

The Mapping Medicare Disparities Tool

Frequently Asked Questions

The Mapping Medicare Disparities (MMD) Tool identifies differences between sub-groups (e.g., racial and ethnic populations) in health outcomes, utilization, and spending. This document presents Frequently Asked Questions (FAQ) as they relate to the MMD Tool and its use.

General

- What is the MMD Tool?
- Why is there a need for the MMD Tool?
- How can I access the MMD Tool?
- Who should use the MMD Tool?
- Will the MMD Tool be updated in the future?
- How may I provide feedback on the MMD Tool?
- Where can I find additional information about the MMD Tool?

Data Background and Derivations

- What measures and conditions are included in the MMD Tool?
- Where does the underlying data in the MMD Tool come from?
- What are Research Identifiable Files?
- What Master Beneficiary Summary File information is used by the MMD Tool?
- What has been done to protect the privacy of Medicare beneficiaries?
- How is a beneficiary identified by the MMD Tool as having chronic conditions?
- What are ICD-9 procedure codes?

Using the MMD Tool

- Why can't I see county-lines when viewing data in state mode?
- How do I save the map I created?
- How do I export or download the underlying data presented in the map I created?
- How do I zoom in or out on a specific location in the map I created?

Interpreting Results

- How can I compare differences in measures?
- How do I interpret the information presented when “*Within County Differences*” or “*Within State Differences*” is chosen in the Analysis tab?
- How do I interpret the information presented when “*Differences from State Average*” is chosen in the Analysis tab?
- How do I interpret the information presented when “*Differences from National Average*” is chosen in the Analysis tab?
- How do I compare racial and ethnic differences at the county-level to racial and ethnic differences at the state-level?
- Why are some results missing?

GENERAL

Q. What is the MMD Tool?

- A. The Mapping Medicare Disparities (MMD) Tool is an interactive, web-based tool that identifies disparities between sub-populations (e.g., racial and ethnic groups) in health outcomes, utilization, and spending. The MMD Tool presents health-related measures from Medicare claims by sex, age, dual-eligibility for Medicare and Medicaid, race and ethnicity, and state and county. The MMD Tool provides users with a quick and easy way to identify areas with large numbers of vulnerable populations. Users can identify regions and populations where Medicare outcomes differ from state or national averages, thereby supporting the development of targeted strategies and programs to eliminate disparities that exist between different populations (e.g. racial and ethnic groups). The MMD Tool offers data on chronic disease prevalence, Medicare spending, hospital and emergency department utilization, preventable hospitalizations, readmissions, and mortality rates for Medicare beneficiaries with various chronic conditions, a disability, or end stage renal disease.

Q. Why is there a need for the MMD Tool?

- A. Chronic diseases, such as diabetes and cardiovascular diseases, pose a significant problem in the United States, resulting in substantial morbidity, mortality, disability, and cost. In 2012, two-thirds of Medicare beneficiaries had multiple chronic conditions and accounted for 93 percent of Medicare spending. Racial and ethnic minority communities are disproportionately affected by the disparities in disease, and the burden of disease differs by where individuals live. Understanding geographic differences in disparities is important to informing policy decisions and efficiently targeting populations and geographies for interventions.

Q. How can I access the MMD Tool?

- A. The MMD Tool can be found [here](#). The technical documentation is available [here](#). The [MMD Tool Overview](#) provides more information on the purpose and uses of the MMD Tool.

Q. Who should use the MMD Tool?

- A. The MMD Tool is a useful resource for government agencies, policy makers, researchers, community-based organizations, health providers, Quality Innovation Networks-Quality Improvement Organizations (QIN-QIOs), and the general public to identify and explore different facets of Medicare chronic disease disparities. It can also be used by researchers as a starting point to identify important health-related questions that impact the Medicare population. Users with a wide range of data sophistication may take advantage of the breadth of information contained in the MMD Tool, as it visually summarizes large amounts of data in a simple format.

Q. Will the MMD Tool be updated in the future?

- A. The MMD Tool will be improved and enriched over time. Enhancements will take into consideration users' suggestions for improvement and stakeholder feedback when possible. Planned additions include adding data for more recent years to allow for trending analyses, and possibly adding measures for other chronic conditions.

