INHALE CQI User Guide

Contents

Introduction

The Michigan Data Collaborative (MDC) is a nonprofit healthcare data organization at Michigan Medicine. Inspiring Health Advances in Lung Care (INHALE) has partnered with MDC in a Collaborative Quality Initiative (CQI) to produce a dashboard supporting their mission focused on addressing lung health in patients with asthma and chronic obstructive pulmonary disease (COPD).

INHALE Dashboard

MDC aggregates Blue Cross Blue Shield of Michigan (BCBSM) claims data from participating primary care providers (PCPs) and Specialty Care Providers (SCP), including Allergists and Pulmonologists, as well as clinical data sent to MiHIN as part of the Physician-Payer Quality Collaborative (PPQC) Use Case. Over time, additional sources of information will be integrated into the INHALE Data Hub.

MDC provides dashboards sourced from the CQI Data Hub for participating INHALE organizations. The MDC dashboards contain meaningful measures determined by INHALE clinicians and expert staff. Through our iterative design process, ongoing updates will accommodate new data and reporting options. Measures are searchable by Provider Organization (PO), Practice, and Provider.

This guide describes how to use the INHALE dashboard and download the information you need. The INHALE dashboard is compatible with modern browsers such as Google Chrome, Mozilla Firefox, Apple Safari, and Microsoft Edge. Access to the INHALE dashboard is secured based on user credentials.

Before You Begin

Access and Setup Guide

The *Access and Setup Guide* provides detailed information about the steps that you must complete to access the INHALE CQI site, including setting up a University of Michigan (U-M) user account and Duo two-factor authentication.

If you have general questions about accessing, using, or data contained within the INHALE dashboard, contact MDC at *MichiganDataCollaborative@med.umich.edu.*

Logging in to the Dashboard from INHALE

Using your web browser, go to *INHALECQI.org*. Click the **Data Dashboard** button in the top right corner, as shown below. *You will be redirected to the MDC Login page and may log in from there.*
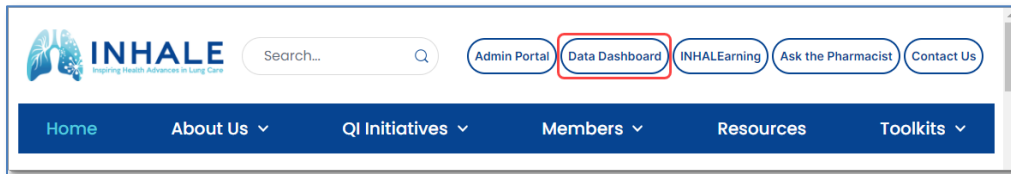
Logging in to the Dashboard from MDC

1. Using your web browser, go to *michigandatacollaborative.org.* Select the **Login** button in the top navigation bar, as shown below.
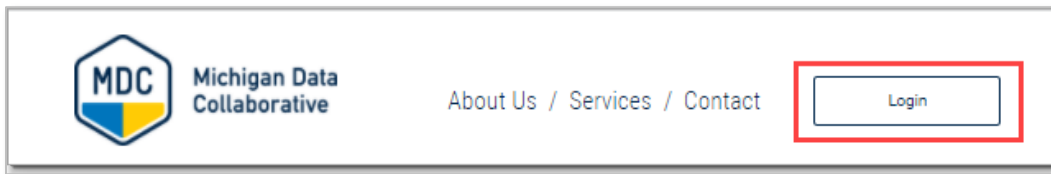

1. If you are not already logged in to the University of Michigan, you will be redirected to the U-M Weblogin page (if you are already logged in, skip to Attestation Tab below) and prompted to enter the following information:

    - **Username/uniqname**: Type in your U-M uniqname.
    - **Password**: Type in your U-M Level-1 password.

2. Click **Login**.

3. Next, you will be required to complete Duo Two-Factor Authentication. To get help installing the Duo app or using two-factor authentication, see the *Access and Setup Guide*.

4. **Approve** the Duo request on your device *OR* approve two-factor authentication using the phone call method.

5. Next, the MDC Dashboard Navigation page will open. After you select **INHALE Dashboard**, you will be directed to the INHALE Attestation dashboard tab.

