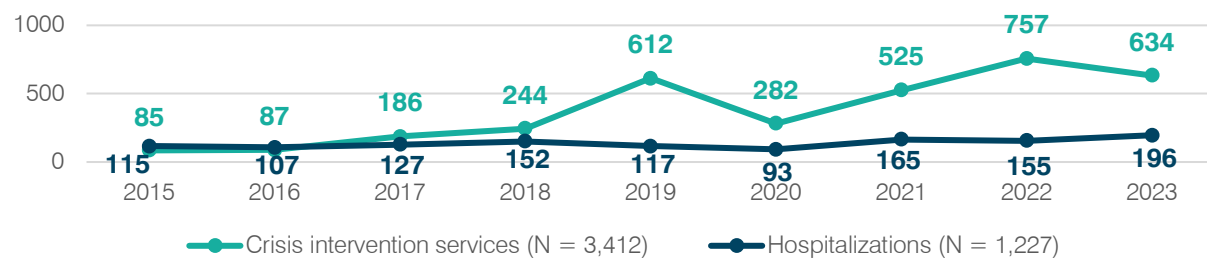
Note: Items may total more than 100 percent due to rounding.

Crisis Intervention Services

HealthWest provided over 3,400 crisis intervention services between 2015 and 2023. More than half (56 percent) of these services occurred between 2021 and 2023, representing over 1,900 individual crisis service events (Exhibit 10).

More than half of these services occurred between 2021 and 2023, representing over 1,900 individual crisis service events.

EXHIBIT 10. Inpatient Psychiatric Hospitalizations and Crisis Intervention Services Provided per Year, 2015–2023



Source: Data compiled by HealthWest and analyzed by PSC

Note: The number of crisis intervention services in 2022 was originally over-reported because the information provided included billing code T1023. Services with that code have been removed from the 2022 number and the corrected number is shown in this report.

There is no discernible relationship between the use of crisis services and hospitalizations currently, as the percentage of hospitalizations has remained relatively steady over time, and while crisis intervention services have increased considerably in the past few years (Exhibit 10).

There is no discernible relationship between the use of crisis services and hospitalizations currently.

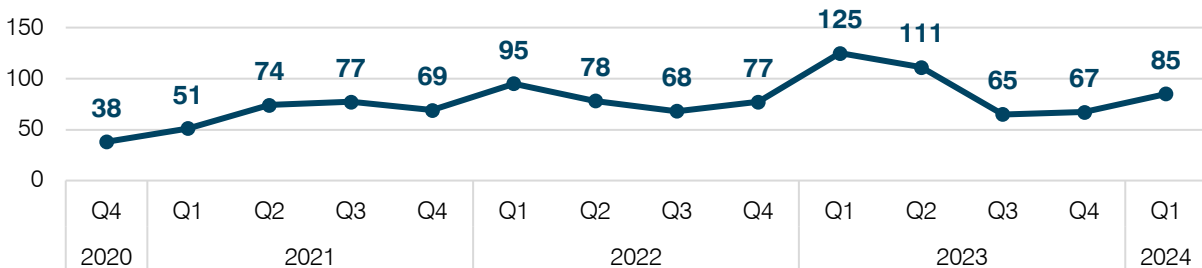
Mobile Response and Stabilization

Since October 2020, HealthWest has monitored the number of calls received each month that result in MRSS crisis team deployments and the response time for each deployment. These calls are a subset of HealthWest’s crisis intervention services. This report presents quarterly MRSS deployment data from October 2020 to March 2024.

A total of 1,080 MRSS team deployments occurred between October 2020 and March 2024, for an average of 77 per quarter. The number of deployments each quarter ranged from 38 in the fourth quarter of 2020 to 125 in the first quarter of 2023 (Exhibit 11).

A total of 1,080 MRSS team deployments occurred between October 2020 and March 2024, for an average of 77 per quarter.

