MOUD Performance Measure Reports:

A guide for developing and implementing MOUD treatment reports to evaluate treatment quality

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Resource Description

The Medication for Opioid Use Disorder (MOUD) performance measurement guide can be used by healthcare providers for quality monitoring or improvement activities for programs treating individuals with an OUD. The guide includes:

1. **An overview of three key performance metrics for MOUD, i.e., treatment initiation, engagement, and retention.**
2. **Data analyses from 18 Office-based Opioid Treatment (OBOT) and Opioid Treatment (OTP) programs within the PA MOUD Expansion Project (PA MOUD) using the three quality metrics.**
3. **Detailed descriptions of how to develop the performance metrics, with electronic health record (EHR) data elements.**

Introduction

Implementing MOUD as an evidence-based practice in treating opioid use disorder (OUD) requires standardized quality of care monitoring and measurement. Essential quality measures for MOUD, as identified in the literature, include treatment engagement, MOUD initiation, MOUD retention, and remission.[1-3] MOUD providers maintain patient treatment data in their electronic health systems; however, few develop or use standardized quality measures.[3] Additionally, national standardized OUD treatment measures are scarce, with existing measures limited to managed care reporting measures based on claims. PA MOUD operationalized clinical quality guidelines and evidence-based research to create standardized MOUD treatment performance measures using electronic health record (EHR) data. Measures included:

- treatment initiation.
- engagement.
- treatment retention.

The project team used these three measures to evaluate MOUD treatment quality and determine performance measure benchmarks among a cohort of participating MOUD providers.

PA MOUD recruited practice sites across urban, suburban, and rural locations in Pennsylvania. Each practice was asked to sign a Data Use Agreement (DUA) to allow EHR data-sharing between the University of Pittsburgh and the practice or health system. The project developed a template of common EHR data fields to specify MOUD treatment measure components and extracted a limited dataset of patient-level MOUD treatment data in collaboration with the site's clinical and information technology staff (see Appendix A, Common EHR Data Fields, and Appendix B, Steps for Implementing EHR-based MOUD Treatment Performance Measure Reporting). Medication prescription dates were used to measure MOUD treatment initiation, engagement, and length of treatment. Reported measures included the percent of buprenorphine prescriptions versus naltrexone, patient engagement in treatment the month following initiation by medication type, percent of patients retained at 90 and 180 days by medication type regardless of the time between prescriptions, and length of buprenorphine treatment based on episodes of care without gaps in prescribing greater than 60 days (see Appendix C, Performance Measure Definitions). We developed and implemented these MOUD performance measures into a quarterly report anonymously comparing performance across sites (see Appendix D, PA MOUD Quarterly KPI Dashboard).

Sample:
Treatment setting types included primary care (n = 12), OB/GYN (n = 1), behavioral health (n = 1), single county authorities (n = 1), and outpatient opioid treatment centers (n = 3). Performance measure results were grouped into nine practice sites based on the healthcare delivery system or geographic location. Two sites prescribed only buprenorphine or naltrexone, respectively. EHR data were collected between January 2021 and October 2022 and included 5,847 unique patients.

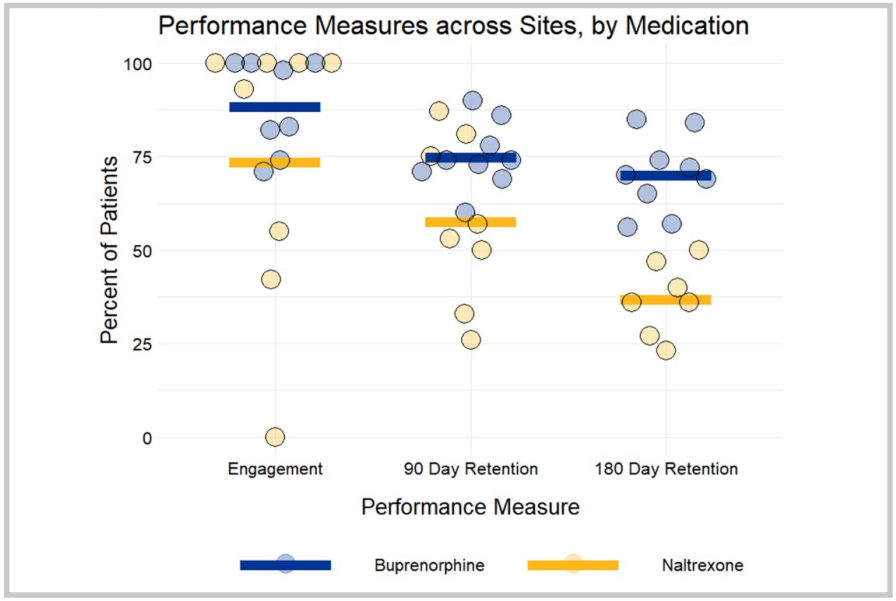
† *A single county authority is an organization designated by the Pennsylvania Department of Drug and Alcohol Programs (DDAP) to administer county substance use disorder (SUD) treatment programs.*

Results

Buprenorphine was the most prescribed medication, accounting for 95% of all patient prescriptions.

1. **Treatment initiation:**
   5,847 patients initiated treatment across the 18 MOUD Programs.
2. **Engagement:**
   The percentage of new patients engaging the month following their first appointment was 73% for buprenorphine.
3. **Retention in treatment:**
   The percentage of patients retained at 90 days was 65% for buprenorphine, with programs ranging from 60% to 90% (mean = 75%; SD = 9%). The percentage of patients retained at 180 days was 60% for buprenorphine, with programs ranging from 56% to 85% (mean = 71%; SD = 10%).

FIGURE 1



The average treatment length by episodes of buprenorphine treatment was 278 days, ranging from 157 days to 455 days.

Table 1. Average Buprenorphine Treatment Length by Site

Sites	A	B	C	D	E	F	G	H	I
Mean	256	273	455	220	424	157	338	348	343
% of N	67%	12%	6%	4%	3%	2%	2%	1%	0.4%

Conclusions & Discussion

Developing widely used quality measures for treating OUD is essential to improving access to quality MOUD treatment.

PA MOUD developed and used standardized MOUD performance measures to compare patient engagement and retention across nine health systems in Pennsylvania, providing a basis for subsequent continuous quality improvement.

The combined site performance measure results were weighted toward the practice site with the most patients (n = 3,920), a group of outpatient opioid treatment centers. Future analyses could be enhanced by comparing performance measures to similar treatment settings because setting types can have unique patient, provider, and system-level factors influencing treatment outcomes. For example, primary care providers may be more likely to maintain patients in treatment longer once they are stabilized because patients can receive all their care from one provider.

Lessons Learned

- Sufficient information system resources are needed to obtain data from EHRs and create reports.
- The process for completing DUAs and establishing data sharing is sometimes lengthy. Establishing resource needs and expectations upfront helps ensure practices are capable of participating.
- When comparing data across health systems, report both individual and site-level patient trends. Moreover, report or account for the variations in patient populations across different sites.
- Implement measure definitions and data visualizations to maximize meaningful interpretation. Our project learned that statistical modeling measures were difficult for report users to understand.

Moving Forward

The Role of MOUD Treatment Performance Monitoring in Policy and Practice

Measuring providers' MOUD treatment outcomes is important for ensuring individuals with OUD receive high-quality care using the most effective treatment. Specifically, monitoring provider performance of MOUD treatment initiation and engagement in ongoing treatment retention can prevent poor treatment outcomes, such as opioid-related mortality.

