

Medication Reconciliation for Children: Desirable Attributes of Medication Reconciliation by Organizational Self-Report and Attestation

Detailed Measure Specifications

A. Description

This measure set outlines a set of constructs that provide a framework of desirable attributes of effective, patient-centered medication reconciliation (Med Rec) processes for children, as called for by the guidelines developed by our expert panel.

The guidelines suggest that efforts to reconcile medications at transitions of care are only a first step on the path to developing patient centered med rec. Effective med rec results in common understanding of medication use by the family and clinical team and benefits from policies and systems that provide information to prescribers, including data regarding prescription fills and refills, key medication alerts, and reminders. The goal of med rec activities is to optimize health by avoiding preventable medication-related complications and improving the likelihood of medications achieving their intended purposes. These practices allow patients, families, and health care providers to better understand not only medication reconciliation, but how it can improve quality of care for children.

The desirable attributes of patient-centered med rec for children, as defined by the expert panel, go beyond transitions of care to include regular, periodic med rec at least annually for all children, even those not seen by a healthcare provider in the past year. Additional desirable attributes include having pharmacists participating in med rec for complex patients and high utilizers; having medication histories obtained in a systematic way; having families involved in reviewing medications; and providing patients and families with a written list of medications, dosages, and descriptions of the medication at each change of medication.

Medication information should be freely communicated among clinicians caring for the child, and policies describing this should be readily available to parents. Privacy options should exist for adolescents. Med rec should go well beyond prescription drugs. All clinicians caring for the patient should have sufficient information regarding current medications. These attributes are captured by our distinct measures, which are briefly described as follows:

Med Rec IT Infrastructure: This structural measure captures the capacity of an organization's information technology to support med rec processes, including electronic prescribing capabilities and decision support systems.

Med Rec Policy Infrastructure: This structural measure aims to assess the extent to which policies are in place as a component of infrastructure to support and promote desirable attributes of med rec.

Medication-related Communications with Families (self-reported): This process measure captures several key aspects of bi-directional communication related to med rec, including both information seeking from families and information sharing with families. This measure at the organizational level represents an organizational perspective of how families are integrated into the med rec process.

Medication-related Communications among Clinicians: This process measure integrates the reported content and quality of the information related to medications exchanged between clinicians with certain key elements of infrastructure. Information exchange between clinicians and potential prescribers is a key element of med rec.

Med Rec Procedures: This measure assesses the extent to which reported practices achieve a variety of desirable attributes of med rec, including integration of med rec practices, such as medication history, the sharing of information, such as with medication list. It is the most inclusive of the various process measures.

Frequency of Med Rec: This process measure assesses the timing of med rec practices. Med rec may be triggered by clinical transitions or encounters as well as by periodicity or clinical encounters that serve as triggers. The measure includes assessment of when medication histories are taken and when medication lists are provided to families. The measure incorporates some structural (policy) elements as well.

Content and Comprehensiveness of Med Rec: This measure aims to assess the content incorporated into med rec and the comprehensiveness of specific information that is included in the medication list. Accuracy of the medication list is a fundamental element of med rec. We consider both policies and practices for this measure, making it an integration of process and structural attributes.

Involvement of Pharmacists: This measure assesses the utilization of pharmacists in the process of med rec. Pharmacist involvement is evaluated for their role in optimizing medication history, prescribing and follow-up with clinicians and families. While this measure incorporates structural elements, we consider it to be fundamentally a process measure.

Use of Med Rec: This process measure assesses the extent to which med rec practices are audited and incorporated into organizational reporting and improvement activities. This is a measure that is only assessed for hospitals and hospital systems.

Privacy Score: Not available for all practices, this process measure when present documents the presence or absence of attentiveness to detail regarding practices that relate to taking issues of privacy into appropriate consideration (e.g., for adolescents and children with mental health conditions).

Medication Reconciliation Assessment Performance Score Mental Health (MRAPS-MH): An overall performance score that is algorithmically determined to incorporate multiple categories.