Attestation Tab

1. The Attestation tab will open. Users must attest that they will use the patient information appropriately and maintain confidentiality of all data. Scroll down, review the content, and if acceptable, click **I Agree**.
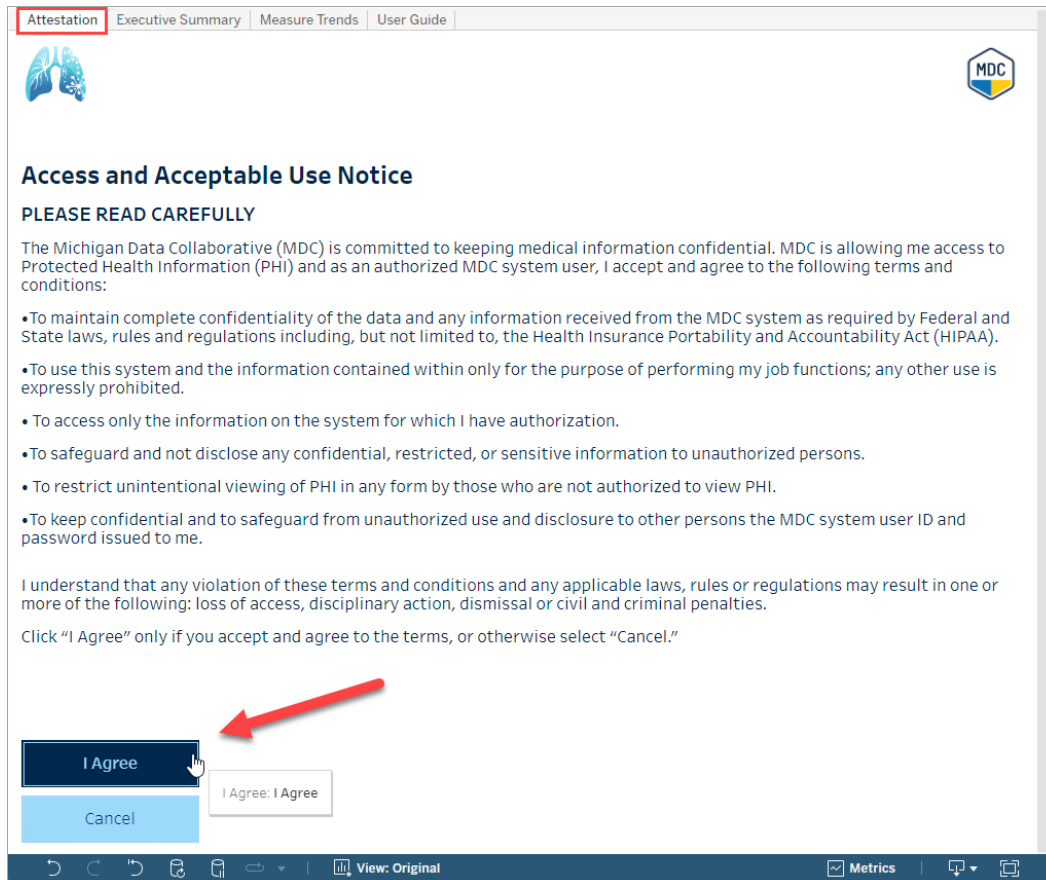
2. You will be redirected to the INHALE Executive Summary tab, as shown below.

INHALE Executive Summary Tab

The INHALE Executive Summary contains the following measure results:
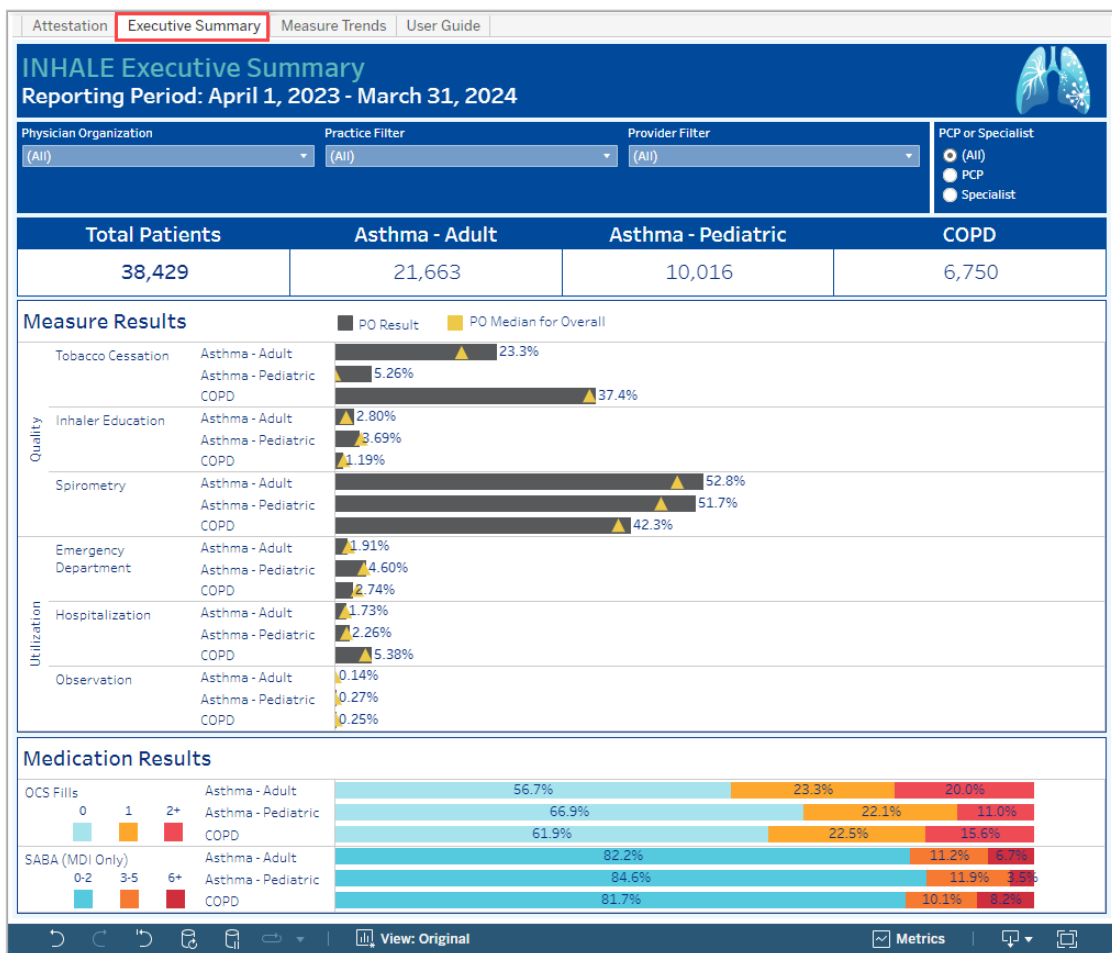
Quality Measures
- Tobacco Cessation
- Inhaler Education
- Spirometry

Utilization Measures
- Emergency Department
- Hospitalization
- Observation

Medication Results
- Oral corticosteroid (OCS) Fills
- Short-Acting Beta-Agonist Fills (Metered-Dose Inhaler Only) – SABA Fills (MDI Only)

Note: The data shown in all screenshots is either aggregate summary data or artificial data that is randomly generated for demonstration purposes only.