Payers and health systems who implement MOUD treatment performance measure reports can leverage these tools to:

- Identify access or quality issues along the continuum of MOUD treatment for improvement and subsequent intervention.
- Compare performance across providers or systems to measure quality.
- Develop payment or reward models for providers who demonstrate quality MOUD treatment.
- Learn effective MOUD treatment strategies from providers with high-performing MOUD treatment outcomes.

Correspondence

Providers and payers interested in learning more about the process for implementing EHR-based data reports can reach out to Katie Wooten, PA MOUD Senior Program Implementation Specialist (kew180@pitt.edu) and Dylan Pieper, Senior Data Scientist (DJP119@pitt.edu).

Acknowledgment

Research is supported by the Pennsylvania Department of Drug and Alcohol Programs (DDAP) under award # 418516.

References

1 *Johnson K, Hills H, Ma J, Brown CH, McGovern M. Treatment for opioid use disorder in the Florida Medicaid population: Using a cascade of care model to evaluate quality. The American journal of drug and alcohol abuse. 2021 Mar 4;47(2):220-8.*

2 *Martin SA, Chiodo LM, Wilson A. Retention in care as a quality measure for opioid use disorder. Substance Abuse. 2019 Oct 2;40(4):453-8.*

3 *Williams AR, Nunes EV, Bisaga A, Pincus HA, Johnson KA, Campbell AN, Remien RH, Crystal S, Friedmann PD, Levin FR, Olfson M. Developing an opioid use disorder treatment cascade: A review of quality measures. Journal of substance abuse treatment. 2018 Aug 1;91:57-68.*

APPENDIX A: Common EHR Data Fields

These tables include data fields commonly available in most electronic health records and diagnosis codes used in the treatment of opioid use disorder (OUD). Use these to guide data collection for report development.

Table	Field	Description
patient	patient_id	Unique patient identifier. Must be available across all tables
patient	race	Patient race
patient	ethnic	Patient ethnicity
patient	pcp_specified	Patient primary care provider
encounter	patient_id	Unique patient identifier. Must be available across all tables
encounter	enc_id	Unique encounter ID
encounter	enc_date	Encounter date
encounter	provider	Name of provider administering encounter
encounter	status	Encounter status (Attended, No Show, Cancelled, Rescheduled)
encounter	type	Encounter type (Refill, procedure, telehealth, etc.)
encounter	diag_name	ICD diagnosis name
encounter	diag_code	ICD diagnosis code
encounter	provider_type	Provider type
encounter	provider_dept	Provider department
lab	patient_id	Unique patient identifier. Must be available across all tables
lab	order_date	Lab test order date
lab	description	Lab test description
lab	result_date	Lab test result date
lab	reference	Reference range
lab	unit	Unit of measure for lab result value
lab	value	Lab result value
lab	status	Lab test status
lab	result_flag	Lab result flag
lab	result_ abnormal	Unexpected lab test result (Y/N)
lab	lab_id	Lab ID
lab	provider	Provider ordering lab test

Table	Field	Description
medication	patient_id	Unique patient identifier. Must be available across all tables
medication	provider	Authorizing provider
medication	name	Medication name
medication	start_date	Medication prescription start date
medication	end_date	Medication prescription end date
medication	enc_id	Encounter ID associated with medication
medication	refills	Refills authorized
medication	route	Medication route of administration
medication	strength	Medication dosage
medication	quantity	Number of medication units
medication	quantity_unit	Unit of measure for medication quantity
medication	form	Medication form (tablet, capsule, etc.)
medication	doses	Number of medication doses prescribed
medication	pharma_class	Medication pharmaceutical classification
medication	frequency	Frequency of medication administration
medication	dose_unit	Unit of measure for medication dosage
medication	days_supply	Number of days supplied in prescription
medication	type	Prescription type (Prescribed, refilled, discontinued)
billing	patient_id	Unique patient identifier. Must be available across all tables
billing	appt_date	Appointment date
billing	provider	Patient provider
billing	enc_id	Encounter ID associated with billable service
billing	diag_code	Patient diagnosis code
billing	diag_description	Patient diagnosis description
billing	proc_code	Procedure code
billing	proc_ description	Procedure description

APPENDIX A: Common EHR Data Fields *(continued)*

These tables include data fields commonly available in most electronic health records and diagnosis codes used in the treatment of opioid use disorder (OUD). Use these to guide data collection for report development.

ICD-10 Code	Code Description
F11.10	Opioid abuse, uncomplicated
F11.120	Opioid abuse with intoxication, uncomplicated
F11.121	Opioid abuse with intoxication, delirium
F11.122	Opioid abuse with intoxication, with perceptual disturbance
F11.129	Opioid abuse with intoxication, unspecified
F11.14	Opioid abuse with opioid-induced mood disorder
F11.150	Opioid abuse with opioid-induced psychotic disorder, with delusions
F11.151	Opioid abuse with opioid-induced psychotic disorder, with hallucinations
F11.159	Opioid abuse with opioid-induced psychotic disorder, unspecified
F11.181	Opioid abuse with opioid-induced sexual dysfunction
F11.182	Opioid abuse with opioid-induced sleep disorder
F11.188	Opioid abuse with other opioid-induced disorder
F11.19	Opioid abuse with unspecified opioid-induced disorder
F11.20	Opioid dependence, uncomplicated
F11.21	Opioid dependence, in remission
F11.220	Opioid dependence with intoxication, uncomplicated
F11.221	Opioid dependence with intoxication, delirium
F11.222	Opioid dependence with intoxication, with perceptual disturbance
F11.229	Opioid dependence with intoxication, unspecified
F11.23	Opioid dependence with withdrawal
F11.24	Opioid dependence with opioid-induced mood disorder
F11.250	Opioid dependence with opioid-induced psychotic disorder, with delusions

ICD-10 Code	Code Description
F11.251	Opioid dependence with opioid-induced psychotic disorder, with hallucinations
F11.259	Opioid dependence with opioid-induced psychotic disorder, unspecified
F11.281	Opioid dependence with opioid-induced sexual dysfunction
F11.282	Opioid dependence with opioid-induced sleep disorder
F11.288	Opioid dependence with other opioid-induced disorder
F11.29	Opioid dependence with unspecified opioid-induced disorder
F11.90	Opioid use, unspecified, uncomplicated
F11.920	Opioid use, unspecified with intoxication, uncomplicated
F11.921	Opioid use, unspecified with intoxication delirium
F11.922	Opioid use, unspecified with intoxication, with perceptual disturbance
F11.929	Opioid use, unspecified with intoxication, unspecified
F11.93	Opioid use, unspecified, with withdrawal
F11.94	Opioid use, unspecified, with opioid-induced mood disorder
F11.950	Opioid use, unspecified with opioid-induced psychotic disorder, with delusions
F11.951	Opioid use, unspecified with opioid-induced psychotic disorder, with hallucinations
F11.959	Opioid use, unspecified with opioid-induced psychotic disorder, unspecified
F11.981	Opioid use, unspecified with opioid-induced sexual dysfunction
F11.982	Opioid use, unspecified with opioid-induced sleep disorder
F11.988	Opioid use, unspecified with other opioid-induced disorder
F11.99	Opioid use, unspecified, with unspecified opioid-induced disorder

APPENDIX B: Steps for Implementing EHR-based MOUD Treatment Performance Measure Reporting

This brief protocol outlines the resources and operations involved with implementing MOUD treatment reporting to compare MOUD treatment quality across different service delivery systems and provider offices. For successful implementation, the following resources are recommended.