Please note that our primary specification is to report on the distribution of performance within an accountable organization, such as a healthcare plan. We specify the 25th percentile as the defining moment of the distribution for each individual measure when calculating MRAPS. We have chosen the 25th percentile as a means to capture the bulk of the distribution and still allow some leniency recognizing the early stage of development that medication reconciliation (the construct) is at. We anticipate changing this specification to the 10th percentile in the future as the measure and the construct mature.

These measures, when assessed using the recommended specifications, describe medication reconciliation among the clinical organizations that provide the bulk of mental health services to children.

B. Eligible Population

These measures are intended to report upon the performance of health care organizations that may themselves be affiliated with an accountable organization, such as a managed or accountable care organization or preferred provider organization. In this case, the unit of analysis would be the practice or the hospital. The primary specification of these measures is to assess the distribution of performance associated with accountable organizations or at larger levels, such as with accountable entities, such as a State health Department or Medicaid program.

Eligible organizations are:

- Hospitals/hospital systems that have at least 100 discharges of children (all types of insurance) ages 0-18 years during the reporting year
- Clinical practices that have at least 50 clinical encounters with children 0-18 years of age at the time of the encounter during the reporting year. Practices are defined as one or more clinicians practicing together as would typically be recognized as a contracting unit or practice by a managed care organization.

C. Data and Sources

Hospitals/ Hospital systems: Eligibility is preferably determined for the hospitals using a comprehensive encounter and/or billing administrative data base, or hospital discharge abstract. As eligibility is determined by the hospital's total practice, a single payer analysis can only be used to determine inclusion (i.e., can rule it in on the basis of single payer analysis) but should not be relied on to determine lack of eligibility. If an all payer extract that is not available, any hospital that discharged at least one child age 0-18 years whose care is assignable to the accountable organization should be included.

General data elements include:

- Age and date of discharge.

Practices:

- Eligibility is preferably determined for the practices using a comprehensive outpatient

encounter and/or billing administrative database. As eligibility is determined by the practice's total practice, a single payer analysis can only be used to determine inclusion (can rule it in on the basis of single payer analysis) but should not be relied on to determine lack of eligibility. If an all-payer extract is not available, any practice that had at least 10 encounters in the single payer analysis should be included.

D. Calculation

Step 1: Identify eligible hospitals and practices.

Eligible organizations are:

- a. **Hospitals/hospital systems or their equivalent** that have at least 100 discharges of children (all types of insurance) ages 0-18 years during the reporting year.
 - Eligibility is preferably determined for the hospitals using a comprehensive encounter and/or billing administrative data base, or hospital discharge extract. As eligibility is determined by the hospital's total practice, a single payer analysis can only be used to determine inclusion (i.e., can rule it in on the basis of single payer analysis) but should not be relied on to determine lack of eligibility. If an all payer extract is not available, any hospital that discharged at least one child ages 0-18 years whose care is assignable to the accountable entity should be included.
- b. **Clinical practices** that have at least 50 clinical encounters with children ages 0-18 years at the time of the encounter during the reporting year. Practices are defined as one or more clinicians practicing together as would typically be recognized as a contracting unit or practice by a managed care organization.
 - Eligibility is preferably determined for the practices using a comprehensive outpatient encounter and/or billing administrative database. As eligibility is determined by the practice's total practice, a single payer analysis can only be used to determine inclusion (i.e., can rule it in on the basis of single payer analysis) but should not be relied on to determine lack of eligibility. If an all-payer extract is not available, any practice that had at least 10 encounters in the single payer analysis should be included.

Step 2. Identify the individual responsible for overseeing completion and attesting to the data at each eligible health care organization.

- Hospitals and Hospital Systems: Chief Medical or Chief Quality/Safety Officers (or their organizational equivalent).
- Practices and Practice systems: Medical Director or Chief Medical Officer (or their organizational equivalent).

Step 3. Collect the necessary data from every eligible organization. Use the data collection instruments (see Appendix) or electronic data collection equivalents (in terms of both verbatim questions and answer sets) to collect data needed for measure calculation. It is

specified that if electronic data collection is employed, a paper or electronic file detailing the entire data collection instrument should be made available for review prior to data entry.

