

Variation in Quality Measures: Feedback from Colorado Leaders

Agenda

Wednesday, October 18, 2017 9:00a.m. – 11:00a.m COPIC Mile High Room 7351 E Lowry Blvd Denver, CO 80230

Ready Talk: https://cc.readytalk.com/r/of0iltruomt8&eom Call-in: 1.866.740.1260; Access Code 9533694

Purpose of this meeting: Present information on quality measures variation to local community stakeholders. Receive feedback on potential systemic factors that might be correlated with the observed variations.

Торіс	Lead Presenter	Time
Welcome, introductions and purpose of meeting	Ana English and Jonathan Mathieu	9:00am
Overview of NRHI and AHRQ grant Handout I	Stacy Donohue	9:15am
Overview of the HDSA project Handout 2	Paul McCormick and Maria de Jesus Diaz	9 :25am
Discussion of Findings: Handouts 3 – 5	Tamaan Osbourne-Roberts	9:35am
Wrap-up and next steps	Ana English and Jonathan Mathieu	10:50am

Handouts:

- I. Health Care Delivery Systems (HDSA) Project 2 Executive Summary
- 2. HDSA technical process description
- 3. Quality Measures snapshots by state
- 4. Quality Measures by geographical region
- 5. CMS county type designations



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Regional Healthca mprovement Healthcare Delivery Systems Analysis

The Network for Regional Healthcare Improvement and four of its members in Colorado, Massachusetts, Oregon and Utah, are partnering with the National Bureau of Economic Research (NBER) and Harvard University in a study funded by the Agency for Healthcare Research and Quality (AHRQ). The goal of this study is to better understand the characteristics of delivery systems to create a national model that contributes to better health care at lower costs.

This project, called Healthcare Delivery Systems Analysis (HDSA), is one of six projects being facilitated through the U19 study by the National Bureau of Economic Research and Harvard University. The aims of this specific project are as follows:

- Aim 1: Assemble data on use of Patient Centered Outcomes Research (PCOR)based evidence and related clinical and economic outcomes in these states and over time, and compare these outcomes across areas.
- Aim 2: Merge data on use of PCOR-based evidence and related clinical and economic outcomes with data from the Enhanced System Database derived from national data, and supplement that data with area-specific information.
- Aim 3: Use variation within and across states to examine the impact of different delivery systems on use of PCOR-based evidence and related clinical and economic outcomes.

This project required calculating selected quality measures using 2014 Commercial All-Payers Claims Data (APCD) collected locally in each of the four states and incorporating per capita spend data by age and gender. The opportunity and challenge of a multi-state approach is to maintain a robust and rigorous research approach across four different organizations and their different all-payer claims data sources so that reasonable comparisons of quality and cost performance measures can be made. This required standardization across data sets, measures, SAS code, data analysis, and other elements. Reaching a common understanding and adoption of a uniform and collective approach required the state partners to understand and document the initial state of the data available to each organization, where variation existed between the states' data, options for addressing that variation, and agreement on how to do so.

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We are confident that the data presented accurately reflect the claims submitted to commercial payers for payment in each state for the 2014 reporting period. When interpreting and comparing cost and quality measure results, users should keep the following points in mind.

- Results of quality measures such as these that are calculated using only administrative (claims) data will appear lower than rates calculated using the hybrid method that includes sampling medical records. Published results, such as in HEDIS[®] Quality Compass, may show higher rates due to hybrid data collection.
- 2. Measure results are affected by differences among the states in policies and incentives. For example:
 - Results show that Colorado had a significantly higher score in 2014 on the developmental screening rate in the first 36 months of life than the other states in this study (62%, compared to the next highest rate 37% in Massachusetts and the lowest rate, 13% in Utah). Several state agencies in Colorado (including the Colorado Office of Early Childhood, the Colorado Department of Health Care Policy and Financing, the Colorado Department of Public Health and Environment and the Colorado Department of Education) promote programs that involve the use of developmental screening tools and providers are reimbursed by commercial and public health plans for conducting developmental screening. The states are continuing to evaluate whether primary care providers may be conducting equivalent screenings using different methods (i.e. charting) or different codes to report or document them. States are also looking into variation of reimbursement amounts.
 - In Oregon, three measures in this study (Developmental Screening, Adolescent Well-Care Visits, and Follow-up care for children prescribed Attention Deficit Hyperactivity Disorder (ADHD) medication) have been included in Coordinated Care Organization incentive measures since 2013, but incentives were specific to Medicaid performance. Due to this focus, Oregon's status on these measures is improving for the commercial populations as well, but remains low when compared to other states.
 - In Massachusetts, commercial insurance contracts, such as the Blue Cross Blue Shield (BCBS) Alternative Quality Contract (ACQ) have placed providers a risk for several of these quality measures. These risk contracts have drawn attention to the importance of HEDIS-type quality measures, leading practices to act, including the choice of specific diagnosis and procedure codes on claims and reaching out to patients who have not been in for a visit. Additionally, the large not-for-profit commercial health plans in Massachusetts have consistently been nationally ranked among the top ten (and often the top five or three) NCQA commercial plans. [For example, in 2014-2015, four of the