- **Executed data sharing agreement or business associates agreement.**
- **Organized secure file transfer platforms, such as SharePoint, with restricted access for treatment provider staff to upload data exports.**
- **Staffing with expertise in business intelligence and/or data analytics who can pull data files for export and/or produce reports.**

STAGE 1: Planning

The planning stage focuses on identifying your organization's reporting needs and goals. Some MOUD treatment performance measures may be applicable in some treatment settings and not others. Including clinical leaders during the planning stage will support your organization in selecting the best measures for evaluating and improving MOUD treatment quality. It is also recommended that clinicians familiar with the EHR infrastructure be included to advise on what data are captured in the EHR.

1. Review possible MOUD treatment measures and report template (see MOUD Treatment Performance Measure Definitions and sample MOUD Key Performance Indicator report).
2. Identify your organization's MOUD treatment goals.
3. Assess what measures are appropriate for your healthcare setting. Review clinical guidelines to define measures not included in this resource.
4. Assess your organization's capability to report different EHR data.

STAGE 2: Recruitment

This stage applies to organizations developing external reports. These steps are not applicable if existing data-sharing agreements are in place or if an organization wants to develop reports for internal use.

1. Provider agrees to share data and to sign a Data Use Agreement (DUA).
2. Provider confirms they have internal resources to abstract EHR data into a file and submit it monthly (see Appendix A, Common EHR Data Fields).

Note: Send data file template to information management/systems team or department to review and determine feasibility for submission.

(*continued*)

STAGE 3: Testing

3. An EHR test file is created and shared with the programmer/analyst.

Note: file must be shared securely if working with an external group.

4. Data analyst develops data cleaning and harmonization script to standardize field names and types across all reports and ensures correct structure and format.

5. Data analyst merges data across all organizations/sites.

    a. Create an "output" folder in your project files with a "site-specific" subfolder.

    b. Write all the cleaned site data to the "site-specific" folder. Do not create subfolders for each site. Typically, EHR data is exported in multiple files or sheets that are assigned standardized names (e.g., "encounter," "lab," "medication," "patient", "billing"). The file format would be "may_encounter.rds", for example.

    c. Run the xsitemerge function for all your sites (requires knowledge of R/RStudio).

6. The data analyst runs a test report to identify errors and make modifications.

7. The data analyst writes the script until it's producing the report correctly.

Note: The testing stage is repeated after recruiting a new practice site.

STAGE 4: Production

Note: Steps 8 a – c apply to external treatment providers or organizations sharing data. Proceed to Step 9 if you are not collecting data from external providers.

8. Use the following guidelines to ensure provider EHR data files are formatted correctly.

    a. Upload one file for each month. Each table can be a sheet in an Excel file so the data are well-organized.

    b. It's essential to share at least 12 months of past data from the current month, if possible, to have a full picture of MOUD treatment for evaluation and track changes that occurred in the EHR or other data management tracking tools over time.

    c. When sending new monthly data, it's important to re-pull the past 12 months of data and append it to the new monthly data to account for late EHR data that are not sent in prior data submissions.

Programmer/Data Analyst Steps

9. Anonymize practice site names (e.g., Site A, Site B) if keeping practice performance confidential is appropriate.

10. Run the report on schedule or as requested.

APPENDIX C: MOUD Treatment Performance Measure Definitions

Table A. The following table includes measures used to compare MOUD treatment across individual providers. The example report, *Appendix D: PA MOUD KPI Quarterly Dashboard Report*, includes the measures in Table A.

Category	Performance Measure	Description
MOUD Treatment Initiation and Engagement	**Patient engagement in MOUD[1]**	We assess patient engagement with MOUD by looking at the percentage of patients who have a buprenorphine/ naltrexone treatment encounter the month following buprenorphine/ naltrexone initiation. • Figure 2 (buprenorphine) • Figure 7 (naltrexone) Note: No rate is reported if the site didn't newly initiate treatment with a medication during the quarter.
MOUD Treatment Utilization	**Patients Prescribed Buprenorphine and Naltrexone**	Figure 1 shows the percentage of patients prescribed buprenorphine and naltrexone in the quarter across individual sites.
	Returning Patients	Figure 5 shows the percentage of patients who had treatment in the current quarter and returned the following month.
MOUD Treatment Capacity	**Buprenorphine Prescriptions with Primary MOUD Provider**	Figures 3 and 8 show the percentage of patients treated by the site's primary buprenorphine/naltrexone prescriber during the quarter. • Figure 3 (buprenorphine) • Figure 8 (naltrexone) Each patient's primary prescriber is based on the provider who prescribed the most MOUD prescriptions to them in a specific period. If a patient has an equal number of prescriptions from multiple providers, the patient is assigned to the one most recently seen. Note: This measure has no external benchmarks. PERU recommends organizations use the measure to set goals based on their service model, number of patients treated, and prescribers.
MOUD Treatment Retention	**Median Treatment Retention in MOUD[2,3]**	A gap in treatment (i.e., non-continuous treatment) is considered to have occurred when there is a break in receiving medication for more than 60 days. Median retention represents the midpoint value or the number of days at which half of the treatment episodes are shorter in duration while the other half are longer. In the quarterly dashboard, we compare median retention in treatment episodes at different sites across the years of the project. This allows us to compare the differences in the length of time until a treatment gap occurs among these sites. Treatment episodes continuing across years are adjusted, and the time rolls over to the following year.
	No-show appointments[3*]	Figure 6 shows the average percent of no-show appointments that occurred in the quarter. Missed or no-show appointments may indicate a patient who is not adhering to treatment or needs additional support to engage in treatment. We assess the percentage of patients who had a no-show or missed appointment during a specific period.

(continued)

APPENDIX C: MOUD Treatment Performance Measure Definitions

Table B. The following table includes measures to evaluate MOUD treatment on an individual practice/clinic level.

Category	Performance Measure	Description
MOUD Treatment Initiation and Engagement	**Patient engagement in MOUD[1]**	This measure assesses patient engagement with MOUD by looking at the percentage of patients who have a buprenorphine treatment encounter the month following buprenorphine/ naltrexone initiation.
	Patient engagement in substance use disorder (SUD) or mental health (MH) treatment[1*]	This measure assesses the ongoing engagement of MOUD patients in SUD and mental health treatment as related to their MOUD treatment timeline. It assesses the percentage of patients concurrently engaged in MOUD, SUD, or MH treatment.
MOUD Treatment Utilization	**Average number of new and returning patients**	The total number of new and returning patients by month is tracked to identify treatment utilization trends.
	Average number of patients prescribed buprenorphine or naltrexone	The total number of patients prescribed buprenorphine or naltrexone by month is tracked to identify MOUD prescribing trends.
MOUD Treatment Capacity	**Number of Patients Receiving MOUD, by Primary Prescriber**	The total number of patients prescribed MOUD by the primary prescriber at the practice to track MOUD patient panels. Each patient's primary prescriber is based on the provider who prescribed the most MOUD prescriptions to them in a specified period. If a patient has an equal number of prescriptions from multiple providers, the patient is assigned to the one most recently seen.
MOUD Treatment Retention	**Patient retention in MOUD[2,3]**	Duration of MOUD treatment should be considered patient by patient with continuing pharmacotherapy if there is a therapeutic benefit. Treatment for less than 90 days is of limited effectiveness, generally. Positive outcomes are associated with longer-term treatment. MOUD patient retention is the percentage of all MOUD patients who have reached 90, 120, and 180 days in MOUD treatment.
	Treatment Gaps	Generally, an individual is considered to have had a gap in treatment (i.e., non-continuous treatment) after 60 days without a prescription. The measure assesses the percentage of patients who experienced a gap in treatment during a specified timeframe.