We recommend that when distributing the data collection instruments that it be made clear that the questionnaires are intended to be completed with the respondent having access to sufficient internal consultations to be able to answer all the questions.

Missing data and missing responses will be reported as in the lowest category for each measure.

Step 4. Report the number of eligible practices and the number of eligible hospitals. Report the number of organizations with attested responses for each. Calculate and report the response rate as attested responses divided by eligible entities distinctly for hospitals and for practices. The target response rate is 100 percent, since all are entities with accountability relationships to the accountable organization.

Step 5. Score Hospital Questionnaires. Use the indicated scoring algorithms to convert the raw data for the hospital instrument into measure scores. Please note that for all yes/no items either the ‘yes’ box or the ‘no’ box should be recorded; similarly: for unchecked items in checklists, data should be entered as a ‘no’, as the absence of an item may be scored specifically.

The attached score sheet (see Appendix) for the hospital instrument includes the score assigned to every box and notes in the far right column (with ‘Algorithm’) those items that require additional processing before generating an item or question score. The item specific algorithm is included in the same far right column.

Any questions/items not completed should be assigned to have the lowest score for that item. In the near future, CAPQuaM will make available an electronic data entry and scoring spreadsheet for this measure set, as well as an exemplar SAS program for analyzing these data.

Table 1 indicates for the hospital survey which questions should be summed in order to create a raw score for each measure (desirable attribute). Tables 2 and 3 indicate how to convert the raw scores for each measure into a categorical (final) score. There are distinct tables for those hospital systems that provide any outpatient care (Table 2) and those that do not (Table 3), according to the responses to the questionnaire (Q,H).

- The percent in each category
- Use category number to report:
 - Mean, median, 10th, 25th, 75th, and 90th percentiles
- Use the total score for the instrument, after applying scoring algorithms
 - Mean, median, 10th, 25th, 75th, and 90th percentiles

Step 6. Score practice questionnaires.

Use the indicated scoring algorithms to convert the raw data for the practice data collection instrument into measure scores. Please note that for all lists, and yes/no items both the yes box and the 'no' box (or the fact that the item was unchecked) should be noted and both may be used for scoring purposes.

The attached score sheet (see Appendix) for the practice instrument includes the score assigned to every box and notes in the far right column (with 'Algorithm') those items that require additional processing before generating an item or question score. The item specific algorithm is included in the same far right column.

Any questions/items not completed should be assigned to have the lowest score for that item.

CAPQuaM hopes to make available an electronic data entry and scoring spreadsheet for this measure set, as well as an exemplar SAS program for analyzing these data.

Table 4 indicates for the practice questionnaire which questions should be summed in order to create a raw score for each measure (desirable attribute). Tables 5 and 6 indicate how to convert a raw score into a categorical (final) score for each measure. There are distinct tables for those practices/systems that provide any primary care (Table 5) and those that do not (Table 6), according to the responses to the Questionnaire (Q.11) – see Appendix.

Step 7: Calculate and Report Performance scores

For each desirable attribute distribution of category scores should be assessed and reported as follows:

- The percent in each category.
- Use category number to report:
 - Mean, median, 10th, 25th, 75th, and 90th percentiles (exclude privacy with Category 0).
- Use the total score for the instrument, after applying algorithms
 - Mean, median, 10th, 25th, 75th, and 90th percentiles

The Medication Reconciliation Assessment Performance Score (MRAPS) is assessed using the following algorithm, applied to 25th percentile of measure category scores, separately for both outpatient and hospital performance. As requested by the accountability entity, specifications may also be applied at the level of individual healthcare organizations, with percent in each category reported:

These rules should be applied sequentially until the appropriate score has been identified:

1. Eliminate the privacy measure only for those practices that are in Category 0 (n/a) for the privacy measure.

2. ANY measure with a score using the category number that is below 2 => “Needs Improvement”
 - a. All measures below category 2 should be specified as “in [measure title].”
3. ALL attributes with 25th percentile at least 2 and not more than one at or above 3 => “Consistently Basic Performance.”
4. At least 4 of IT, Policy, Procedures, Family Communication, Pharmacists, Clinician Communications with score of 3 or higher =>” Leadership performance”
5. At least 3 of IT, Policy, Procedures, Family Communication, Pharmacists, Clinical Communications with score of 3 or higher =>” Outstanding performance”
6. At least 2 of IT, Policy, Procedures, Family Communication, Pharmacists, Clinical Communications in Category 3 or higher =>” Distinguished performance”

Note:

- a) For Steps 1, 2, and 3 any category 4 performance should be recognized in the MRAPS as “With honors in [name attributes with category 4 performance]” and any category 5 performance as “With high honors in [name measures with category 5 performance]”
- b) For Step 2, any measure above 3 should be acknowledged in the MRAPS as “Consistently Basic Performance with strength in [name measure with category 3 or better performance].”

As an example take an accountable organization with 100 practices and the following results in the individual measures:

| Measure (abbreviation) | Percentiles | | | | | |
|---|------------------|------------------|--------|------------------|------------------|------|
| | 10 th | 25 th | Median | 75 th | 90 th | Mean |
| IT | 1 | 1 | 2 | 2 | 4 | 2.1 |
| Policy | 1 | 2 | 2 | 3 | 3 | 2.1 |
| C & C | 1 | 2 | 2 | 2 | 3 | 2.2 |
| Frequency | 1 | 2 | 2 | 2 | 3 | 2.2 |
| Procedures | 1 | 2 | 2 | 2 | 3 | 2.2 |
| Communications with Clinicians | 1 | 2 | 2 | 2 | 3 | 2.2 |
| Communications with Families | 1 | 4 | 4 | 4 | 5 | 4.1 |
| Attention to Privacy | 1 | 2 | 2 | 2 | 3 | 2.2 |

| | | | | | | |
|----------------------------|---|----------|---|---|---|-----|
| Role of Pharmacists | 1 | 2 | 2 | 2 | 3 | 2.2 |
|----------------------------|---|----------|---|---|---|-----|

Using the highlighted and bolded 25th percentile column as we have specified, the presence of a 25 percentile score of 1 for IT, with otherwise 2 or better would lead to a reported MRAPS of “Needs Improvement in Medication Reconciliation Information Technology Infrastructure.”

- Had Policy also been a 1 it would have been “Needs Improvement in Medication Reconciliation Information Technology Infrastructure and Medication Reconciliation Policy.”
- Conversely, had the 25th percentile for IT been 3, then the score would have been “Distinguished performance with honors in Medication Reconciliation Communications with Families.”

Step 8: Create stratification variables

- i. Identify County equivalent of organization using zip codes to link to county FIPS codes indirectly, using the Missouri Census Data Center (<http://mcdc.missouri.edu/>). These data will link to County or County equivalents as used in various States.
- ii. Identify the Urban Influence Code (1) or UIC for organization’s county (2013 urban influence codes available at <http://www.ers.usda.gov/data-products/urban-influence-codes.aspx#.UZUvG2cVoj8>). Use one of two schema to identify rurality/urbanicity if desired. The former differentiates better various rural communities, while the latter better differentiates different urban settings. One may incorporate aspects of both as shown in C. Depending on the setting and interests of the accountability entity, all rural areas may be aggregated, although this should not be done to obscure findings in frontier areas:
 - a. After Bennett et al (SC Rural research Center):
 - i. UIC 1 & 2 are classified as Urban
 - ii. UIC 3,5,& 8 as micropolitan Rural
 - iii. UIC 4,6,& 7 Rural Adjacent to a metro area
 - iv. UIC 9-12 remote rural
 - b. Modified after Hart (UND Center for Rural Health)
 - i. UIC 1 Large Urban
 - ii. UIC 2 Small Urban
 - iii. UIC 3-8 Rural
 - iv. UIC 9-12 remote rural (may be used to approximate frontier)
 - c. Modified integrated approach:
 - i. UIC 1 Large Urban
 - ii. UIC 2 Small Urban
 - iii. UIC 3,5,& 8 as micropolitan Rural
 - iv. UIC 4,6,& 7 Rural Adjacent to a metro area