Suppression of Small Cell Size

When Practice users view PO level results, results with a small cell size will be suppressed and a Suppressed label will appear on the dashboard.

Small cell size occurs when one of the following criteria are met:

- Numerators = 1-10 (i.e., 0 and 11 and greater will be displayed)
- Denominator is < 32

Navigating the Executive Summary

1. **Reporting Period**. Indicates the period for which data is reported.

2. **Filters.** Select from the Physician Organization (PO), Practice, Provider, and Specialty Type (PCP or Specialist) filters across the top to view results on the desired patient population.
   - Filter options depend on user permission level and PO or Practice filter selected.
   - All results — including Patient Counts, Percentages, Numerators, and Denominators — will reflect the hierarchy selected.

     Note: By default, the filters are set to PO-level aggregations.

   - Users may search *within* each filter for a specific PO, Practice, or Provider.

3. **Patient Counts Banner.** Criteria for inclusion in patient counts vary by measure. See Appendix A: INHALE Measures Denominator-Numerator Chart for greater detail.

   a. Total Patients – based on the selections made above (e.g., PO, Practice, Provider)
   b. Asthma – Adult (≥19 years of age)
   c. Asthma – Pediatric (ranges from 2 years to <19 years of age).
   d. COPD (≥ 40 years of age)
      - Total Patients includes non-suppressed counts

4. Measure Results.

The Measure Results bar graphs display results as a percentage of the population that met the measure criteria, based on the filters selected.

a. Bar graph legend:

   ◼ Blue bar graph. Result

   ◻ Gray bar graph. Result, Small N (N < 32). N = Denominator

   ▲ Yellow triangle. Represents the Median for the level of organization selected, and for the Specialty type available.
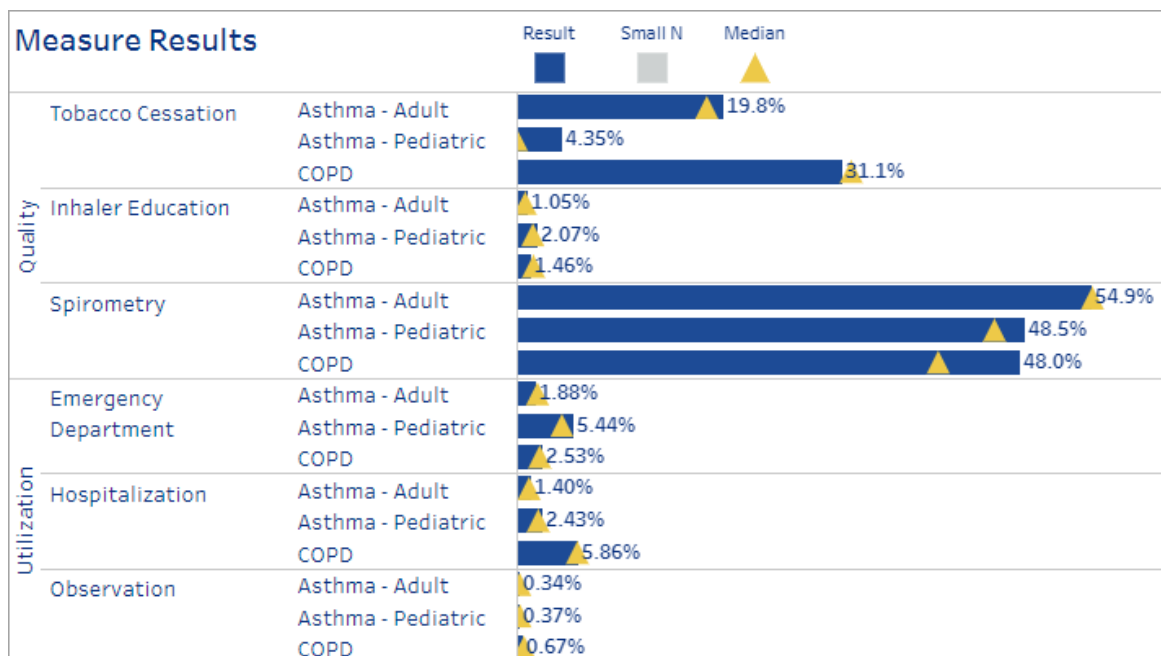
5. Measure Results Median Values.

- The displayed median values will change automatically after a change in the selection of filters.
- Measure medians are calculated separately for PCP and Specialty Provider groups, with allergist and pulmonologist calculated together under the grouping Specialist.
  - If a PO has both PCPs and Specialists, the median for the selected specialty type will display. An overall measure median is also calculated for both specialty types combined.
  - If a PO has only PCPs and no Specialists, only the PCP median will display.
 - If a PO has only Specialists, only the Specialist median will display.

- Medians are no longer calculated at the Provider level. Instead, when a Provider Filter is selected, medians are calculated for the appropriate Practice-level specialty type.
- Note: Choosing the **All** filter will not change the median when only one specialty type is available.
- PO and Practice identification numbers have been replaced with parenthesized labels indicating the type of practice (PCP, Specialist, Mixed).

