



AASM

Sleep Clinical Data Registry

User Guide

Mar 2021

Version 1.0

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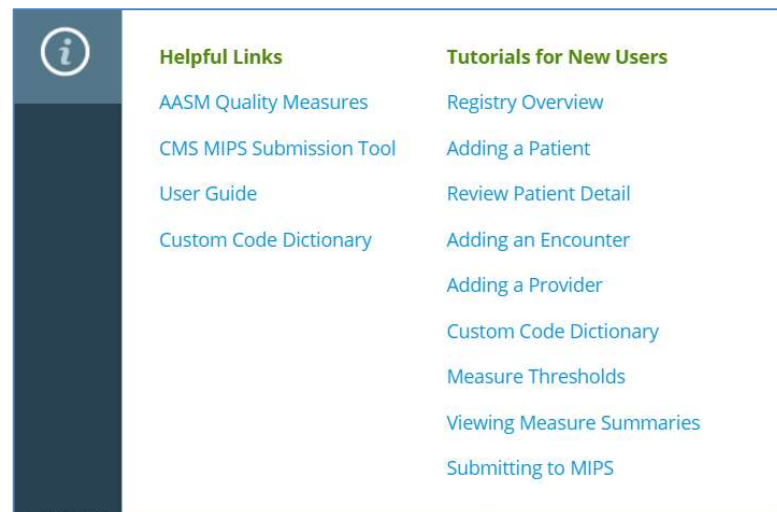
About the American Academy of Sleep Clinical Data Registry

The American Academy of Sleep Medicine (AASM), in partnership with ArborMetrix, has developed SLEEP CDR, a clinical data registry with the overall goal of being the first registry dedicated solely to sleep medicine. This registry is also designed to meet the Center for Medicare & Medicaid Services (CMS) requirements to be a qualified clinical data registry (QCDR), for participation in the Quality Payment Program. AASM expects that this registry will support data collection for quality measure reporting (including measure reporting to meet the AASM Quality Assurance Accreditation standard), quality measure testing, validation and implementation, quality improvement activities, and research purposes.

The AASM quality measure portfolio can be accessed here: <https://aasm.org/clinical-resources/practice-standards/quality-measures/>


Tutorials for New Users






To aid new users in learning registry navigation, video tutorials are available detailing the tasks that users will perform in the registry. These are available by clicking the Helpful Links button on the left of the screen.



Navigating the Registry


On the left most side of the screen, you will find the main navigation menu. Each icon denotes a different area of the application:

- **Admin Dashboard**  : For Administrators to view users, sites, clinicians, and registry usage.





- **Lists**  : Select to access patient and encounter lists.
- **Reports**  : Select to access all reports. Only accessible to users with Report access.
- **Administrative**  : Select to add new users, sleep facilities or clinicians to the registry.
- **Help**  : This is an in-registry option for users who need help or have general questions about the registry.
- **Helpful Links**  : Contains external links to additional AASM resources.

Filtering capabilities are accessible next to the left navigation menu, which allow for review of data related to specific areas of interest. Choosing filter options will update the data shown within the primary chart / table view of the screen.





Admin Dashboard

The Admin Dashboard tab () provides a quick way to view or add new users, view or add new sleep facilities / clinicians and see an overview of sleep facility usage.

The User Management area of the Admin Dashboard includes:

- **User List**  : Select to view current user list or see pending user requests for approval by either an AASM admin or sleep facility-specific admin (note: an AASM admin will have access to all functionalities in the registry but it is recommended that only a sleep facility-specific admin approve user requests).
- **Add User**  : Select to add new user to the registry and select permissions.
- **Search Users**  : Select to search all current or pending users.
- **Bulk User Change**  : Select to add/remove user roles, add/remove sleep facilities or add/remove clinicians.