- v. UIC 9-12 remote rural

- iii. Identify the Level of Poverty in the organization's county. The percent of all residents in poverty by county or county equivalent are available from the U.S. Department of Agriculture at http://www.ers.usda.gov/data-products/county-level-data-sets/download_data.aspx. Our stratification standards are based on 2011 US population data that we have analyzed with SAS 9.3. Using the FIPS code, use the variable PCTPOVALL_2011 to categorize into one of 5 Strata:
 - a. Lowest Quartile of Poverty if percent in poverty is $\leq 12.5\%$
 - b. Second Quartile of Poverty if percent in poverty is $> 12.5\%$ and $\leq 16.5\%$
 - c. Third Quartile of poverty if percent in poverty is $> 16.5\%$ and $\leq 20.7\%$
 - d. First Upper Quartile (75th-90th) if percent in poverty is $> 20.7\%$ and $\leq 25.7\%$
 - e. Second Upper Quartile (> 90 th percentile)

- iv. Categorize the organizations' county by racial and ethnic mix.

Use government-supplied public access data files to calculate the percent of children 0-18 in each county equivalent who are white, black, Hispanic, Asian, and Native American. Estimate the nonwhite as $100\% - \text{the percent white}$. Calculation of percent blacks for example, is achieved by multiplying 100 times the ratio of the number of black children to the total population within that county equivalent. These data are used for the practice level analysis; <http://wonder.cdc.gov/> is a valuable source for these data.

For the hospital analysis determine the percent of discharges that are white, non-white, black, Hispanic, Asian, and Native American.

For both the practice and hospital levels, we specify for stratification by race ethnicity using the cutoffs specified below. We describe two schema for stratification, one using five modified quartiles as we do for poverty above and the other using ten deciles.

The minimum adequate analysis uses the proportion who are nonwhite. We recommend further stratification by proportion black, and Hispanic for most geographic areas. We specify cut points for conducting the analysis by stratifying for percent Asian and Native American. We leave to the accountability entity to define the extent to which racial or ethnic category should be done beyond non-white. We estimate the proportion as a percent non-white as $[100 \text{ minus percent white}]$.

For the Practice-related analyses, use these cut points using county level data:

Cut points for the two stratification schemas are shown here:

SCHEMA 1: Modified Quartiles

- a. Lowest Quartile of non-whites if percent
Non-whites $\leq 11.4\%$
Blacks $\leq 5.7\%$
Native-Americans $\leq 0.8\%$
Asian $\leq 0.9\%$
Hispanics $\leq 9.9\%$

- b. Second Quartile of non-whites if percent
Non-whites is $>11.4\%$ and $\leq 19.1\%$
Blacks $5.7\% > \& \leq 12.3\%$
Native-Americans $0.8\% > \& \leq 1.2\%$
Asian $0.9\% > \& \leq 1.7\%$
Hispanics $9.9\% > \& \leq 17.3\%$

- c. Third Quartile of non-whites if percent
Non-whites is $>19.1\%$ and $\leq 28.0\%$
Blacks $12.3\% > \& \leq 20.5\%$
Native-Americans $0.8\% > \& \leq 1.9\%$
Asian $0.9\% > \& \leq 3.6\%$
Hispanics $17.3\% > \& \leq 30.9\%$

- d. First Upper Quartile (75th-90th) of non-whites if percent
Non-whites $>28.0\%$ and $\leq 52.8\%$
Blacks $20.5\% > \& \leq 32.5\%$
Native-Americans $1.9\% > \& \leq 3.4\%$
Asian $3.6\% > \& \leq 6.6\%$
Hispanics $30.9\% > \& \leq 55.5\%$

- e. Second Upper Quartile ($>90^{\text{th}}$ percentile) of non-whites if percent
Non-whites $>52.8\%$
Blacks $> 32.5\%$
Native-Americans $> 3.4\%$
Asian $> 6.6\%$
Hispanic $>55.5\%$