Q. How may I provide feedback on the Mapping Medicare Disparities Tool?

- A. Questions and comments can be submitted to mapping-medicare-disparities@norc.org. Questions will be answered in a timely manner and suggestions for enhancements will be taken under consideration.

Q. Where can I find additional information about the MMD Tool?

- A. For additional details about the MMD Tool, please review the [MMD Tool Overview](#) and the [MMD Tool Technical Documentation](#).

Data Background and Derivations

Q. What measures and conditions are included in the MMD Tool?

- A. The MMD Tool includes nine health outcome measures with information on up to 18 specific chronic conditions (based on International Classification of Diseases, 9th Revision, Clinical Modification [ICD-9] billing codes) and allows the user to examine the prevalence of multiple chronic conditions grouped into four categories (i.e., 0, 1, 2, and 3 or more). Additionally, the MMD Tool includes information on the prevalence, costs, and hospitalizations of beneficiaries with end stage renal disease and/or a disability). For a complete list of the chronic conditions and measures presented by the MMD Tool, as well as the data and methodology used, refer to the [MMD Tool Overview](#) and the [MMD Tool Technical Documentation](#).

Q. Where does the underlying data in the MMD Tool come from?

- A. The data used in the MMD Tool are based on CMS administrative enrollment and claims data for Medicare beneficiaries enrolled in the fee-for-service program. These data are available from the [CMS Chronic Condition Data Warehouse \(CCW\)](#), a database with 100 percent of the Medicare enrollment and fee-for-service claims data.

The prevalence rates are based on 100percent of Part A and Part B claims. The hospital utilization, preventable hospitalization, and readmission and mortality rates are based on 100 percent inpatient claims, while emergency department utilization rates are based on 100percent of inpatient and outpatient claims. For more information, refer to the [MMD Tool Technical Documentation](#).

Q. What are Research Identifiable Files?

- A. Research identifiable files contain beneficiary-level protected health information. These files have been reviewed by CMS's Privacy Board to ensure that the beneficiary's privacy is protected and the need for identifiable data is justified.

Q. What Master Beneficiary Summary File is used by the MMD Tool?

- A. The MMD Tool uses the following Beneficiary Summary File information:
- State: A Medicare beneficiary's state of residence is based upon the state code, which is provided by the Social Security Administration (SSA).
 - County: A Medicare beneficiary's county of residence is based upon both the state and county codes; which are provided by the Social Security Administration (SSA).
 - Age: A Medicare beneficiary's age is provided by the Social Security Administration (SSA). The MMD Tool categorizes beneficiaries into four age groups: those aged < 65 years, ages 65 through 74 years, ages 75 through 84 years, and those aged 85 years and older.
 - Sex: A Medicare beneficiary's sex is classified as male/female.
 - Dual eligibility: A Medicare beneficiary receiving full or partial Medicaid benefits in any month in the given calendar year is classified as dual eligible by the MMD Tool.
 - Race and ethnicity: A Medicare beneficiary's race and ethnicity is based on the variable imputed race definition created by the Research Triangle Institute (RTI). [RTI's race definition](#) improves on the SSA classification of a beneficiary's race and ethnicity which is designated at birth. The RTI race variable imputes race for Hispanic and Asian/Pacific Islander classifications based on Census surname lists for Hispanic and Asian/Pacific Islander origin, as well as geography.¹ The race and ethnicity classifications are: Non-Hispanic White, Black or African American, Asian/Pacific Islander, Hispanic, and American Indian/Alaska Native.

Q. What has been done to protect the privacy of Medicare beneficiaries?

- A. CMS is obligated by the federal Privacy Act, 5 U.S.C. Section 552a, and the HIPAA Privacy Rule, 45 C.F.R. Parts 160 and 164, to protect the privacy of individual beneficiaries and other persons. The MMD Tool performs a series of checks and data suppression decisions to maintain beneficiary confidentiality and privacy. If the study population for the user's chosen set of beneficiary characteristics is less than 11 beneficiaries, the MMD Tool will not display the chosen domain or measure. If the number of beneficiaries for the numerator of a measure (e.g., beneficiaries who are hospitalized) is less than three but greater than zero, the MMD Tool will display 0 percent. Additionally, the underlying data in the MMD Tool is certified as de-identified according to the HIPAA Privacy Rule.

¹ Eicheldinger, C and Bonito, A. Health Care Financing Review/Spring 2008/Volume 29, Number 3.