The Provider Management area of the Admin Dashboard includes:

- **Provider List**  : Select to view current sleep facility or clinician list.
- **Add User**  : Select to add new clinician to the registry. Note that you will not be able to add a new sleep facility; to do so, submit a help ticket or reach out to the AASM Staff.
- **Search Users**  : Select to search all current sleep facilities or clinicians.
- **Bulk Provider Change**  : Select to add/remove CPIA (MIPS Improvement Activities) to clinicians.

The Summary area of the Admin Dashboard provides a high-level view of registry usage by sleep facility. As additional users are added and submit data to the registry, this table will populate with user login details, pending user activations and abstraction totals. See below for an example of the usage summary details:

Hospital Usage Summary

Site	Year	Month	Area	Element	Value
...
	2017	June	User	Total Users	2
	2017	June	User	Pending Activations	1
	2017	June	User	Users Created	2
	2017	June	User	Users that have logged in	1
	2017	June	User	Total Logins	6
	2017	June	User	Last Log in Date	2017-06-30 03:06:04
	2017	June	Abstraction	Discharges Created	17939

1 - 7 of 14,999 items

Pending User Requests

Site administrators can navigate to the Pending Requests List via the Admin Dashboard. This view will contain a list of all users at their site who have requested access to the registry. Click on an individual row to view information about the request on the View Request page.

Admin Dashboard // Pending Requests List

Email	First Name	Last Name	Date
...
Ttest1@test.com	Test	Test1	08/01/2017

1 - 1 of 1 items

Use the check mark or cancel icons in the top right-hand corner of the **View Request** page to either accept (✓) or deny (✗) the request.

Admin Dashboard // Pending Requests // View Request ✓ ✕

▼ Request User Access




Requested User Name *	First Name *
TTest1	Test
Last Name *	Work Email *
Test1	Ttest1@test.com
Work Phone *	Cell Phone
999-999-9999	999-999-9999
Sites *	
Loma Linda University Children's Hospital	
Please describe the purpose for access below: *	
Test1	




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Modifying User Data

User accounts can be viewed and modified within the registry by accessing the User List from the Admin Dashboard. The User List can be filtered by different criteria using the top row of the table which makes it easier to find the correct user. After a search, the user list will refresh to reflect users that meet the entered criteria.


You can clear a search by clicking on the orange cancel icon (✕) next to the top row. The top right corner of the User List contains additional configuration options depending on user access levels:

- **Bulk-Update** : This functionality allows a site administrator to edit multiple user accounts at the same time and can be helpful if user criteria need to be updated for many users at the same time (example: multiple users need access to new sleep facilities / clinicians, multiple users need their access updated in order to view reports).
- **Add User** : This functionality can be selected to input a new user account for registry access.
- **Export Data** : This functionality allows users to export data from the user list to an excel file.


User List   

User Name	Email	First Name	Last Name	Status	Work	Sites	Login
...
arbormetrix1@mailinator.com		Test	Test	Enabled	111-222-3333		1
arbormetrix2@mailinator.com				Enabled	111-222-3333	001	1

Bulk-Update Mode

When using the Bulk-Update Mode () , an Admin can specify multiple user accounts they would like to modify by selecting specific rows in the user list or toggling on “All Rows” to change a role or specification. Users can then specify the action they would like to apply to those selected.

For example, in the image below, the user has selected two users. They are removing multiple data management roles for these users at the same time.

User List 

Users: ☒ Selected ☐ All Rows Action: Remove Role Administrative - Program Admin Administrative - Provider Manager **SUBMIT**

2 Selected ✕


User Name	Email	First Name	Last Name	Status	Work	Sites	Last Login	Logi
admin	superuser@arborm	ArborMetrix	SuperUser	Enabled	734-123-4567	164029, 100797, 100793, 040875, 150808, 160787, 431013, 301098, 010735, 010956, 190017, 010739, 010844, 010937, 013626, 370652, 301188, 190034, 364231, 400466...	07/27/2017 08:55 AM	229
				Enabled		164029, 100797, 100793, 040875, 150808, 160787, 431013, 301098, 010735, 010956, 190017, 010739, 010844, 010937, 013626, 370652, 301188, 190034, 364231, 400466...	07/25/2017 03:32 PM	6
				Enabled		270875	07/21/2017 01:05 PM	2