SCHEMA 2: Deciles

- a. 1st decile for
Non-whites $\leq 5.4\%$
Blacks $\leq 2.2\%$

Native-Americans $\leq 0.5\%$
Asian $\leq 0.6\%$
Hispanics $\leq 5.5\%$

- b. 2nd decile for
Non-whites $5.4\% > \& \leq 9.7\%$
Blacks $> 2.2\%$ and $\leq 3.8\%$
Native-Americans $> 0.5\%$ and $\leq 0.7\%$
Asian $> 0.6\%$ and $\leq 0.8\%$
Hispanics $> 5.5\%$ and $\leq 8.15\%$
- c. 3rd decile for
Non-whites $9.7\% > \& \leq 12.6\%$
Blacks $> 3.8\%$ and $\leq 7.4\%$
Native-Americans $> 0.7\%$ and $\leq 0.9\%$
Asian $> 0.8\%$ and $\leq 1.0\%$
Hispanics $> 8.15\%$ and $\leq 11.0\%$
- d. 4th decile for
Non-whites $12.3\% > \& \leq 16.5\%$
Blacks $> 7.4\%$ and $\leq 10.0\%$
Native-Americans $> 0.9\%$ and $\leq 1.1\%$
Asian $> 1.0\%$ and $\leq 1.2\%$
Hispanics $> 11.0\%$ and $\leq 14.05\%$
- e. 5th decile for
Non-whites $16.5\% > \& \leq 19.1\%$
Blacks $> 10.0\%$ and $\leq 12.3\%$
Native-Americans $> 1.1\%$ and $\leq 1.2\%$
Asian $> 1.2\%$ and $\leq 1.7\%$
Hispanics $> 14.05\%$ and $\leq 17.3\%$
- f. 6th decile for
Non-whites $19.1\% > \& \leq 22.1\%$
Blacks $> 12.3\%$ and $\leq 14.4\%$
Native-Americans $> 1.2\%$ and $\leq 1.4\%$
Asian $> 1.7\%$ and $\leq 2.25\%$
Hispanics $> 17.3\%$ and $\leq 21.75\%$
- g. 7th decile for
Non-whites $22.1\% > \& \leq 25.4\%$
Blacks $> 14.4\%$ and $\leq 18.1\%$
Native-Americans $> 1.4\%$ and $\leq 1.7\%$
Asian $> 2.25\%$ and $\leq 3.2\%$
Hispanics $> 21.75\%$ and $\leq 27.7\%$
- h. 8th decile for

Non-whites > 25.4% & <=31.6%
Blacks >18.1% and <=22.25%
Native-Americans >1.7% and <=2.1%
Asian > 3.2% and <=4.5%
Hispanics >27.7% and <=38.2%

- i. 9th decile for
Non-whites 31.6% > & <=52.8%
Blacks >22.25% and <=32.5%
Native-Americans >2.1% and <=3.4%
Asian > 4.5% and <=6.6%
Hispanics >38.2% and <=55.5%

- j. 10th decile for
Non-whites >52.8%
Blacks >32.5%
Native-Americans >3.4%
Asian > 6.6%
Hispanics >55.5%

For Hospital level stratification, using percent of childhood (0-21) primary mental health discharges in past year of indicated race/ethnicity: Use the following cut points:

SCHEMA 1: Modified Quartiles

- a. Lowest Quartile
Non-whites is <= 11.2%
Blacks <=2.6%
Native-Americans <=0.1%
Asian <=0.7%
Hispanics <=3.5%

- b. Second Quartile if percent of
Non-whites is >11.2% and <=31.2%
Blacks 2.6% > & <= 8.6%
Native-Americans 0.1 > & <= 0.3%
Asian 0.7% > & <=1.9%
Hispanics 3.5% > & <=10.6%

- c. Third Quartile if percent of
Non-whites is >31.2% and <=56.3%
Blacks 8.6% > & <= 21.9%
Native-Americans 0.3% > & <=1.8%
Asian 1.9% > & <=4.5%
Hispanics 10.6% > & <=28.7%