Q. How is a beneficiary identified by the MMD Tool as having a chronic condition?

- A. A Medicare beneficiary is considered to have a chronic condition by the MMD Tool if the individual has a claim in any of the six CMS Research Identifiable Files indicating that the beneficiary received a service or treatment for a specific condition, according to the CMS CCW or CDC methodology. These methodologies call for use of diagnosis codes from the ICD-9 to identify claims. Detailed information on the identification of these conditions is available from the [CCW](#) and the [CDC](#).

Q. What are ICD-9 procedure codes?

- A. ICD-9 diagnosis codes are a set of codes used by physicians, hospitals, and allied health workers to indicate diagnosis for all patient encounters in order to improve statistical tracking of diseases.

Using the MMD Tool

Q. Why can't I see county-lines when viewing data in state mode?

- A. You can choose to view aggregate state or county-specific data. If you're interested in viewing data for counties, select *County* from the **Geography** drop-down menu displaying county demarcations.

Q. How do I save the map I created?

- A. To save or export your map, take a screen-shot of the MMD Tool and save it as a picture.

If you're using a Windows operating system, a screen-shot can be taken by completing the following steps:

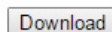
- Step 1. Click the browser window you want to save (i.e., the window with the MMD Tool open).
- Step 2. Hold Alt + Print Screen on your keyboard.
- Step 3. Hold Ctrl + V after opening Microsoft Paint or Microsoft Word.

If you're using a Mac operating system, a screen-shot can be taken by completing the following steps:

- Step 1. Click the browser window you want to save (i.e., the window with the MMD Tool open).
- Step 2. Hold Command + Shift + 3 on your keyboard.
- Step 3. The map created by the MMD Tool will be automatically saved to your desktop.

Q. How do I export or download the underlying data presented in the map I created?

- A. To export/download the underlying data presented in your map, click on the button underneath the **Comparison Race** tab.



Q. How do I zoom in or out on a specific location in the map I created?

- A. The MMD Tool provides you with two distinct options for zooming in/out.

If you're using a computer with a mouse, the zoom feature can be utilized by completing the following steps:

Zoom In – Click on the county/state you wish to enlarge. Hold Ctrl and push the scroll wheel up (away from you) on the mouse. Each push of the scroll wheel will increase the zoom factor by 10 percent.

Zoom Out – Hold Ctrl and pull the scroll wheel down (toward you) on the mouse. Each pull of the scroll wheel down will decrease the zoom factor by 10 percent.

If you're using a computer without a mouse, the zoom feature can be utilized by completing the following steps:

Zoom In – Click on the county/state you wish to enlarge. With one finger firmly placed on the TouchPad, drag a separate finger away from the first on the TouchPad. Each time you drag your two fingers apart, you will increase the zoom factor by 10 percent.

Zoom Out – With one figure firmly placed on the TouchPad, drag a separate finger towards the first (*in a pinching motion*) on the TouchPad. Each time you *pinch* your two fingers together, you will decrease the zoom factor by 10 percent.

Interpreting Results

Q. How can I compare differences in measures?

- A. When an option other than *Base Measure* (under the **Analysis** drop-down menu) is selected, you can choose to visualize differences between racial/ethnic groups, thereby comparing health outcomes, spending or utilization.

Q. How do I interpret the information presented when “Within County Differences” or “Within State Differences” is chosen in the Analysis tab?

- A. If you select *Within County Differences* or *Within State Differences* in the **Analysis** tab, your map will display three values when you hover over a specific county (or state, depending on your selection in the **Geography** tab). The first value (A) presented in the summary box is the rate calculated for the chosen racial and ethnic group selected in the **Race and ethnicity** tab. The second value (B) is the rate calculated for the chosen racial and ethnic group selected in the **Comparison Race and ethnicity** tab. The difference between the first rate (A) and the second rate (B) is displayed in the third row (A – B = C). A positive value indicates a county or state in which the chosen racial and ethnic

group selected in the **Race and ethnicity** tab performs worse than the chosen racial and ethnic group selected in the **Comparison Race and ethnicity** tab. A negative value indicates a county or state in which the chosen racial and ethnic group selected in the **Race and ethnicity** tab performs better than the chosen racial and ethnic group selected in the **Comparison Race and ethnicity** tab. For example, the MMD Tool shows that in 2012, black Medicare beneficiaries in Wayne County, Michigan experienced 24.1 hospitalizations for heart failure per 1,000 beneficiaries (A). The rate for whites in the same county was 16.1 per 1,000 beneficiaries (B), resulting in a difference of eight more hospitalizations per 1,000 (C) experienced by black Medicare beneficiaries within that county.