top five plans were from Massachusetts]. Massachusetts health plans have invested significant resources to help providers and thereby maintain these high national rankings to remain competitive in the local market. This investment includes the development of expertise in HEDIS[®] measure reporting. The relatively high rates for Massachusetts in the table below reflect this.

- The Massachusetts provider market is dominated by several large networks centered around expensive academic medical centers, such as Partners and Beth Israel Deaconess. These AMC-centered networks enjoy significant market share but also can negotiate generous contracts with local payers. This cycle of market dominance and expensive insurance contracts accounts for some of the price differential between Massachusetts and other states.
- 3. Measures of per capita cost based on claims data vary among states due to many factors. One example is that substance use and disorder treatment claims have been historically systematically suppressed in Colorado and Oregon, aligning with CMS recommendations. In Utah and Massachusetts, suppression is up to the payer. However, the difference this makes in the overall PMPM is likely +/- 1%.
- 4. Although as noted above there are factors that create between state differences, geographic regions of differing population density (i.e. large metro, metro, rural) comparisons across regions within each state and between healthcare systems within each state would be considered valid. Cross state comparisons of these geographic groups can be made if each is standardized to the state overall result.
- 5. Measures of Hospital Admissions for Ambulatory Care Sensitive Conditions are difficult to compare in Commercial populations because the events are very rare. These events are much more frequent, and the measure results are more robust, in the Medicare-eligible population.

The next steps for this project include continuing to assess reasons for variation within and across states through meetings with multi-stakeholder groups in each state. We will also explore stakeholders' thoughts on what influence health care systems could have on the measures. The consensus measure set studied:

- 1. Avoidance of antibiotic treatment in adults with acute bronchitis
- 2. Follow-up care for children prescribed Attention Deficit Hyperactivity Disorder (ADHD) medication
- 3. Anti-depressant medication management
- 4. Adolescent well-care visits
- 5. Chlamydia screening
- 6. Developmental screening for the first 36 months of life

7. Hospital admissions for ambulatory-sensitive conditions- acute and chronic composite

HDSA Project 2 within NBER AHRQ grant: Technical Process Description

In Year 1 of the project (September 2015 – August 2016), the available APCD data were compared and the measures were selected but not calculated. See Appendix A for the list of measures.

In Year 2 (September 2016 – August 2017), a Technical Lead was added to the project to coordinate the standardization of the work among the states and to streamline the process of calculating measures. This report summarizes the technical work that led to the successful calculation of the desired comparable measures.

Role	Colorado	Massachusetts	Oregon	Utah			
Analyst	Paul McCormick	Char Kasprzak	Ed Davies	Brantley Scott			
Oversight	Maria de Jesus Diaz-Perez	Jim Courtemanche	Doug Rupp	Rita Hanover			
Project Manager	Emily Levi, NRHI						
Technical Lead	Jud	y Loren, Compass H	ealth Analytics				

Composition of the Technical Team:

Principal Investigators:

Colorado	Massachusetts	Oregon	Utah	NRHI
Jonathon Mathieu	Barbra Rabson	Meredith Roberts Tomasi	Sharon Donnelly	Elizabeth Mitchell
	Project Directo	or: Stacy Donohu	ie, NRHI	

Approach

The challenge was to calculate common measures on disparate data sources and ensure comparable results. The measures themselves were technically complex (mostly HEDIS[®] measures). The technical team had to choose between writing different versions of the

measure code to suit each state's data source, or building a consistent data structure across states that would enable all states to execute the same measure code.

In considering which approach to take, the team recognized that calculating measures on any data source requires two areas of expertise: detailed understanding of the data source and detailed understanding of the measure specifications. The first approach, writing different versions of the measure code to suit each state's data source, entails every state team having expertise in both their own data and all the measures. Using the second approach, each state still needed to understand their own data, but they could share the burden of writing measure code.