User Access

When a user has been added, the Administrator will need to assign roles to the new user. The role options are divided into 5 categories: Administrative, Data Management, Reports, Admin Dashboard Reports, and Data File Management. In addition, the Administrator will need to assign specific site and clinician access for each new user. Each role gives access to the following:

- **Administrative**
 - Program Admin: Reserved for AASM Staff Only
 - Provider Manager: Ability to create, edit, and enable/disable sites and clinicians
 - User Manager: Ability to create, edit, and enable/disable users (only for sites that you have access to)
- **Data Management**
 - View: Ability to view patient or encounter data
 - Add: Ability to add a new patient or encounter record
 - Patient Delete: Ability to delete a patient or encounter record
 - Edit: Restricts the timeframe for which a user can edit a patient or encounter record (i.e., one day, thirty days, unlimited, by survey; selecting ‘by survey’ can limit access to

only editing either patient OR encounter data; not both.)

- **Reports**
 - Registry Admin: Ability to share reports with other registry users within the platform
 - Site Admin: Ability to view reports that show data at the site level
 - Clinician: Ability to view reports that show data at the clinician level
- **Admin Dashboard Report**
 - View Usage Reports: Ability to view Admin Dashboard
- **Data File Management**
 - Upload site Data: For AASM or Site Admins to upload site-level data
 - Export Data: Ability to export data from the registry
- **Site & Clinician Access**
 - To grant access to select Sites and Clinicians, click the  button. Select the site you would like to grant access to. To select multiple sites, hold the Ctrl button while you select the additional sites.
 - To grant access to all Sites, select the checkbox next to 'Assign all and always add new to user'.

Granting User Access

For each type of user requesting access to the registry, this details what access will be granted:

- **AASM Administrators** Access will be granted for All sites and All clinicians.

Administrative <input checked="" type="checkbox"/> Program Admin <input checked="" type="checkbox"/> Provider Manager <input checked="" type="checkbox"/> User Manager	Data Management <input checked="" type="checkbox"/> View <input type="checkbox"/> Add <input type="checkbox"/> Patient Delete <input type="checkbox"/> Edit	Reports <input checked="" type="checkbox"/> Registry Admin <input checked="" type="checkbox"/> Site Admin <input checked="" type="checkbox"/> Clinician
Admin Dashboard Report <input checked="" type="checkbox"/> View Usage Reports	Data File Management <input checked="" type="checkbox"/> Upload site data <input checked="" type="checkbox"/> Export Data	

- **Site Administrators.** Access will be granted only to their relevant Site, and All clinicians at that site.

Administrative <input type="checkbox"/> Program Admin <input checked="" type="checkbox"/> Provider Manager <input checked="" type="checkbox"/> User Manager	Data Management <input checked="" type="checkbox"/> View <input checked="" type="checkbox"/> Add <input checked="" type="checkbox"/> Patient Delete <input checked="" type="checkbox"/> Edit <div>Unlimited</div>	Reports <input checked="" type="checkbox"/> Registry Admin <input checked="" type="checkbox"/> Site Admin <input checked="" type="checkbox"/> Clinician
Admin Dashboard Report <input checked="" type="checkbox"/> View Usage Reports	Data File Management <input type="checkbox"/> Upload site data <input type="checkbox"/> Export Data	


- **Data Abstractors** Access should be granted only to their relevant Site, and All clinicians at that site.