(continued)

APPENDIX C: MOUD Treatment Performance Measure Definitions

Table B. (*continued*)

Category	Performance Measure	Description
MOUD Treatment Prescribing Guidelines	**Provider adherence to buprenorphine dosing guidelines[2,3*]**	Daily buprenorphine doses ≤24 mg are recommended as the literature indicates no added therapeutic benefit of doses >24 mg/day. This measure assesses provider adherence to clinically recommended buprenorphine prescribing guidelines.
	Average number of days between MOUD prescribing events[2]	Generally, to be enrolled in a Naltrexone program, the recommendation is no more than 30 days between Naltrexone injections. During maintenance treatment with buprenorphine, patients should receive prescriptions at least once a month with shorter prescription lengths (7 – 14 days) recommended earlier in treatment.
	Higher risk co-prescribing[2*]	There is a risk of respiratory depression and death when MOUD is used with benzodiazepines or other CNS depressants. This measure looks at the number of patients who are prescribed a medication that has a medication class that includes the words "opioid analgesic" or "benzodiazepine" between the time of the patient's first and last MOUD appointments.
Treatment Adherence	**MOUD patient treatment monitoring (UDS, oral swabs)[2,3]**	The testing frequency should be determined per patient based on the patient's progress in recovery and current level of care. Testing should be more frequent early on in recovery and less frequent later. Additionally, federal and state regulations may influence the frequency of testing for opioid treatment programs (OTPs). This measure assesses the frequency of treatment monitoring by evaluating the percentage of patients who received testing within the month.
	No-show appointments[3*]	Missed or no-show appointments may indicate a patient is not adhering to or potentially diverting treatment. The measure assesses the percentage of patients who had a no-show or missed appointment during a given timeframe.

1 Measure is based on Healthcare Effectiveness Data and Information Set (HEDIS) measures of Initiation and Engagement of Alcohol and Other Drug Abuse or Dependence Treatment (IET).

2 Measure is based on ASAM National Practice Guideline for the Use of Medications in the Treatment of Addiction Involving Opioid Use.

3 Measure is based on SAMHSA Treatment Improvement Protocol (TIP) 63: Medications for Opioid Use Disorder.

APPENDIX D

Pennsylvania Medications for Opioid Use Disorder Technical Assistance and Quality Improvement Expansion Project

MOUD KPI Dashboard: Q2 2023 (April - June)

PROJECT OVERVIEW

- The Program Evaluation and Research Unit (PERU) has partnered with the Pennsylvania Department of Drug and Alcohol Programs (DDAP) to improve the capacity and quality of medications for opioid use disorder (MOUD) treatment within health systems throughout Pennsylvania.
- The project uses electronic health record (EHR) data from partnering health systems to produce monthly MOUD treatment performance measures at the system level for quality improvement activities.
- The MOUD Key Performance Indicator (KPI) Dashboard uses standardized measurement across sites to establish performance measure benchmarks, identify effective strategies for MOUD treatment quality and service, and disseminate findings.
- The following analyses are based on each site's available data, total number of MOUD patients, and treatment delivery model.
- All sites have been de-identified to maintain confidentiality.

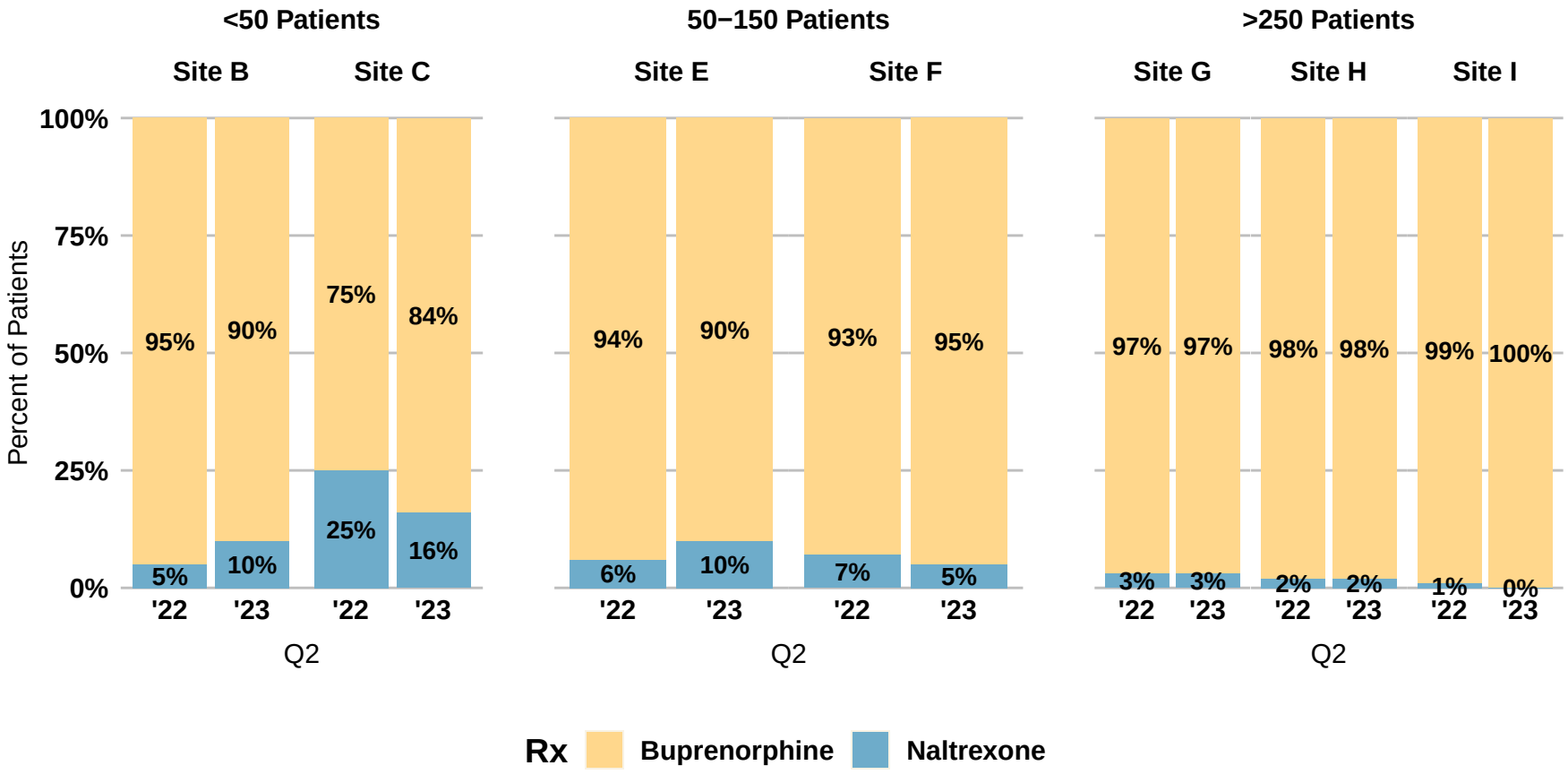
KEY TAKEAWAYS

- 83% of patients returned for MOUD treatment (Figure 5).
- 79% and 80% of patients engaged the month after initiating treatment with buprenorphine and naltrexone, respectively (Figures 2, 7).
- Patients are retained in MOUD treatment for a median duration of 150 days in 2023 (Figure 4).