In addition, three of the four states had experience using the HealthPartners Total Cost of Care package (<u>https://www.healthpartners.com/hp/about/tcoc/toolkit/index.html</u>) which uses the common data structure/common code approach. Based on the success of that experience, as well as the increase in efficiency of human capital, the team decided to go the latter route.

Although producing and storing each state's APCD in a common data structure in addition to their domestic structure requires additional computer storage space, that is relatively inexpensive compared to human resources needed to code measures.

<u>Process</u>

1) Identify the portion of the APCD that should be used to calculate quality measures

APCDs consist of submissions from payers of eligibility and claims information for a population of members. Some states mandate submissions from payers domiciled in the state, regardless of member residence. Other states mandate submission from any payer who insures a significant number of state residents. Some APCDs consist of voluntary submissions from payers incented to participate by the data and analytic products produced and made available to them.

The specific fields that payers are required to submit vary across states. Payers sometimes fail to meet requirements, so the completeness and accuracy of required fields can also vary across payers within a state. The most problematic fields for this research were those related to cost and provider identification. The data quality of other fields needed for the correct calculation of quality measures, such as DRG, ICD9/10 procedure codes, Admission Type and Source, CPT/HCPCS codes on outpatient claims, and Place of Service codes, also varies across payers.

To calculate quality measures correctly and fairly so that the results reflect the actual situation in each state, it is essential to identify the population for which

the APCD contains complete medical eligibility and claims information. Both eligibility data and claims data are required to ensure that members with coverage but no claims for services are also included in appropriate denominators. Eligibility files also require identification of the type of coverage to exclude plans that do not cover all of the services being measured.

APCDs can contain the following types of plans that are inappropriate for inclusion in quality measure calculations because they will not contain complete information about the member's healthcare:

- 1) Supplemental plans—These products help cover a member's responsibility portion once the primary payer has contributed its share.
- Limited liability plans—These products cover some claims, but they have a ceiling on how much they will pay. Once that ceiling is reached, the payer no longer collects or processes claims.
- Specific service plans—Members who have coverage only through one of these plans should not be included in the denominator of any quality measure.
 - a. Behavioral health only plans
 - b. Vision only plans
 - c. Dental plans
- 4) Student plans—Campus-based plans cover students only while at school.

In addition to the limitations described above, APCDs often have payer-specific quality issues that limit the completeness of information in a measurement period. For example, a payer may be missing a calendar period (month, quarter) of data.

For Year 2 of HDSA, each state conducted extensive analysis targeted at the records and fields needed for quality measures. They then isolated the appropriate populations to be used for the measure calculations.

After completing this process, the states have confidence that even though they don't have the complete commercial population in the dataset, the results of measure calculations fairly represent what is happening with their commercially-insured populations.

2) Construct the Uniform Data Store

The Technical Team designed a Uniform Data Store (UDS) that streamlined the common calculation of measure results while minimizing the need for extra computer storage space. The UDS contained all of the fields necessary for the set of measures chosen for this project.

The Team agreed on the use of SAS software datasets as the technology. The UDS specified the field names, types and lengths, as well as the rules for populating the UDS from different data sources.

3) Map the provider specialty

Some quality measures rely on knowing the specialty of the servicing provider on each claim. This can be a challenge with an APCD because not all payers supply the NPI (national provider identification number) on all claims, and most use proprietary ways of identifying the specialty. In the quality control (QC) process for this project, payers who did not supply a minimum level of NPIs were excluded from analysis. For those who did supply NPI on the majority of claims, we still needed to determine the specialty of the provider using a consistent domain across payers.

The NPPES (National Plan and Provider Enumeration System) makes available a downloadable file that lists all active NPIs along with names, addresses, and taxonomy (specialty) codes. Taxonomy codes are very detailed (838 possible values). Listing all the possible values that correspond to, for example, primary care, is arduous. Instead, the team used a map from Taxonomy to the Centers for Medicare & Medicaid Services (CMS, 2-digit specialty code available here: https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/MedicareProviderSupEnroll/downloads/JSMTDL-08515MedicarProviderTypetoHCPTaxonomy.pdf. The value stored in the UDS was the 2-digit code so that the programs to calculate quality measures could work with shorter lists.