Administrative <input type="checkbox"/> Program Admin <input type="checkbox"/> Provider Manager <input type="checkbox"/> User Manager	Data Management <input checked="" type="checkbox"/> View <input checked="" type="checkbox"/> Add <input checked="" type="checkbox"/> Patient Delete <input checked="" type="checkbox"/> Edit <div>Unlimited</div>	Reports <input type="checkbox"/> Registry Admin <input type="checkbox"/> Site Admin <input type="checkbox"/> Clinician
Admin Dashboard Report <input type="checkbox"/> View Usage Reports	Data File Management <input type="checkbox"/> Upload site data <input type="checkbox"/> Export Data	


- **Clinicians** Access should be granted only to their relevant site and to only one clinician.

Administrative <input type="checkbox"/> Program Admin <input type="checkbox"/> Provider Manager <input type="checkbox"/> User Manager	Data Management <input checked="" type="checkbox"/> View <input type="checkbox"/> Add <input type="checkbox"/> Patient Delete <input type="checkbox"/> Edit	Reports <input type="checkbox"/> Registry Admin <input type="checkbox"/> Site Admin <input checked="" type="checkbox"/> Clinician
Admin Dashboard Report <input type="checkbox"/> View Usage Reports	Data File Management <input type="checkbox"/> Upload site data <input type="checkbox"/> Export Data	


Patient / Encounter List View

The Lists View tab () is where users can find both the Patient and Encounter List details and drilldown options. Like the User List, the Patient and Encounter lists can be filtered across different criteria using the top row of the table. After a search, the case list will refresh to reflect users that meet the entered criteria. Additionally, users can conduct an advanced search or create an export of abstraction data.

Exporting Case List Data

The Standard Export option found at the top of the list () will provide the user with a spreadsheet output of everything shown in the case list view.


Advanced Search


The Advanced Search function allows a registry user to perform a more granular search for specific patients and/or encounters. Users can search based on patient characteristics, site characteristics, or measures. The user can create and save Advanced Search queries for later use. This functionality can be accessed by clicking on the search icon () in the top right-hand corner of the case list view.

Search Filters

Upon selecting Advanced Search, users will be taken to a page where they can create and save a search filter. To do so, enter a Filter Name and (optional) Description. This permits the saved filter to be used again in the future. Then select the match condition:

- **All** – The search filter must match all the search criteria listed.
- **Any** – The search filter must match at least one of the search criteria listed.

Select a category to view a drop-down menu of the possible categories to search from. After selecting the category, select the applicable question and additional specifications you want to search by. Select the save icon () in the top right to save the search criteria for this filter. After saving, the list will refresh to reflect the patients and/or encounters that meet the selected search criteria.

From the case list view, saved filters will appear under the data filters icon ().

Interacting with the Patient List

The Patient list will contain a list of all new and existing patients that are entered for the sleep facility where the user has access. Patient data will be viewed by clicking into an individual row (that was previously created) or new patients can be added, as needed.

Adding a New Patient to the List

With appropriate user permissions, a user can add a new patient to the list by clicking on the plus sign (+) in the upper right-hand corner of the list. This will open a blank patient form that allows the user to enter the appropriate patient identifying information and applicable sleep facility name.

Once all of the patient information has been entered, select Save from the upper right-hand corner (if required fields have not been completed, an error message will appear, and these fields will be highlighted). When the patient information is saved correctly, two additional tabs will appear.

The Problem List tab allows the user to indicate as many problems as needed using the Add Row functionality and the corresponding ICD-10 code field.

Please note that while ICD-10-CM is being used for diagnosis codes, due to limitations within the registry platform, none of the codes contain the decimal (i.e., G47.33 will appear as G4733). Be careful not to confuse these ICD-10 codes with G codes. Keep in mind that G codes are not diagnosis codes and can only be used to capture a service or procedure provided.

After each problem is entered, the user can choose Save and enter the next problem (if applicable).

The final tab is for entering a PRO (Patient Report Outcome) survey or questionnaire response. Similar to the Problem List tab, the user can add as many PRO Assessment scores as needed by using the Add Row functionality and selecting the appropriate measurement system:

After each PRO Assessment score is entered, the user can choose Save and enter the next score (if applicable). If there is a PRO that has been used which does not appear in the registry, please send an addition request to registry@aasm.org.