Site D was not included in the dashboard (pending data submission).

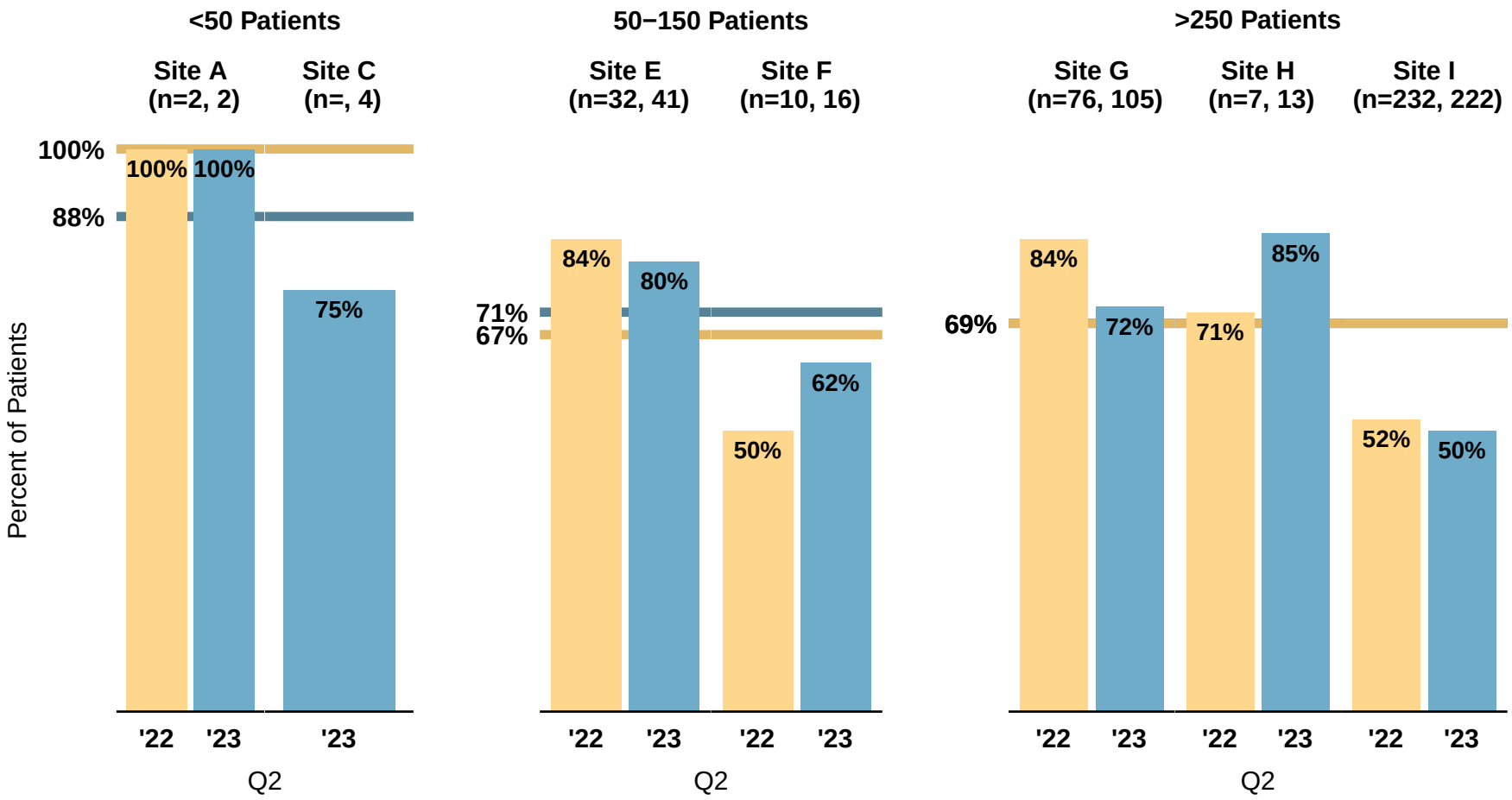
PATIENT OVERVIEW

Figure 1. Patients Prescribed Buprenorphine and Naltrexone



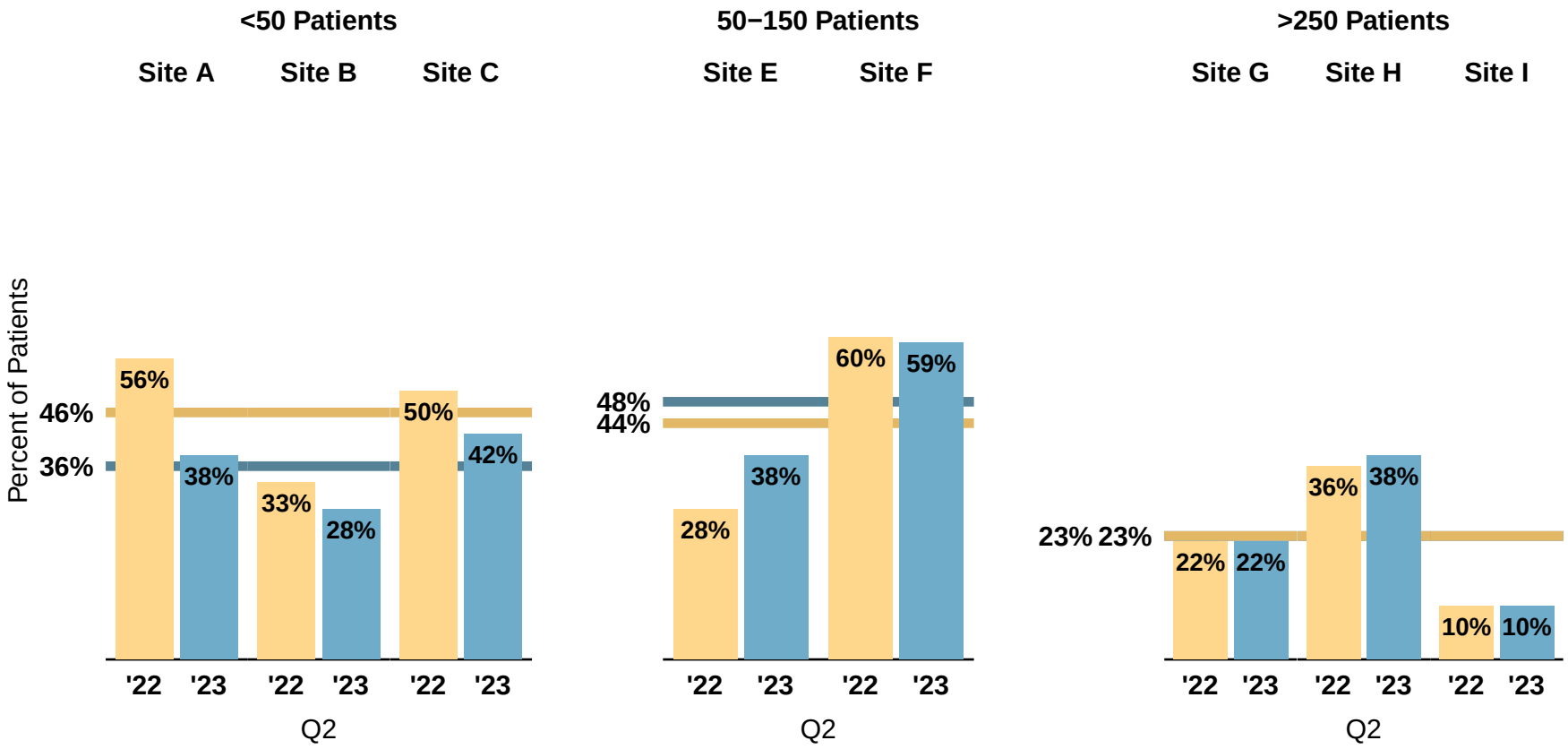
- Figure 1 shows the percent of patients prescribed buprenorphine and naltrexone in the quarter across individual sites.
- Buprenorphine is the most commonly prescribed MOUD across sites.
- Buprenorphine accounted for 94% of MOUD prescriptions in Q2 ’23 compared to 93% in Q2 ’22.
- One site (A) prescribed only one medication and they are not included in the figure.