4) Create SAS formats from HEDIS[®] value sets

Users who license the HEDIS[®] measure specifications can download an Excel workbook that supplies lists of codes used in the calculation of HEDIS[®] measures. SAS formats are memory-mapped lookup tables that make it very easy to select appropriate records for each value set. The Technical Team built and stored SAS formats for the HEDIS[®] value sets used in the specific measures designated for this project. National Drug Codes (NDC) lists were handled similarly.

5) Write measure code

Each state took on the responsibility for writing SAS programs for 2 of the 8 quality measures identified for the project. Massachusetts experienced a delay in receiving their APCD; while they were conducting the QC process, Oregon assisted them with their measure code.

The code for each measure was drafted by the responsible state. The Technical Lead reviewed and tested the code and provided feedback. Code was then

shared among the states, leading to additional feedback. In the end, the team had a SAS program for each of the measures.

6) Run measure code and calculate results

States ran the SAS programs to calculate measures on their UDS and saved the results at the denominator unit level (usually this is the patient level, but some measures are at the event level). This positioned the states to calculate measure results not only at the state level but for any characteristic that could be associated with a member such as geographic area (county type) or attributed system.

7) Create age/sex aggregates for risk calculation

Besides the quality measures, this project required a measure of average cost, adjusted for the age/gender mix of each state. To calculate the adjusters, each state had to produce tables of medical and pharmacy eligibility and cost for age/gender cells (age in 5-year increments). The states sent these to the Technical Lead, who combined them to calculate an unweighted risk factor for each cell (ratio of average cost for each cell to the overall average cost).

The states then applied these adjustment factors to calculate average risk. Raw average cost divided by the average risk yields age/gender adjusted cost.

8) Create geographic divisions within each state

To gain some additional insight into differences among the state participants in this project, the researchers requested cost and quality measure results for subdivisions of the states defined by the urban/rural nature of the patient's place of residence. In Year 1, staff from each of the states worked with Primary Care Service Areas (PCSAs), including some attempts at mapping members. PCSAs created many very small divisions, which would not support the analysis required by the project.

In Year 2 the states explored using the USDA Economic Research Service (ERS) Rural-Urban Commuting Area (RUCA) Codes

(http://veteransdata.info/geographic-terms-concepts) to create appropriate subdivisions. When the RUCA codes were applied to the state populations, the resulting distribution was concentrated in just one value, which grouped all members in one category. An alternative was found in the CMS County Types created by CMS as part of the effort to assess Network Adequacy (See Appendix B for the CMS County Type Designations).

(https://www.cms.gov/Medicare/Medicare-

Advantage/MedicareAdvantageApps/Downloads/MA Network Adequacy Crite ria Guidance Document 1-10-17.pdf)

For Network Adequacy, CMS divides counties in 5 types: Large Metro, Metro, Micro, Rural, and Counties with Extreme Access Considerations (CEACs). For this project, only 3 geographic types were used: Large Metro, Metro were used as defined; the third category is a combination of Micro, Rural and CEAC counties. Patients were assigned to one of the 3 geographic types based on their county of residence.

9) Calculate results by geography type

The process design enabled the states to calculate results by geographic type quite easily. Results in this case included cost, average risk, and quality measures.

10) Research reasons for discrepancies

The states had very different results on the quality measures which might be indicative of true variation among the states. The Tech Team sought to validate the state level results by comparing with other sources of data on the quality and cost measures. They used HEDIS[®] Quality Compass (a subscription service), individual state publications, and independent projects and were able to confirm/support the results.

The Team also examined the underlying data to identify reasons for variation in measures by state. For example, on the Adolescent Well-Care Visit measure, the Team examined the rate of general office visits among Adolescents compared to the rate of Preventive visits to see how general tendency of adolescents to visit the doctor compared with provider coding practices as a determinant of measure results.

<u>Result</u>

As a result of executing the process above, the States successfully calculated the desired quality measures and raw and age/gender-adjusted average cost, both for the state as a whole and for the geographic divisions in each state.

In addition, they have established a basis for extending the calculation process to other entities, and for adding measures to the set.