6. **Tooltips.**

When you hover your mouse over the Measure Results and Medication Results bar graphs, tooltips will pop up, displaying the following information:

a. Patient Population
b. Measure & Measure Category (Quality, Utilization, or Medication)
c. Measure Description, including patient population
d. Selected Result
e. Median for selected filter (except for Medication Results)
f. Whether higher or lower proportions indicate better performance
g. Numerator
h. Denominator

Tooltip example. Emergency Department (Utilization Measure) for Adult Asthma patients. The measure result for this population is 1.76%, while the median is 2.27%.
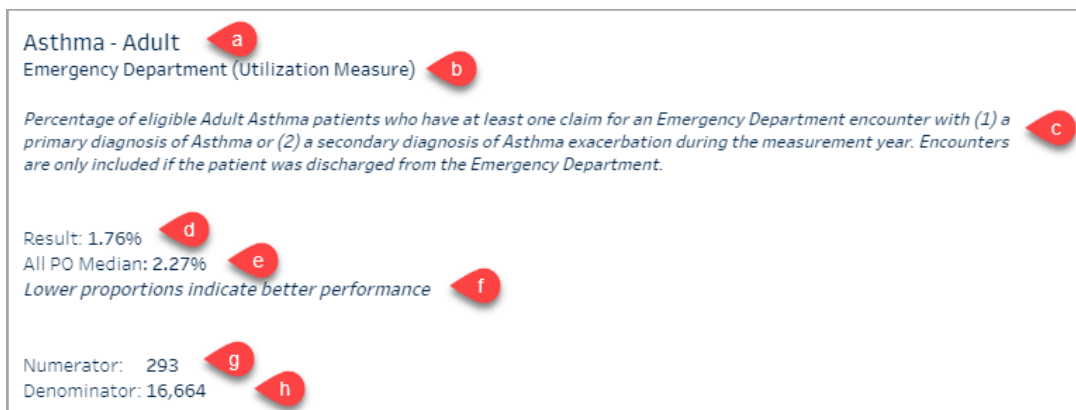
7. **Patient List**

a. Users may click on a specific Patient Population bar graph to see the Patient List, which displays patient-level results for each measure, depending on their permission level. For example, PO users may view patient-level results for all

patients in the PO, while Practice users may view patient-level results for only their practice.

b. The Patient List displays Patient Name, Population, Measure, and Patient Result.

- By default, the Patient List is sorted by Yes/No, Date, or numerator, in descending order.
- Patient Name. Users may re-sort the list by Patient Name by hovering over Patient Name column and selecting the sort icon (⊞↓).

Note: When a user switches from the default sort order to an alphabetical sort, they must reload the dashboard to revert to the default sort order.

c. Hover over the Measure Results cell for each patient to see the Tooltip with the following information:
- Patient Name
- Date of Birth
- INHALE Population
- Measure Description
- Attribution: Specialty Type, PO, Practice, Provider

d. Download the Patient List.

- Click on a specific Patient Population bar graph to see the Patient List
- Click the **Download** button.
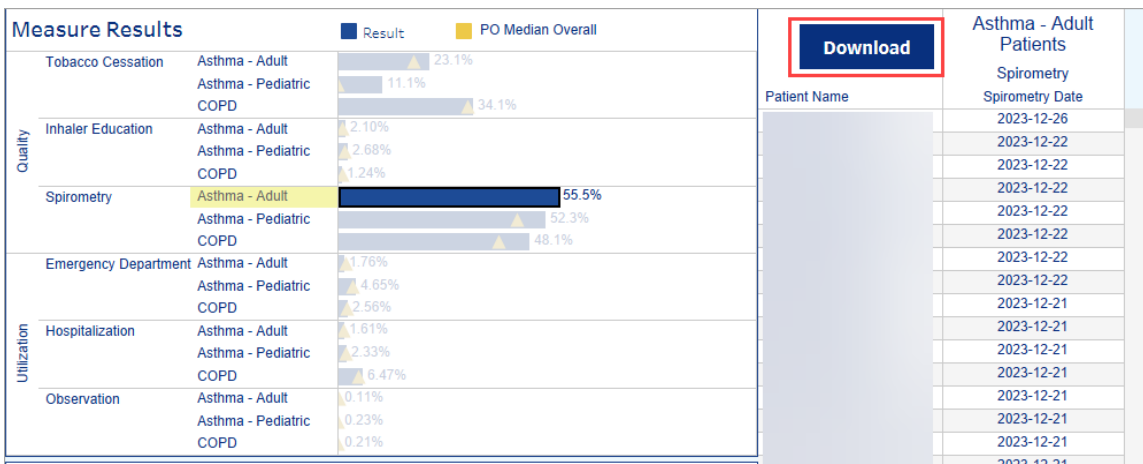
e. When the Download Crosstab window displays:
i. Select **Patient Table**
ii. Select Format: **Excel** or **CSV**
iii. Click **Download**
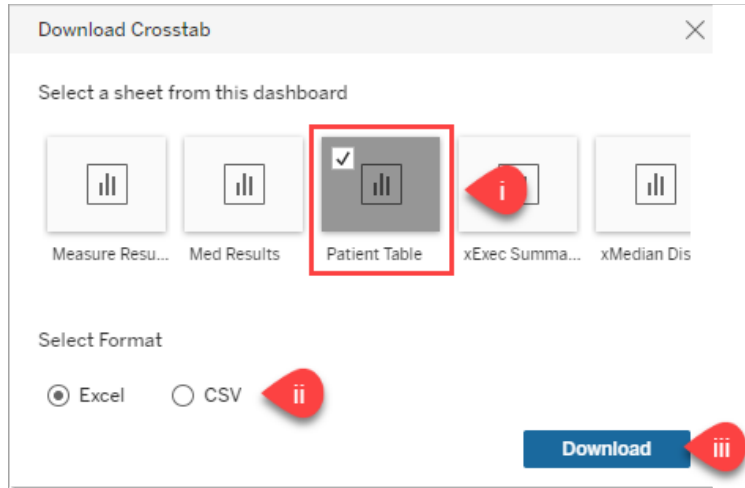
- Save the downloaded file to a local drive.
- To close the Patient List, click on the **X** above it or click away from it on another portion of the dashboard.