To return to the patient list, either select the Patient List hyperlink at the upper-left corner or choose the Data Management icon (📄) in the left navigation bar.

Viewing Current Patients in the List

Once a patient has been created, a user can (with the appropriate permissions) view details of each patient by clicking on the patient row within the list. This will open all of the completed information for that patient and (if able), a user can edit information as needed and re-save.

Interacting with the Encounter List

The Encounter list will contain a list of all new encounters (patient visits) that are entered for the sleep facility where the user has access. Encounter data can be viewed by clicking into an individual row (that was already created) or new encounters can be added, as needed.

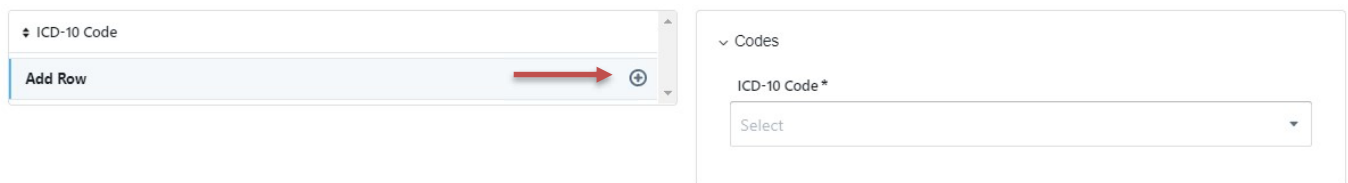
Adding a New Encounter to the List

With appropriate user permissions, a user can add a new encounter to the list by clicking on the plus sign (+) in the upper right-hand corner of the list. This will open a blank encounter form that will allow the user to select the patient (created previously from the Patient List) along with encounter identifying information.

Once all of the encounter information has been entered, select Save from the upper right-hand corner (if required fields have not been completed, an error message will appear, and these fields will be highlighted). When the encounter information is saved correctly, three additional tabs will appear.

The Diagnoses tab allows the user to indicate as many diagnoses as needed using the Add Row functionality and the corresponding ICD-10 code field.

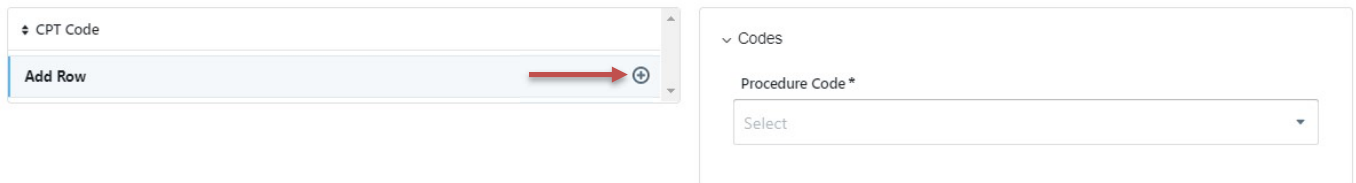
Please note that while ICD-10-CM is being used for diagnosis codes, due to limitations within the registry platform, none of the codes contain the decimal (i.e., G47.33 will appear as G4733). Be careful not to confuse these ICD-10 codes with G codes. Keep in mind that G codes are not diagnosis codes and can only be used to capture a service or procedure provided.



The image shows two parts of the user interface. On the left is a table with a header 'ICD-10 Code' and a single row labeled 'Add Row'. A red arrow points from the 'Add Row' text to a plus sign icon in the right corner of the table. On the right is a section titled 'Codes' which contains a label 'ICD-10 Code *' and a dropdown menu with the word 'Select' and a downward arrow.

After each diagnosis is entered, the user can choose Save and enter the next (if applicable).