EXHIBIT 11. Number of MRSS Deployments, by Quarter



Source: Data collected by HealthWest and analyzed by PSC

Timely Response

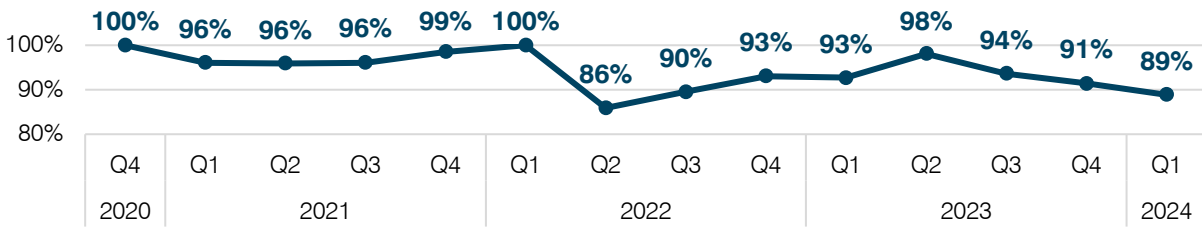
HealthWest seeks to deploy MRSS teams in a timely manner in alignment with state guidelines. Data collected between October 2020 and March 2022 defines a timely manner as one hour in urban areas and two hours in rural areas. In April 2022, HealthWest began defining a “timely manner” as one hour because Muskegon County is categorized as a metropolitan statistical area by the U.S. Census Bureau.² Of the calls that resulted in deployment, at least 86 percent of MRSS team quarterly response times met those guidelines each quarter (Exhibit 12). In the fourth quarter of 2020 and the first quarter of 2022, 100

² U.S. Department of Health and Human Services Guidance Portal. June 25, 2020. “Defining Rural Population.” *U.S. Department of Health and Human Services: Guidance Portal*. [https://www.hhs.gov/guidance/document/defining-rural-population#:~:text=A%20Metro%20area%20contains%20a,\(MSA\)%20are%20considered%20rural](https://www.hhs.gov/guidance/document/defining-rural-population#:~:text=A%20Metro%20area%20contains%20a,(MSA)%20are%20considered%20rural)

percent of response times met the required time frame. Except for the second quarter of 2023, a smaller percentage of response times met the required time frame in the last eight quarters than in any of the previous quarters; this change coincides with the “timely manner” redefinition.

Of the calls that resulted in deployment, at least 86 percent of MRSS team quarterly response times met those guidelines.

EXHIBIT 12. Percentage of Deployment Arrivals Occurring within the Required Time Frame

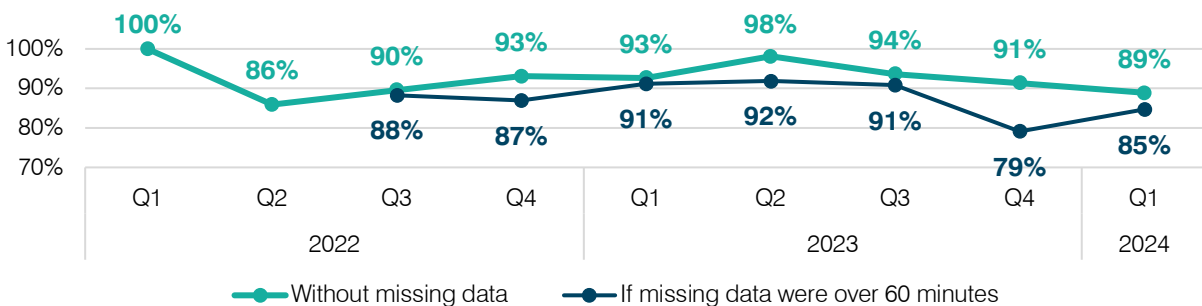


Source: Data collected by HealthWest and analyzed by PSC

Note: The N varied by quarter and excludes 30 total entries with missing “minutes to respond” data.

Between August 2022 and March 2024, 30 entries were missing “minutes to respond” data: one in the third quarter of 2022, five in the fourth quarter of 2022, two in the first quarter of 2023, seven in the second quarter of 2023, two in the third quarter of 2023, nine in the fourth quarter of 2023, and four in the first quarter of 2024. If all missing data were over 60 minutes, the percentage for each quarter would drop (Exhibit 13).

EXHIBIT 13. Percentage of Deployment Arrivals Occurring within the Required Time Frame, with Missing Data Shown at Over 60 Minutes



Source: Data collected by HealthWest and analyzed by PSC

Note: The N varied by quarter