8. Medication Results

The Medication Results section of the dashboard has the same functionality as Measure Results, described in 4 a–c above. Click on a Medication Results bar graph to view the Patient List with patient-level results for each medication.

a. OCS Fills. Bar graphs display percentage of patients with OCS prescriptions filled for each population:
- Asthma – Adult (≥19 years of age)
- Asthma – Pediatric (at least 2 years to <19 years of age)
- COPD (≥40 years of age)

b. SABA Fills (MDI Only). Bar graphs display percentage of patients with SABA prescriptions filled for each population using a Metered-Dose Inhaler only.

Navigating the Measure Trends Tab

The Measure Trends tab, shown here, displays trend lines for **Inhaler Education** and **Tobacco Cessation** measure rates over time.
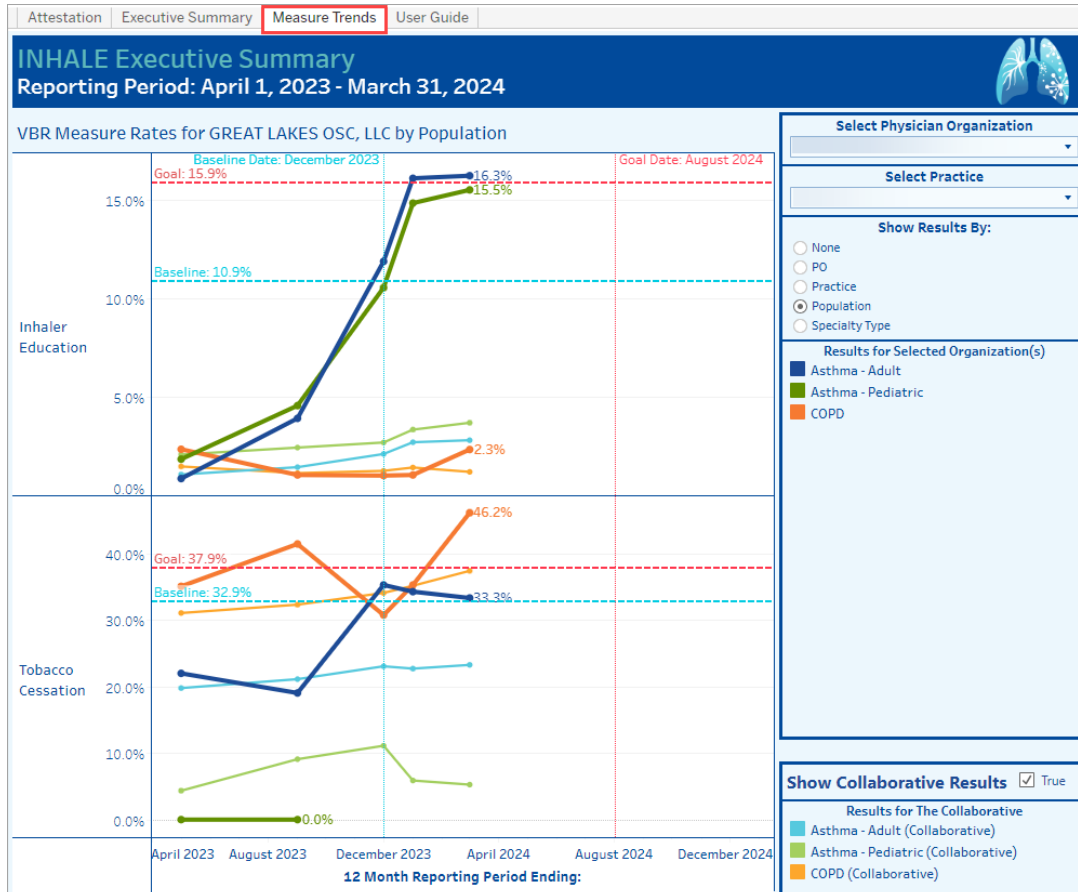
Here's how to navigate and utilize this dashboard tab.

Measure Trends Graph

Measure Rates

- Measure rate percentages appear next to the trend line endpoints for the selected organizations; however, they do not display for the Collaborative trend lines.
- Measure rates displayed pertain to the user's access level and filter selections.
  - o Physician Organization (PO) users are restricted to results for their PO.
  - o Practice users are restricted to results for their practice(s). A Practice user who selects **All** under Physician Organization and Practice will see results aggregated for the practice(s) they are allowed to see.

Graph Lines

- Dashed horizontal lines pertain to the user's PO measures:
    - *A dashed red line* indicates the PO's **Goal** for that measure
    - A *dashed blue line* indicates the PO's **Baseline** measure
- Thicker, darker trend lines show results for the selected organization(s).
- Thinner, lighter trend lines show the Collaborative Results.