The Procedures tab allows the user to indicate as many procedures as needed using the Add Row functionality and the corresponding procedure code field:

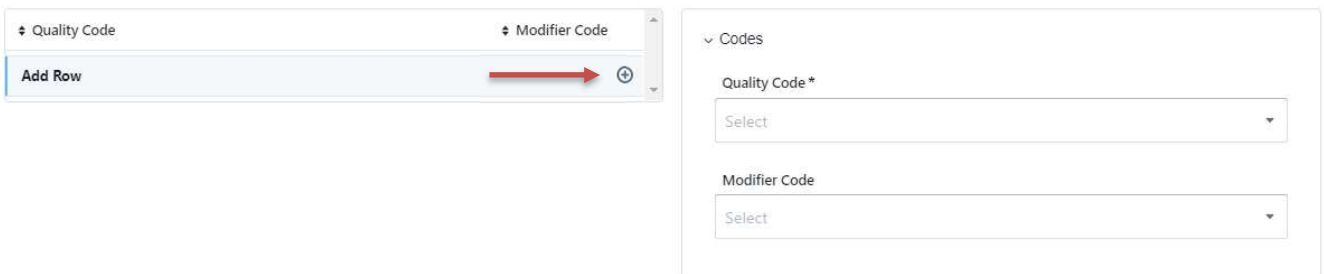


After each procedure is entered, the user can choose Save and enter the next (if applicable).

Adding Quality Codes to an Encounter

The final tab is for entering Quality Codes, which capture each quality action, as performed and captured in the quality measures. Quality Codes are custom AASM codes often required for measures to qualify for MIPS reporting. The list of Quality codes is accessible in the Custom Code Dictionary, which can be found by clicking the Information button (i) at the top of the screen and navigating to the Resources page.

Similar to the other tabs, the user can add as many Quality Codes as needed by using the Add Row functionality and selecting the appropriate code and modifier (if necessary).



After each code is entered, the user can choose Save and enter the next (if applicable).

To return to the encounter list, either select the Encounter List hyperlink at the upper-left corner or choose the Data Management icon in the left navigation bar.

Viewing Current Encounters in the List

Once an encounter has been created, a user can (with the appropriate permissions) view details of each encounter by clicking on the encounter row within the list. This will open the completed information for that encounter and (if able), a user can edit information as needed and re-save.

Reports

Reports are graphical and tabular representations of data related to an individual or combined grouping of sleep facilities. AASM has built initial summary reports for user review and will continue to release new reports for quality monitoring going forward.

Viewing Reports

To view reports, choose the graph icon (📊) on the left-hand side navigation bar. Then, choose a report from the pop-out menu:

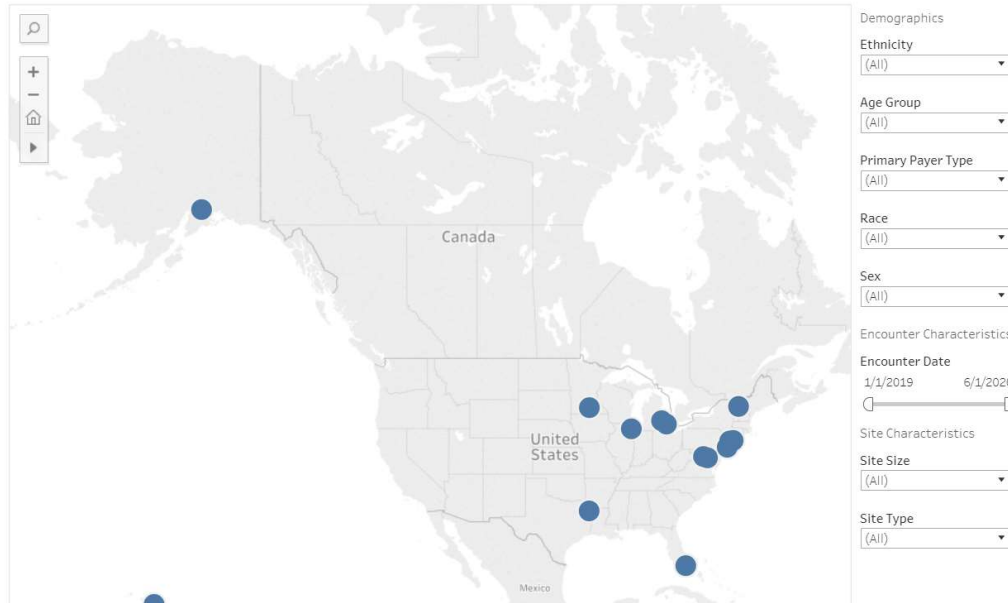
- **Patient Demographic Dashboard and Patient Dashboard by Site:** View demographic characteristics for patients seen at a site.