PRESCRIPTION DRUG MEASURES



	Oregon		Colorado		Massac	husetts	usetts Utah	
	N	Rate	Ν	Rate	Ν	Rate	Ν	Rate
Follow-up care for children prescribed Attention Deficit Hyperactivity Disorder (ADHD) Medication- initiation phase	813	46%	1,610	34%	4,719	50%	1,337	35%
Follow-up care for children prescribed Attention Deficit Hyperactivity Disorder (ADHD) Medication- continuation and maintenance phase	368	52%	270	36%	1,120	53%	409	37%
Anti-depressant medication management- acute phase	7,067	71%	6,443	41%	8,524	79%	5,901	47%
Anti-depressant medication management- continuation phase	7,067	55%	6,443	31%	8,524	69%	5,901	47%
Adult avoidance of antibiotics	8,190	44%	7,780	35%	3,314	56%	6,128	31%

PREVENTIVE CARE MEASURES



MONTHS OF LIFE

	Oregon		Colo	Colorado		Massachusetts		Utah	
	Ν	Rate	Ν	Rate	Ν	Rate	Ν	Rate	
Chlamydia screening	17,968	37%	23,238	42%	24,738	70%	23,802	30%	
Adolescent well-care visits	78,640	27%	102,746	42%	84,882	73%	138,624	34%	
Developmental screening for the first 36 months of life	15,620	28%	21,068	62%	22,008	37%	29,556	13%	

13%

Follow-up care for children prescribed Attention Deficit Hyperactivity Disorder (ADHD) Medication—**initiation phase**

Measure Steward: NCQA/HEDIS®





	Large metro areas		Me	tro	Micro, rural and CEAC		
	N	Rate	N	Rate	N	Rate	
Oregon	344	50%	290	40%	179	49%	
Colorado	1,051	34%	421	33%	133	33%	
Massachusetts	2,313	51%	2,003	51%	29	41%	
Utah	451	36%	657	34%	229	34%	

Follow-up care for children prescribed Attention Deficit Hyperactivity Disorder (ADHD) Medication—**continuation and maintenance phase**

Measure Steward: NCQA/HEDIS®



Age band: 6-12 years of age

Description: The percentage of children newly prescribed attention-deficit/hyperactivity disorder (ADHD) medication who had who remained on the medication for at least 210 days and who, in addition to the visit in the Initiation Phase, had at least two follow-up visits with a practitioner within 270 days (9 months) after the Initiation Phase ended.



	Large metro areas		Me	tro	Micro, rural and CEAC	
	N	Rate	N	Rate	N	Rate
Oregon	166	58%	129	46%	73	48%
Colorado	155	35%	82	34%	33	42%
Massachusetts	690	55%	425	50%	* 2	*2
Utah	162	41%	187	35%	60	35%

¹CMS County Types, see Appendix A for more detail. In Oregon, Washington and Clackamas counties were changed from Metro to Large Metro to treat as part of the Portland metro area.

 2 Values suppressed due to n<11.

Anti-depressant medication management—acute phase

Measure Steward: NCQA/HEDIS®



Age band: 18 years and older Description: The percentage of members 18 years of age and older who were treated with antidepressant medication, had a diagnosis of major depression and who remained on an antidepressant medication for at least 84 days (12 weeks).



	Large metro areas		Me	tro	Micro, rural and CEAC		
	N	Rate	N	Rate	N	Rate	
Oregon	2,779	74%	2,670	69%	1,618	67%	
Colorado	3,697	33%	1,711	47%	1,015	60%	
Massachusetts	5,460	80%	3,033	78%	31	74%	
Utah	2,185	63%	2,662	63%	1,054	65%	

¹CMS County Types, see Appendix A for more detail. In Oregon, Washington and Clackamas counties were changed from Metro to Large Metro to treat as part of the Portland metro area.

 2 Values suppressed due to n<11.

Anti-depressant medication management—continuation phase

Measure Steward: NCQA/HEDIS®



Age band: 18 years and older

Description: The percentage of members 18 years of age and older who were treated with antidepressant medication, had a diagnosis of major depression and who remained on an antidepressant medication for at least 180 days (6 months).



	Large metro areas		Me	tro	Micro, rural and CEAC		
	N	Rate	N	Rate	N	Rate	
Oregon	2,779	59%	2,670	53%	1,618	50%	
Colorado	3,697	25%	1,711	35%	1,015	44%	
Massachusetts	5,460	70%	3,033	67%	31	58%	
Utah	2,185	63%	2,662	47%	1,054	46%	

Avoidance of antibiotic treatment in adults with acute bronchitis Measure Steward: NCQA/HEDIS®



Age band: 18-64 years Description: The percentage of adults 18–64 years of age with a diagnosis of acute bronchitis who were not dispensed an antibiotic prescription.