Tool Tips

- Hover over each trend line data point to view the measure result in the tooltip.
- To view the measure results for the **Collaborative** trend lines, hover your mouse over the trend line data points to reveal the measure tooltips.
- Trend line data points reflect measure result percentages for each data release.
- Tooltips for each data point display the following:
    - Data date range
    - Filter selection
    - Measure result
    - Measure name

February 2023 - January 2024
For Collaborative Result
30.6% of patients received Tobacco Cessation
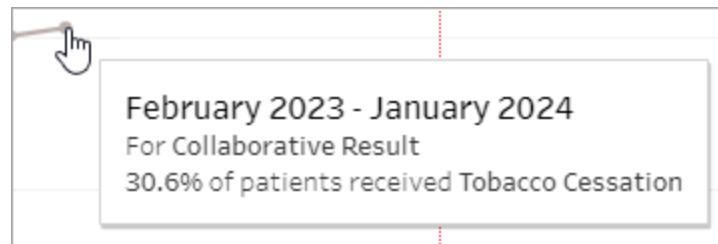
Filter Panel Selections

Users may select from four different filters on the right side of the window:

1. **Select Physician Organization**. Select from the dropdown list
2. **Select Practice**. Select from the dropdown list
3. **Show Results By**. Check or uncheck the radio button
4. **Show Collaborative Results**. Check or uncheck the **True** checkbox

Highlighting a Trend Line for a Practice, Population, or Specialty Type

To get a clearer view of an individual trend line, do the following:

1. Click the **Practice or Population or Specialty** radio button
2. Then click on the name of the individual trend line you wish to highlight.
3. The corresponding trend line will be highlighted, and the other lines will fade.
4. Click the **Practice/Population/Specialty** name again to unhighlight that trend line.
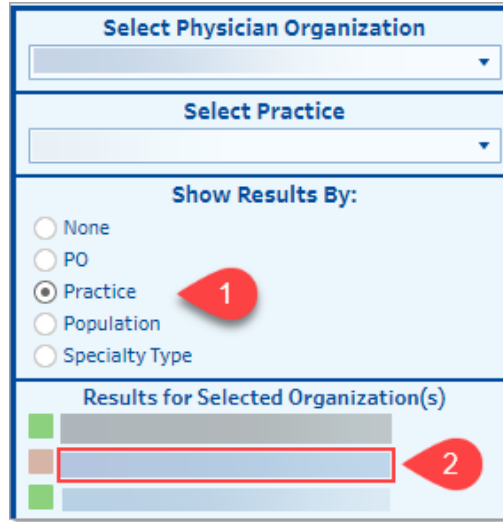
Downloading Data and Visualizations

1. To download data and visualizations, click the **Download** icon on the right side of the bottom toolbar. Choose a format from the Download popup window: Image, Data, Crosstab, PDF, or PowerPoint.

   - If a download format is grayed out, it is not available.
   - Downloads of Crosstabs, PDFs, or PowerPoints will ONLY contain data or content if the graph is currently visible on the dashboard.
   - We recommend using the default Image, Data, PDF, and PowerPoint options for downloads.

   a. **Image**. When you select **Image**, a PNG file format will be generated for download.

   b. **Data.** If the data download option is grayed out, the user should click on the area of the dashboard they wish to download data from. Different sections of the dashboard generate different data feeds.

   - *All Measure Results*. By default, if no individual measures are selected, selecting Data on the bottom toolbar will download all measures currently displayed.

   - *Individual Measure Results*. Click on bar graph of desired measure, select Data from bottom toolbar, then select **Download**.

   - Data download window.
     i. Select **Show Fields** to select or deselect fields to download.
     ii. Select **Download** to download a CSV file.
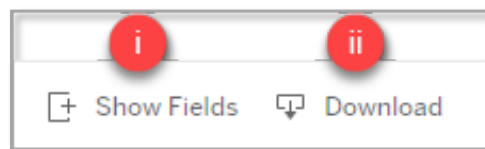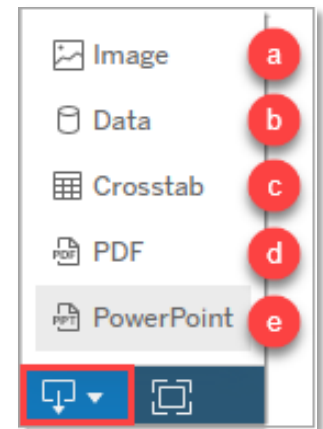
   c. **Crosstab.** When you select Crosstab, a popup window will display listing the underlying sheets that make up the current page. Select either Bar Graph Proportion or Patients (for the Patient Counts) and then click **Download**. *See note below.*
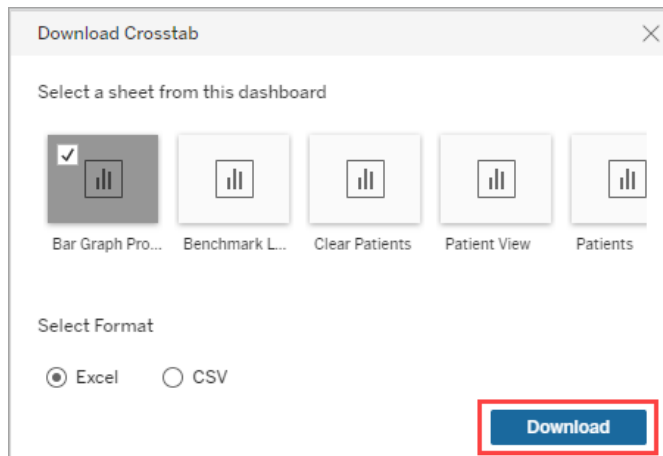
d. **PDF**. When you select PDF, a popup window will display options for which View to download (This View, Specific Sheets from this dashboard, Specific Sheets from this workbook, Scaling, Page Size, and Orientation). *See note below.*

e. **PowerPoint**. When you select PowerPoint, a popup window will display options for which View to download (This View, Specific sheets from this dashboard, Specific sheets from this workbook). *See note below.*

> *Note: Some sheets and views will appear in the Crosstab and PDF download windows that are integral to dashboard functionality, however, they do not contain relevant information. For example, the download options 'Clear Filters Patient List' and 'Title –Executive Summary' appear, however, their use will be minimal.*

2. Using Windows Explorer, navigate to the location where you would like to save the downloaded file on your PC.

3. To log out, click Close ⊠ at the top right of the dashboard tab.

Additional Documentation

Release Notes

Additional user documentation can be found on the MDC website on the *INHALE Support page*. For updates on new releases of INHALE data, see *INHALE CQI Release Notes*.