Figure 2. Buprenorphine Engagement



- Figure 2 shows the average percent of patients in the quarter who had a buprenorphine treatment encounter the month following initiation of MOUD treatment.
- There was more buprenorphine engagement across sites in Q2 ’23 (79%) compared to Q2 ’22 (78%).
- Site B did not have buprenorphine initiation and engagement in the quarter.

Figure 3. Buprenorphine Prescriptions with Primary MOUD Provider



- Figure 3 shows the percentage of patients treated by the site's primary buprenorphine prescriber during the quarter.
- There were more patients receiving buprenorphine from a primary provider across sites in Q2 '23 (40%) compared to Q2 '22 (37%).

MOUD TREATMENT RETENTION

Figure 4. 2023 Median Retention, by Site (n = 3,239)

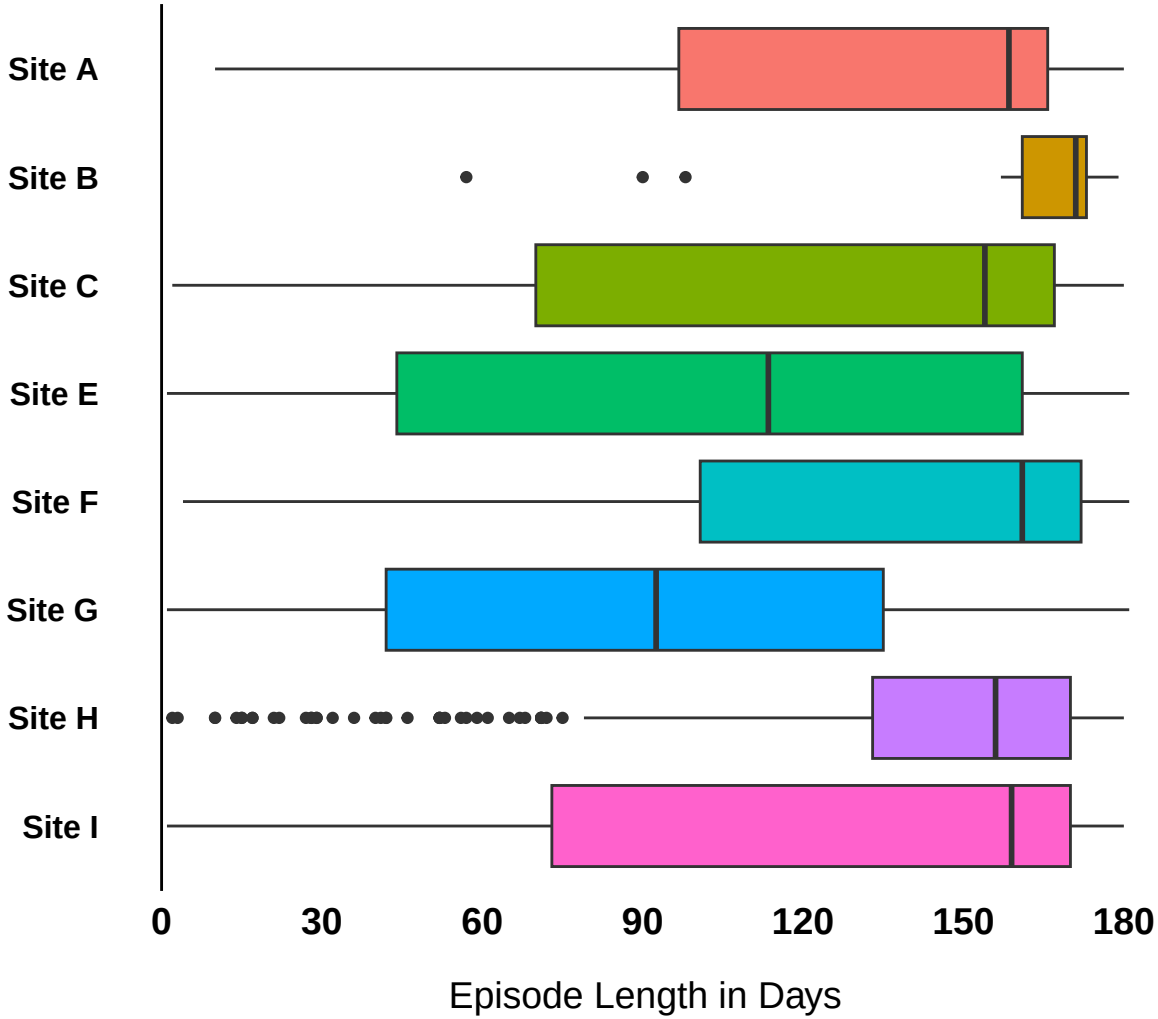
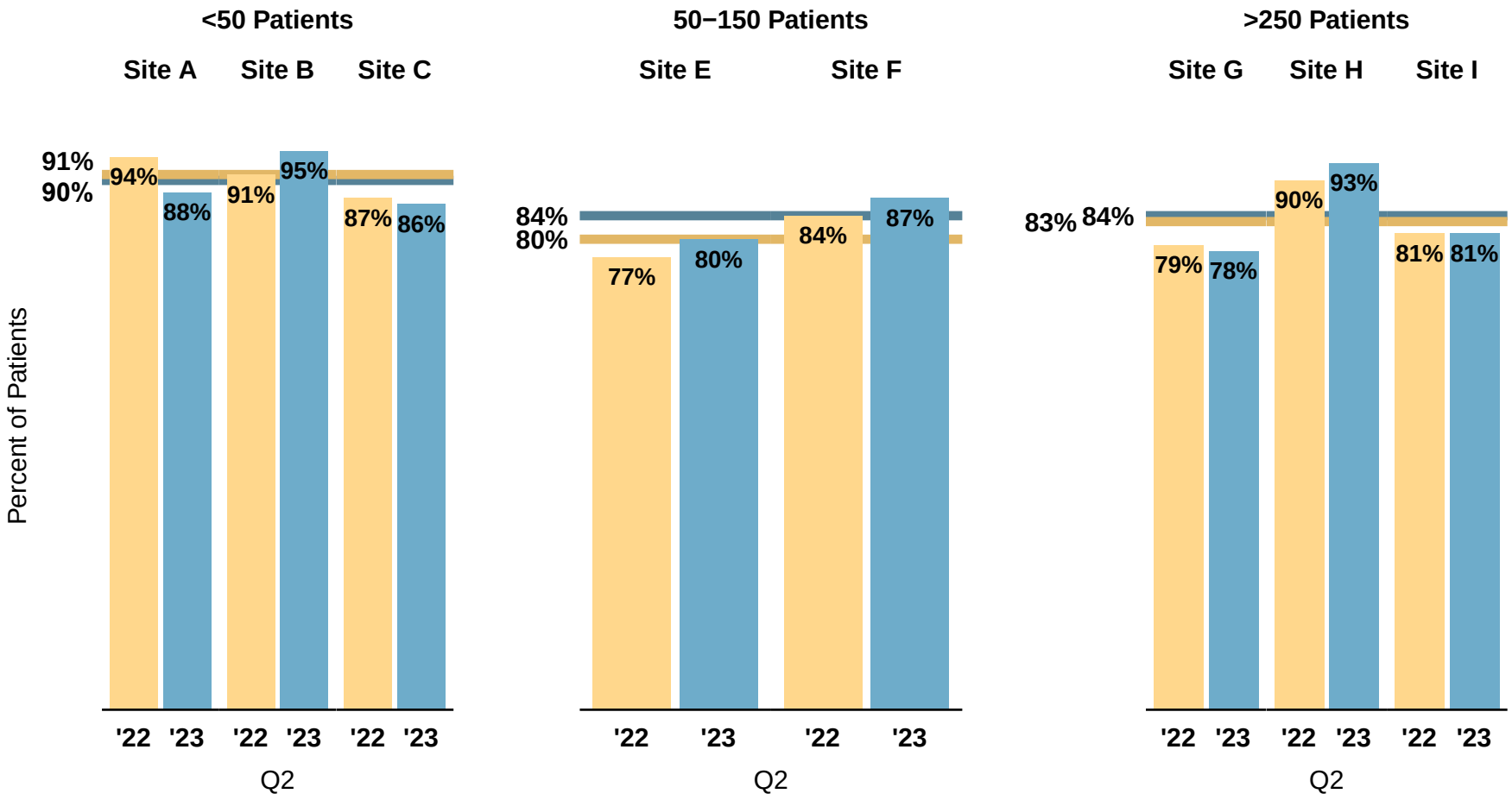