- **Volume Dashboard:** View counts of patients or encounters across all sites for AASM.

Volume Dashboard

See count of Encounters across sites for AASM. Hover on site to see further details



- **Measure Summary:** View performance rates, reporting rates, and exception rates on various AASM measures for each AASM site.

Measure Summary

Please hover over measure values to view numerator and denominator counts.
 A blue performance rate bar means that your site is **At or Above Target** for the measure.
 A red performance rate bar means that your site is **Below Target** for the measure.

Adult OSA Measures

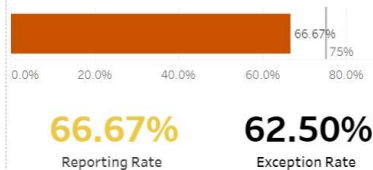
Screening for Obstructive Sleep Apnea



Baseline assessment of OSA symptoms



Assessment of sleepiness



Assessment of motor vehicle crashes or near-miss crashes



Filters

Site Name: (All)

Patient Characteristics

Age Group: (All)

Ethnicity: (All)

Primary Payer Type: (All)

Race: (All)

Sex: (All)

Encounter Characteristics

Encounter Date Range: 1/1/2019 to 6/1/2020

- **Measure Details:** View reporting rates and performance rates trended over time for each AASM site.

Measure Details Dashboard

Pick A Measure

Adult OSA - Screening for Obstructive Sleep Apnea

9.09%

Performance Rate

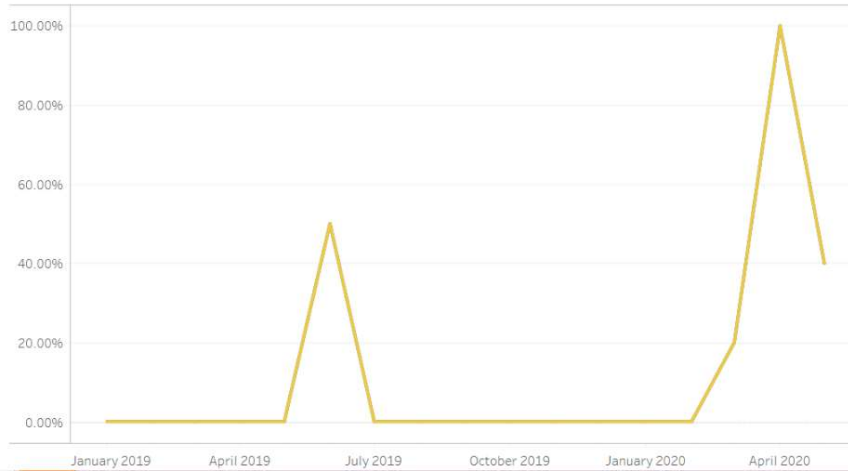
9.09%

Reporting Rate

55

Eligible Records

Reporting and Performance Comparison Trend



Filters

Site Name

Practice_001

Patient Characteristics

Age Group

(All)

Ethnicity

(All)

Primary Payer Type

Medicare

Race

(All)

Sex

(All)

Encounter Characteristics

Encounter Date

January 2019 June 2020

Interacting with Reports

Using Filters

Along the right-hand navigation bar, users can select various report filters to see the most relevant data samples. All filters are setup with “smart filtering” capabilities meaning that users will only see filter options that are applicable to their sleep facility data. Site administrators will see all sleep facilities and all filters available.