Appendix

See *Appendix A: INHALE Measures Denominator–Numerator Chart* for detailed information on the criteria for inclusion and exclusion in each measure.

INHALE Measures: Denominator and Numerator Criteria by Population

Denominator and numerator counts may vary across specific measures due to inclusion criteria such as age, enrollment, anchor month, or other measure-specific criteria.

QUALITY MEASURES

1.) All patients included in the denominator for INHALE Quality Measures meet the following criteria:
   *Commercial and Medicare Advantage patients;
   *Continuous enrollment during the measurement year with no more than 30-day gap and must be enrolled in month 12.
2.) Excluded -- Hospice, Palliative, or Expired (HPE) patients.
3.) Additional criteria for inclusion in each Quality Measure denominator and numerator are listed below.

Tobacco Cessation

Asthma - Adult

Denominator	**Patients**	The count of Adult Asthma patients, regardless of severity, who are diagnosed as tobacco users in the measurement year and are 19 years and older as of the first day of the measurement year.
Numerator	**Claims/Events**	The count of Adult Asthma patients who are diagnosed as tobacco users and have at least one claim for tobacco cessation counseling in the measurement year.

Asthma - Pediatric

Denominator	**Patients**	The count of Pediatric Asthma patients, regardless of severity, who are diagnosed as tobacco users in the measurement year and who are at least 13 years of age to less than 19 years of age as of the first day of the measurement year.
Numerator	**Claims/Events**	The count of Pediatric Asthma patients who are diagnosed as being a tobacco user who have at least one claim for tobacco cessation counseling in the measurement year.

COPD

Denominator	**Patients**	The count of COPD patients who are diagnosed as being tobacco users in the measurement year and are 40 years and older as of the first day of the measurement year.
Numerator	**Claims/Events**	The count of COPD patients who are diagnosed as being tobacco users who have at least one claim for tobacco cessation counseling in the measurement year.

Inhaler Education

Asthma - Adult
Denominator	**Patients**	The count of Adult Asthma patients in the measurement year, who are 19 years and older as of the first day of the measurement year.
Numerator	**Claims/Events**	The count of unique Adult Asthma patients with at least one claim for inhaler education billing code CPT 94664 in the measurement year.

Asthma - Pediatric
Denominator	**Patients**	The count of Pediatric Asthma patients in the measurement year, who meet the following criteria who are at least 2 years of age to less than 19 years of age as of the first day of the measurement year.
Numerator	**Claims/Events**	The count of unique Pediatric Asthma patients with at least one claim for inhaler education billing code CPT 94664 in the measurement year.

COPD
Denominator	**Patients**	The count of COPD patients in the measurement year, who are 40 years and older as of the first day of the measurement year.
Numerator	**Claims/Events**	The count of COPD patients who have at least one claim for inhaler education billing code CPT 94664 in the measurement year.

Spirometry

Asthma - Adult
Denominator	**Patients**	The count of Adult Asthma patients in the measurement year who are 19 years and older as of the first day of the measurement year and who were enrolled in the current AND prior year.
Numerator	**Claims/Events**	The count of unique Adult Asthma patients with at least 1 code for spirometry claim within the measurement year or the year prior.

Asthma - Pediatric
Denominator	**Patients**	The count of Pediatric Asthma patients in the measurement year, who are at least 5 years of age to less than 19 years of age as of the first day of the measurement year and who were enrolled in the current AND prior year.
Numerator	**Claims/Events**	The count of unique Pediatric Asthma patients with at least 1 code for spirometry claim within the measurement year or the year prior.

COPD
Denominator	**Patients**	The count of COPD patients in the measurement year, who are 40 years and older as of the first day of the measurement year and who were enrolled in the current AND prior year.
Numerator	**Claims/Events**	The count of unique COPD patients with at least one code for spirometry claimed within the measurement year or the year prior.

UTILIZATION MEASURES

1.) Utilization measures are calculated following the HEDIS rollup guidelines to the most significant outcome of the episode of care that occurs within 24 hours. This occurs in order from least to most: Urgent Care, Emergency, Observation, Inpatient stay. HEDIS General Guideline 44, ED and Observation Visits that result in an Inpatient Stay: When an ED or observation visit and an inpatient stay are billed on separate claims, the visit results in an inpatient stay when the ED/observation date of service occurs on the day prior to the admission date or any time during the admission (admission date through discharge date). An ED or observation visit billed on the same claim as an inpatient stay is considered a visit that resulted in an inpatient stay.

2.) Excluded -- utilization claims that occur the DAY AFTER the first day the patient has occurrence of Palliative Care, Hospice, or Expired (HPE).

3.) Additional criteria for inclusion in each Utilization Measure denominator are listed below.

Emergency Department

Asthma - Adult

Denominator	**Patients**	The count of Adult Asthma patients in the measurement year who are 19 years and older as of the first day of the measurement year.
Numerator	**Claims/Events**	The count of unique Adult Asthma patients with one or more ED visits with (a) a primary diagnosis of Asthma, regardless of severity, or (b) a secondary diagnosis of Asthma exacerbation.

Asthma - Pediatric

Denominator	**Patients**	The count of Pediatric Asthma patients in the measurement year who are 2 years to less than 19 years of age as of the first day of the measurement year.
Numerator	**Claims/Events**	The count of unique Pediatric Asthma patients who have one or more ED visits with (a) a primary diagnosis of Asthma, regardless of severity, or (b) a secondary diagnosis of Asthma exacerbation.