Table 1: Rolling Episode Length, by Site

Site	Average	'23	'22	'21
Site A	226	**158**	364	155
Site B	293	**171**	364	344
Site C	178	**154**	212	167
Site E	88	**114**	104	47
Site F	228	**161**	306	217
Site G	109	**92**	122	112
Site H	253	**156**	364	240
Site I	185	**159**	230	166

- **Figure 4** shows the median treatment episode length by site for episodes in '23. **Table 1** includes the median treatment episode length for episodes in all of the years that we have project data. Treatment episodes continuing across years are adjusted, and the time period rolls over to the beginning of next year.
  - '23 Median: **150 days** **only 6 months of data collected*
  - '22 Median: **199 days**
  - '21 Median: **160 days**
- A patient's episode ends when there is a gap greater than
  - 60 days in between appointments, or
  - the patient is no longer in treatment

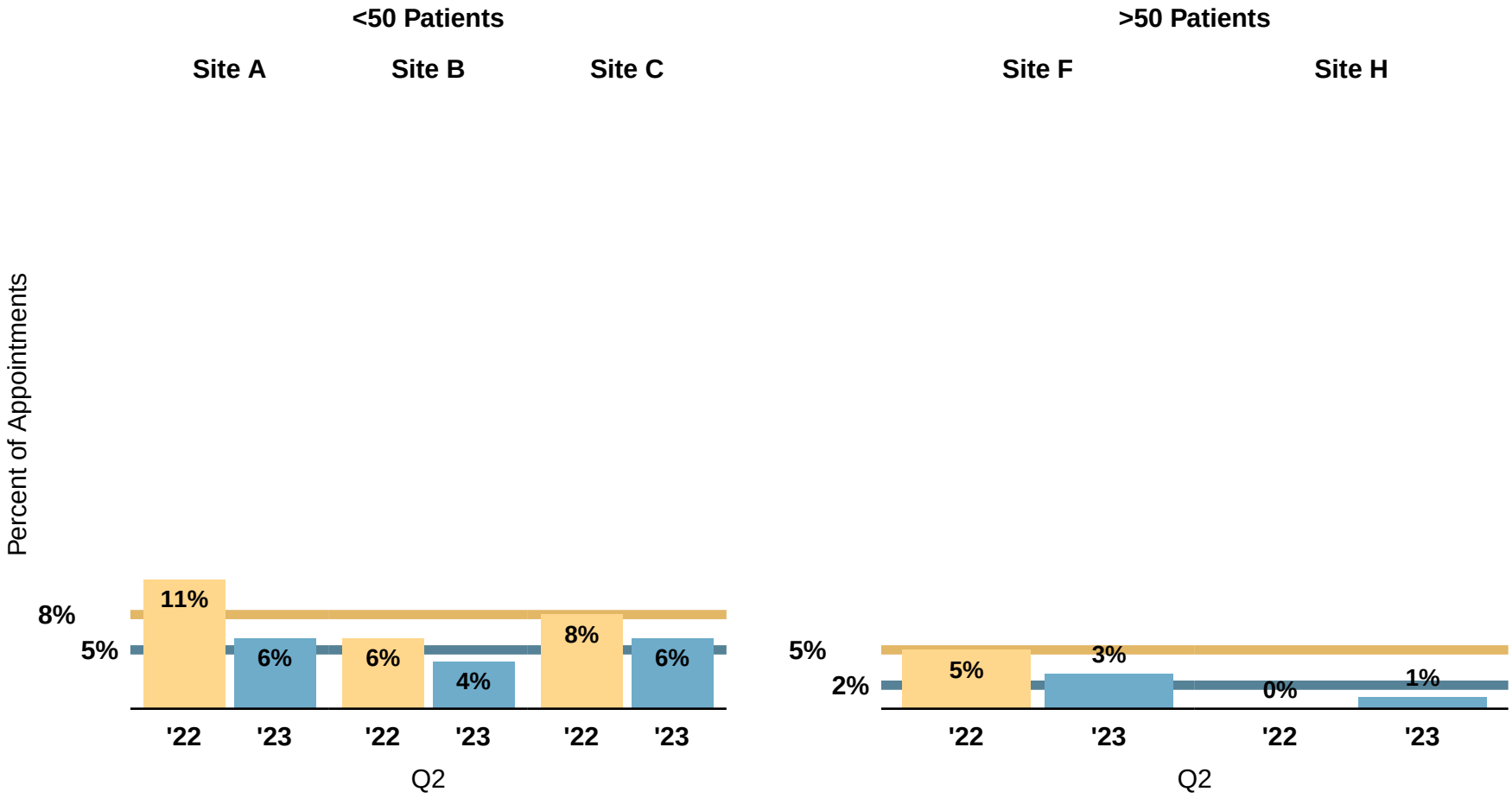
Figure 5. Returning Patients



- Figure 5 shows the percent of patients who had at least one treatment in the current quarter and returned the following month.
- There were fewer returning MOUD patients across sites in Q2 ’23 (83%) compared to Q2 ’22 (85%).