Q. How do I interpret the information presented when “Differences from State Average” is chosen in the Analysis tab?

- A. If you select *Differences from State Average* in the **Analysis** tab, your map will display three values when you hover over a specific county. The first value (A) presented in the summary box is the county’s rate based on the selections made in the patient characteristics tabs (i.e., **Sex, Age, Dual Eligibility, and Race and ethnicity**). The second value (B) is the state’s average rate calculated using the same patient characteristics selected to calculate the county’s rate. The difference between the county’s rate (A) and the state’s rate (B) is displayed in the third row ($A - B = C$). A positive value indicates a county that performs worse than the state’s average. A negative value indicates a county that performs better than the state’s average. For example, the MMD Tool shows that in 2012, Medicare beneficiaries in Wayne County, Michigan experienced approximately 19 hospitalizations for heart failure per 1,000 beneficiaries (A). The state average was 14 hospitalizations for heart failure per 1,000 beneficiaries (B). Thus, the difference between the county and state (C) was five hospitalizations per 1,000 beneficiaries—an instance where the county performed worse than the state average.

Q. How do I interpret the information presented when “Differences from National Average” is chosen in the Analysis tab?

- A. If you select *Differences from National Average* in the **Analysis** tab, your map will display three values when you hover over a specific county or state. The first value (A) presented in the summary box is the county’s or state’s rate based on the selections made in the patient characteristics tabs (i.e., **Sex, Age, Dual Eligibility, and Race and ethnicity**). The second value (B) is the national average rate calculated using the same patient characteristics selected to calculate the county’s or state’s rate. The difference between the county’s or state’s rate (A) and the national rate (B) is displayed in the third row ($A - B = C$). A positive value indicates a county or state that performs worse than the national average. A negative value indicates a county or state that performs better than the national average. For example, if users compare Michigan’s rate of hospitalizations from heart failure in 2012 to the national average, they will find that the state’s rate of 14.2 hospitalizations per 1,000 beneficiaries (A) minus the national rate of 1.7 hospitalizations per 1,000 beneficiaries (B) equals a difference of 12.5 more hospitalizations per 1,000 beneficiaries in Michigan (C)—an instance where the state performs worse than the national average.

Q. How do I compare racial and ethnic differences at the county-level to racial and ethnic differences at the state-level?

A. Comparing disparities at the county- and state-levels is a multi-step process.

First, select *county* from the **Geography** tab. Then, compute “*Within County Differences*” by selecting *Within County Differences* in the **Analysis** tab; your map will display three values when you hover over a specific county. The first value (A) presented in the summary box is the rate calculated for the chosen racial and ethnic group selected in the **Race and ethnicity** tab. The second value (B) is the rate calculated for the chosen racial and ethnic group selected in the **Comparison Race and ethnicity** tab. The difference between the first rate (A) and the second rate (B) is displayed in the third row ($A - B = C$).

Next, select *state* from the **Geography** tab. Then, compute racial and ethnic “*Within State Differences*” by selecting *Within State Differences* in the **Analysis** tab; your map will display three values when you hover over a specific state. The first value (A) presented in the summary box is the rate calculated for the chosen racial and ethnic group selected in the **Race and ethnicity** tab. The second value (B) is the rate calculated for the chosen racial and ethnic group selected in the **Comparison Race and ethnicity** tab. The difference between the first rate (A) and the second rate (B) is displayed in the third row ($A - B = C$).

Then, compare the “*Within County Differences*” found in the first step to the “*Within State Differences*” found in the second step.

Q. Why are some results missing?

A. In order to maintain beneficiary confidentiality and privacy, the MMD Tool suppresses a county’s or state’s rate or cost if the size of the sub-population is too small. If the study population for the user’s chosen set of beneficiary characteristics is less than 11 beneficiaries, the MMD Tool will not display the chosen domain or measure. If the number of beneficiaries for the numerator of a measure (e.g., beneficiaries who are hospitalized) is less than three but greater than zero, the MMD Tool will display 0 percent.