- d. First Upper Quartile (75th-90th) if percent of
 - Non-whites is >56.3% and <=78.5%
 - Blacks 21.9% > & <=42.1%
 - Native-Americans 1.8% > & <=9.7%
 - Asian 4.5% > & <=10.4%
 - Hispanics 28.7% > & <=53.5%

- e. Second Upper Quartile (>90th percentile) if percent of
 - Non-whites is >78.5%
 - Blacks > 42.1%
 - Native-Americans >9.7%
 - Asian >10.4%
 - Hispanics >53.5%

SCHEMA 2: Deciles

- a. 1st decile for
 - Non-whites: <=-.004
 - Blacks <=0.8%
 - Native-Americans N/A
 - Asian <=0.3%
 - Hispanics <=1.0%

- b. 2nd decile
 - Non-white: 0.004 > & <=7.3%
 - Blacks >0.8% and <=1.9%
 - Native-Americans N/A
 - Asian > 0.3% and <=0.5%
 - Hispanics >1.0% and <=2.5%

- c. 3rd decile
 - Non-whites: 7.3% > & <=17.7%
 - Blacks >1.9% and <=3.4%
 - Native-Americans <=0.1%
 - Asian > 0.5% and <=0.9%
 - Hispanics >2.5% and <=4.6%

- d. 4th decile
 - Non-whites: 17.7% > and <=23.0%
 - Blacks >3.4% and <=5.6%
 - Native- Americans >0.1% and <=2.0%
 - Asian > 0.9% and <=1.4%
 - Hispanics >4.6% and <=7.0%

- e. 5th decile
 - Non-whites: 23.0% > and <=31.2%
 - Blacks >5.6% and <=8.55%

Native-Americans >0.2% and <=0.3%
Asian > 1.4% and <=1.9%
Hispanics >7.0% and <=10.6%

f. 6th decile

Non-whites: 31.2% > and <=40.3%
Blacks >8.55% and <=12.7%
Native-Americans >0.3% and <=0.6%
Asian > 1.9% and <=2.5%
Hispanics >10.6% and <=16.0%

g. 7th decile

Non-whites: 40.3% > and <=50.0%
Blacks >12.7% and <=18.3%
Native-Americans >0.6% and <=1.1%
Asian >2.5% and <=3.7%
Hispanics >16.0% and <=23.8%

h. 8th decile

Non-whites: 50.0% > and <=62.5%
Blacks >18.3% and <=25.8%
Native-Americans >1.1% and <=3.0%
Asian > 3.7% and <=5.6%
Hispanics >23.8% and <=34.3%

i. 9th decile

Non-whites: 62.5% > and <=78.5%
Blacks >25.8% and <=42.1%
Native-Americans >3.0% and <=9.7%
Asian >5.6% and <=10.35%
Hispanics >34.3% and <=53.5%

j. 10th decile

Non-whites: > 78.5%
Blacks >42.1%
Native-Americans >9.7%
Asian > 10.35%
Hispanics >53.5%

v. Categorize Insurance Type as Private (Commercial), Public, None or Other

vi. Categorize benefit type as HMO, PPO, FFS, PCCM, or Other

Step 9: As requested by accountability entity, describe variations in each reported measure. Interquartile range is the preferred method for the continuous measures and is calculated by subtracting the value of the 25th percentile from the value of the 75th percentile. Use standard methods for calculating the 95%

confidence intervals (CI) of the percents, assuming the binomial distribution from a single sample. Recall that proportions are percents divided by 100. The CI is found as the mean percent plus or minus the product $1.96 \times [\text{Square root of the } \frac{\text{proportion meeting criterion}}{\text{proportion not meeting the criteria}}]$ divided by Denominator 1].

Step 10: Report Measures by strata—Race/Ethnicity, UIC or urbanicity, County Poverty Level, Insurance Type, and Benefit Type. Report by Race/Ethnicity within Age strata and also by age strata report by UIC, and also by County Poverty Level. Additional Cross tabulations are supported by these specifications and may be requested by an accountability entity.