NO SHOW APPOINTMENTS

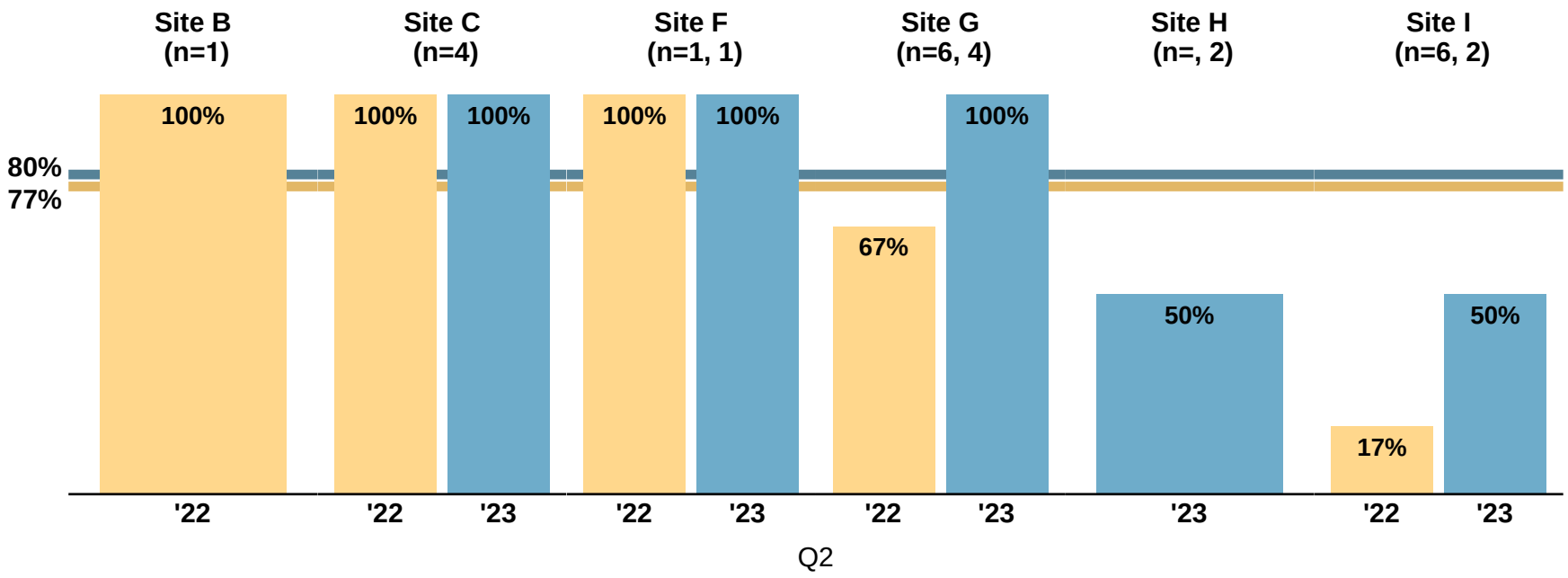
Figure 6. No-Show Appointments



- Figure 6 shows the average percent of no-show appointments that occurred in the quarter.
- There were fewer no-show appointments across sites in Q2 ’23 (4%) compared to Q2 ’22 (5%).

MOUD ENGAGEMENT

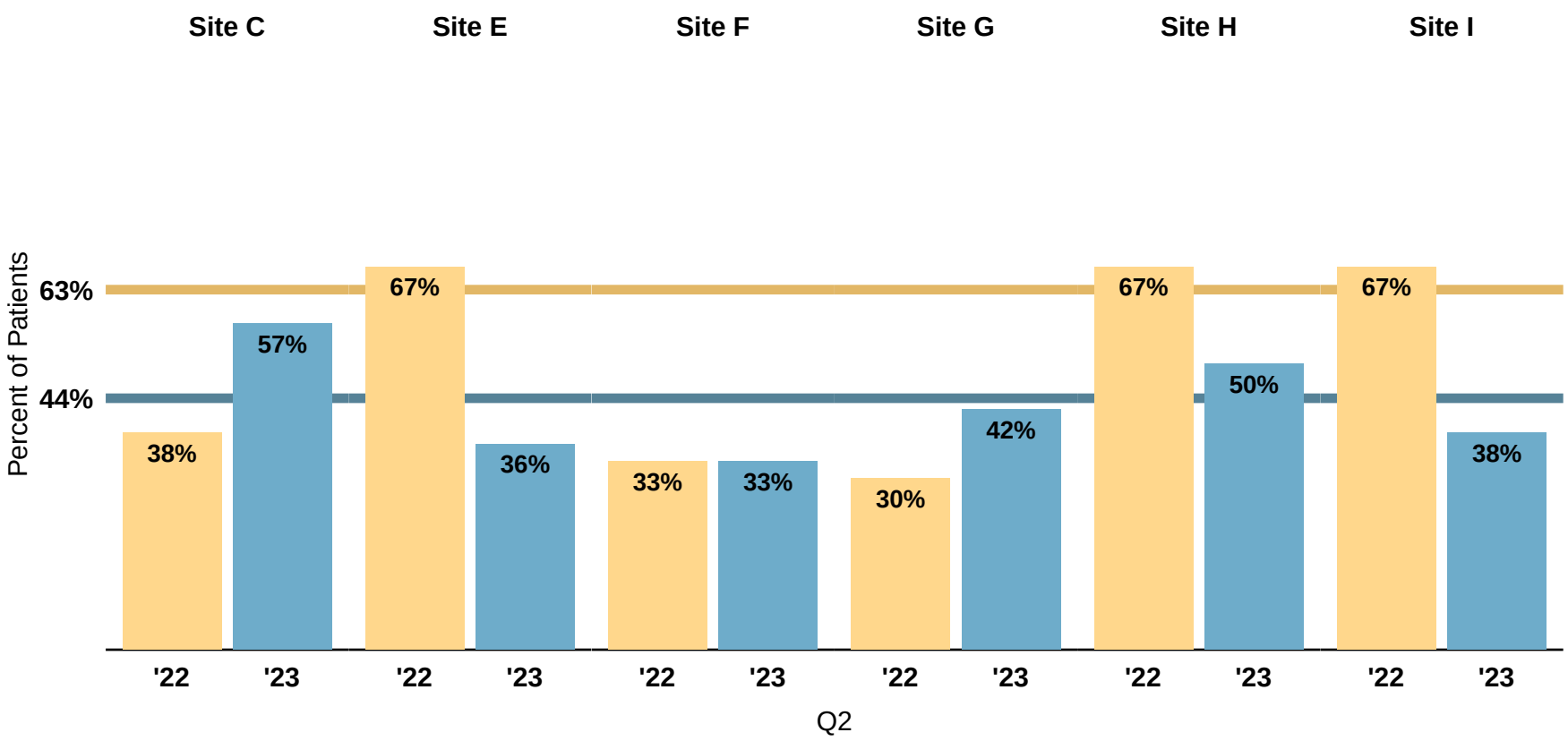
Figure 7. Naltrexone Engagement



- Figure 7 shows the average percent of patients in the quarter who had a naltrexone treatment encounter the month following their first MOUD treatment
- There was more naltrexone engagement across sites in Q2 ’23 (80%) compared to Q2 ’22 (77%).
- Sites A, B, and E did not have naltrexone initiation and engagement in the quarter.

MOUD PROVIDER PRESCRIBING

Figure 8. Naltrexone Prescriptions with Primary MOUD Provider



- Figure 8 shows the percentage of patients treated by the site's primary naltrexone prescriber during the quarter.
- The definition for primary provider translates to the provider who prescribes MOUD to the greatest percent of patients at each site.
- There were fewer patients receiving naltrexone from a primary provider across sites in Q2 '23 (44%) compared to Q2 '22 (63%).