Filter options can vary by report. All reports currently include the below filters:

- Age Group
- Ethnicity
- Race
- Sex
- Primary Payer Type
- Encounter Date Range

Exporting Data

Data can be exported from reports in the form of an Image or a PDF. Note that there is no way to export patient-level data; to do so, navigation must begin from the Patient or Encounter Lists.

Modifying Site-Level Measure Thresholds

In the Measure Summary and Measure Detail reports, unique measure thresholds can be set for accreditation purposes. These are displayed for each site as a horizontal bar:



These thresholds can be configured by the Site Administrator. To edit the measure threshold, navigate to the Admin Dashboard (🏠) and select the Site List under the Provider Management section (👤). Then, select the practice for which the threshold will be updated. Thresholds can be set for up to seven measures. Select the appropriate measure and then indicate the threshold for that measure (to be entered without decimals, for example a threshold of 75% is to be entered as '75').

Accreditation



Accrediting Organization American Academy of Sleep Medicine	Accreditation Term 10/1/2020	Accreditation Type Sleep Facility
Quality Measure #1 AASM 1: Quality Measure	Quality Measure #1 Threshold (%) 75	
Quality Measure #2 AASM 1: Quality Measure	Quality Measure #2 Threshold (%) 85	
Quality Measure #3 Choose only one	Quality Measure #3 Threshold (%) 	

Note: Report analytics are run overnight. Threshold updates will be visible in reports the following day.

CMS Submission

The AASM registry will be used for collecting and submitting data to the Centers for Medicare & Medicaid Services (CMS) for participation in the Quality Payment Program. Information for Quality Payment Program submission will be collected at a Site and Clinician level. Payment will be required for data submission to CMS. Data are submitted once annually, in advance of the CMS submission deadline.

Site-Level MIPS Reporting

Site Administrators are responsible for gathering MIPS reporting information at a Site level. To manage this information, navigate to the Admin Dashboard () and select the Site List under the Provider Management section (). Select the relevant site for MIPS reporting. Under the CMS Reporting section, you will see options for Individual or Group MIPS submissions as well as questions relating to if the site is participating in Quality Reporting or Improvement Activity Reporting.



CMS Reporting

MIPS Reporting Level
☐ Group
☐ Individual

Quality Reporting
☐ Yes
☐ No

Improvement Activity Reporting
☐ Yes
☐ No

Clinician-Level MIPS Reporting

Clinicians are responsible for gathering MIPS reporting information at a Clinician level. To manage MIPS information, navigate to the Admin Dashboard () and select the Clinician List under the Provider Management section (). Select the appropriate clinician and complete the 'CMS MIPS Reporting' section, which asks questions related to MIPS eligibility, Quality Reporting, and Improvement Activity Reporting. Note that if Improvement Activity Reporting is selected, the Clinician will be asked to attest to the select activities performed and the associated date range.


CMS MIPS Reporting


2021 Reporting Year

MIPS Reporting *
☒ Yes
☐ No

Quality Reporting *
☒ Yes
☐ No


Improvement Activity Reporting *
☒ Yes
☐ No

Improvement Activity Start Date *
 


Improvement Activity End Date *
 

Improvement Activity Attestation

Click on the pencil icon to attest to Improvement Activities for 2021. Use CTRL + click to select multiple activities. To see a complete list of activities from the CMS website, click [here](#).



Help

If users have additional questions about the registry, select the  icon on the left most side of the screen. Any questions entered here will be sent to the AASM and ArborMetrix team. Alternatively, users can email aasm-support@arbormetrix.com and a team member will get back to them promptly.