COPD

Denominator	**Patients**	The count of COPD patients in the measurement year who are 40 years and older as of the first day of the measurement year.
Numerator	**Claims/Events**	The count of unique COPD patients who have one or more ED visits with (a) a primary diagnosis of COPD, or (b) a primary diagnosis of acute respiratory failure and secondary diagnosis of COPD exacerbation (for the same visit) in the measurement year.

Hospitalization

Asthma - Adult

Denominator	**Patients**	The count of Adult Asthma patients in the measurement year who are 19 years and older as of the first day of the measurement year.
Numerator	**Claims/Events**	The count of unique patients who have one or more Inpatient Hospitalizations with (a) a primary diagnosis of Asthma, regardless of severity, (b) a secondary diagnosis of Asthma exacerbation.

Asthma - Pediatric

    Denominator   **Patients**   The count of Pediatric Asthma patients in the measurement year who are 2 years to less than 19 years of age as of the first day of the measurement year.

    Numerator   **Claims/Events**   The count of unique Pediatric Asthma patients who have one or more Inpatient Hospitalizations with (a) a primary diagnosis of Asthma, regardless of severity, or (b) a secondary diagnosis of Asthma exacerbation.

COPD

    Denominator   **Patients**   The count of COPD patients in the measurement year who are 40 years and older as of the first day of the measurement year.

    Numerator   **Claims/Events**   The count of unique COPD patients who have one or inpatient hospitalizations with (a) a primary diagnosis of COPD, or (b) a primary diagnosis of acute respiratory failure and secondary diagnosis of COPD exacerbation (for the same visit) in the measurement year.

Observation

Asthma - Adult

    Denominator   **Patients**   The count of Adult Asthma patients in the measurement year who are 19 years and older as of the first day of the measurement year.

    Numerator   **Claims/Events**   The count of unique Adult Asthma patients who have one or more Observation stays with (a) a primary diagnosis of Asthma, regardless of severity, (b) a secondary diagnosis of Asthma exacerbation in the measurement year.

Asthma - Pediatric

    Denominator   **Patients**   The count of Pediatric Asthma patients in the measurement year who are 2 years to less than 19 years of age as of the first day of the measurement year.

    Numerator   **Claims/Events**   The count of unique Pediatric Asthma patients who have one or more Observation stays with (a) a primary diagnosis of Asthma, regardless of severity, or (b) a secondary diagnosis of Asthma exacerbation in the measurement year.

COPD

    Denominator   **Patients**   The count of COPD patients in the measurement year who 40 years and older as of the first day of the measurement year.

    Numerator   **Claims/Events**   The count of unique COPD patients who have one or more observation stays with (a) a primary diagnosis of COPD, or (b) a primary diagnosis of acute respiratory failure and secondary diagnosis of COPD exacerbation (for the same visit) in the measurement year.

MEDICATION RESULTS

1.) All patients included in the denominator for INHALE Medication Results meet the following criteria:
   * *Commercial and Medicare Advantage patients;
   * *Continuous enrollment during the measurement year with no more than 30-day gap and must be enrolled in month 12.
2.) Excluded -- Hospice, Palliative, or Expired (HPE) patients.
3.) Additional criteria for inclusion in each Medication Results denominator and numerator are listed below.

OCS Fills

Asthma - Adult

Denominator	**Patients**	The count of Adult Asthma patients, regardless of severity, with a paid pharmacy claim for any prescription in the measurement year who are 19 years and older as of the first day of the measurement year. Excluded -- patients with conditions known to be associated with chronic OCS.
Numerator	**Claims/Events**	The count of Adult Asthma patients, regardless of severity, in denominator with 0, 1 or 2+ OCS medication claims in the measurement year.

Asthma - Pediatric

Denominator	**Patients**	The count of Pediatric Asthma patients, regardless of severity, with a paid pharmacy claim for any prescription in the measurement year who are 2 to less than 19 years as of the first day of the measurement year. Excluded -- patients with conditions known to be associated with chronic OCS.
Numerator	**Claims/Events**	The count of Pediatric Asthma patients, regardless of severity, in denominator with 0, 1 or 2+ OCS medication claims in the measurement year.

COPD

Denominator	**Patients**	The count of COPD patients with a paid pharmacy claim for any prescription in the measurement year who are ages 40 years and older as of the first day of the measurement year. Excluded -- patients with conditions known to be associated with chronic OCS.
Numerator	**Claims/Events**	The count of COPD patients in denominator with 0, 1 or 2+ OCS medication claims in the measurement year.

    12/21/2023   INHALE_Measures_Denominator-Numerator_Chart.xlsx

SABA

Asthma - Adult

Denominator	**Patients**	The count of Adult Asthma patients ages 19 and older who had a paid prescription claim for any prescription in the measurement year.
Numerator	**Claims/Events**	The count of patients who are identified in the denominator, and are categorized as having SABA inhaler medication(s) filled 0-2, 3-5, or 6+ times total in the measurement year.

Asthma - Pediatric

Denominator	**Patients**	The count of Pediatric Asthma patients ages 5 to less than 19 years who had a paid prescription claim for any prescription in the measurement year.
Numerator	**Claims/Events**	The count of patients who are identified in the denominator, and are categorized as having SABA inhaler medication(s) filled 0-2, 3-5, or 6+ times total in the measurement year.

COPD

Denominator	**Patients**	The count of COPD patients ages 40 and older who had a paid prescription claim for any prescription in the measurement year.
Numerator	**Claims/Events**	The count of patients who are identified in the denominator, and are categorized as having SABA inhaler medication(s) filled 0-2, 3-5, or 6+ times total in the measurement year.