	Large metro areas		Me	tro	Micro, rural and CEAC	
	N	Rate	N	Rate	N	Rate
Oregon	2,403	54%	3,242	42%	2,545	36%
Colorado	3,578	41%	2,554	31%	1,637	25%
Massachusetts	1,895	61%	1,317	50%	*2	* 2
Utah	2,043	38%	2,924	27%	1,161	28%

¹CMS County Types, see Appendix A for more detail. In Oregon, Washington and Clackamas counties were changed from Metro to Large Metro to treat as part of the Portland metro area.

 2 Values suppressed due to n<11.

Chlamydia screening

Measure Steward: NCQA/HEDIS®



Age band: 16-24 years

Description: The percentage of women 16–24 years of age who were identified as sexually active and who had at least one test for chlamydia during the measurement year.



	Large metro areas		Metro		Micro, rural and CEAC	
	N	Rate	N	Rate	N	Rate
Oregon	6,631	39%	6,594	37%	4,743	34%
Colorado	13,735	47%	6,211	37%	3,292	28%
Massachusetts	15,775	70%	8,867	71%	96	64%
Utah	8,494	33%	10,365	30%	4,943	27%

Developmental screening for the first 36 months of life

Measure Steward: Oregon Health Science University



Age band: Children who turn 1, 2 or 3 years of age between January 1 and December 31 of 2014

Description: The percentage of children screened for risk of developmental, behavioral and social delays using a standardized screening tool in the first three years of life. This is a measure of screening in the first three years of life that includes three, agespecific indicators assessing whether children are screened by 12 months of age, by 24 months of age and by 36 months of age.



	Large metro areas		Me	tro	Micro, rural and CEAC		
	N	Rate	N	Rate	N	Rate	
Oregon	6,971	25%	5,191	30%	3,458	29%	
Colorado	12,862	72%	5,511	49%	2,695	42%	
Massachusetts	15,863	39%	5,882	29%	70	26%	
Utah	9,584	7.0%	14,346	20%	5,626	5.0%	

Adolescent well-care visits

Measure Steward: NCQA/HEDIS®



Age band: 12-21 years

Description: The percentage of enrolled members 12–21 years of age who had at least one comprehensive well-care visit with a PCP or an OB/GYN practitioner during the measurement year.



	Large metro areas		Metro		Micro, rural and CEAC	
	N	Rate	N	Rate	N	Rate
Oregon	28,960	34%	28,420	24%	21,260	22%
Colorado	57,456	43%	29,458	43%	15,832	38%
Massachusetts	55,297	73%	29,298	73%	286	57%
Utah	45,124	34%	64,415	34%	29,085	35%

Appendix A

CMS County Type Designations

Network adequacy is assessed at the county level, and counties are classified into five county type designations: Large Metro, Metro, Micro, Rural, or CEAC (Counties with Extreme Access Considerations). CMS uses a county type designation method that is based upon the population size and density parameters of individual counties. These parameters are foundationally based on approaches used by the Census Bureau in its classification of "urbanized areas" and "urban clusters," and by the Office of Management and Budget (OMB) in its classification of "metropolitan" and "micropolitan."

Some states altered county types based on local understanding. In Oregon, Washington and Clackamas counties were changed from Metro to Large Metro to treat as part of the Portland metro area. In Colorado, Adams, Arapahoe, Jefferson, and Douglas counties were changed from Metro to Large Metro to treat as part of the Denver metro area.

County Type Designation	Population	Density	
Large metro	>= 1,000,000	>= 1,000/sq. mile	
	500,000 - 999,999	>= 1,500/sq. mile	
	Any	>= 5,000/sq. mile	
Metro	>= 1,000,000	10 - 999.99/sq. mile	
	500,000 - 999,999	10 - 1,499.9/sq. mile	
	200,000 - 499,999	10 - 4999.9/sq. mile	
	50,000 - 199,999	100 - 4999.9/sq. mile	
	10,000 - 49,999	1,000 - 4,999.9/sq. mile	
Micro	50,000 - 199,999	10 - 99.9/sq. mile	
	10,000 - 49,999	50 - 999.9/sq. mile	
Rural	10,000 - 49,999	10 - 49.9/sq. mile	
	<10,000	10 - 4,999.9/sq. mile	
CEAC (Counties with Extreme Access Considerations)	Any	<10/sq. mile	

Source: https://www.cms.gov/Medicare/Medicare-

Advantage/MedicareAdvantageApps/Downloads/MA Network Adequacy Criteria Guidance Document 1-10-17.pdf