**HEDIS® Public Comment Overview**

**HEDIS Overview**

HEDIS is a set of standardized performance measures designed to ensure that purchasers and consumers can reliably compare the performance of health plans. HEDIS is also a model for emerging systems of performance measurement in other areas of health care delivery.

HEDIS is maintained by NCQA, a not-for-profit organization committed to evaluating and publicly reporting on the quality of physicians, health plans, ACOs and other organizations. The HEDIS measurement set contains 96 measures across 6 domains of care.

Items available for public comment are being considered for the HEDIS Measurement Year 2023 publication (released August 2022).

**HEDIS Measure Development Process**

NCQA’s consensus development process involves rigorous review of published guidelines and scientific evidence, as well as feedback from multi-stakeholder advisory panels. The NCQA Committee on Performance Measurement, a diverse panel of independent scientists and representatives from health plans, consumers, federal policymakers, purchasers and clinicians, oversees the evolution of the HEDIS measurement set. Numerous measurement advisory panels provide clinical and technical knowledge required to develop the measures. Additional HEDIS expert panels and the Technical Measurement Advisory Panel provide invaluable assistance by identifying methodological issues and giving feedback on new and existing measures.

**Synopsis**

NCQA seeks public feedback on proposed new measures, changes to existing measures and proposed measure retirements.

Reviewers are asked to submit comments to NCQA in writing via the Public Comment website by **5:00 p.m. (ET), Friday, March 11**.

**Submitting Comments**

Submit all comments via NCQA’s Public Comment website at [https://my.ncqa.org/](https://my.ncqa.org/)

*Note: NCQA does not accept comments via mail, email or fax.*

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1HEDIS® is a registered trademark of the National Committee for Quality Assurance (NCQA).
How to Submit a Comment

1. Go to https://my.ncqa.org/.
2. Once logged in, click to select Public Comments.
3. Click Add Comment.
4. In the Product field, click to select HEDIS Public Comment from the drop-down menu.
5. Click the Instructions link to view public comment materials, including instructions and proposed measure specifications.
6. Click to select the Topic and Element (measure) on which you want to comment.
7. Click to select your support option (e.g., Support, Do not support, Support with modifications).
   Note: If you chose Do not support, include the reason in the text box. If you chose Support with modifications, enter the suggested modifications in the text box.
8. Enter comments in the Comments box.
   Note: Comments may not be more than 2,500 characters. We suggest you develop comments in Word to check your character limit and save a copy for reference. Use the “cut and paste” function to copy your comment into the Comments box.
9. Click Submit after each comment. After you have submitted all comments, click Close. You will be able to view and download all your submitted comments.

All comments are due Friday, March 11, by 5:00 p.m. ET.

NCQA Review of Public Comments

NCQA appreciates the time and effort required to submit comments, and reviews all feedback submitted within the public comment period. Due to the high volume of comments received, NCQA cannot respond to individual comments, but NCQA advisory panels and the Committee on Performance Measurement will consider comments and advise NCQA staff.

Items for Public Comment

Refer to the NCQA Public Comment page for detailed documentation (memos, specifications, performance data) on the items listed below.

Proposed New Measures

- Topical Fluoride for Children
- Oral Evaluation, Dental Services
- Social Need Screening and Intervention
- Emergency Department Visits for Hypoglycemia in Older Adults With Diabetes

Proposed Changes to Existing Measures

- Adult Immunization Status
- Deprescribing of Benzodiazepines in Older Adults
Proposed Measure Retirements

- Frequency of Selected Procedures
- Select CAHPS®² health plan measures
  - Flu Vaccinations for Adults Ages 18-64
  - Flu Vaccinations for Adults Ages 65 and Older
  - Pneumococcal Vaccination Status for Older Adults

Cross-Cutting Topic

- Expansion of race and ethnicity stratification in Select HEDIS Measures

Contact NCQA Customer Support at 888-275-7585, Monday–Friday, 8:30 a.m.–5:00 p.m. (ET).

²CAHPS® is a registered trademark of the Agency for Healthcare Research and Quality (AHRQ).
Proposed New Measures for HEDIS® Measurement Year (MY) 2023:
Oral Evaluation, Dental Services (OED)
Topical Fluoride for Children (TFC)

NCQA seeks comments on proposed new measures for potential inclusion in the HEDIS measure set for MY 2023:

- **Oral Evaluation, Dental Services:** The percentage of members under 21 years of age who received a comprehensive or periodic oral evaluation with a dental provider during the MY.

- **Topical Fluoride for Children** (formerly **Topical Fluoride for Children at Elevated Caries Risk**): The percentage of members 1–20 years of age who received at least two topical fluoride applications during the MY.

Good oral health is a vital component of a child’s overall health. A primary goal of dental or oral health care is to prevent tooth decay, also known as cavities, caused by dental caries. Dental cavities are one of the most common chronic conditions in children in the United States.

NCQA is set to retire the long-standing Annual Dental Visit (ADV) measure for HEDIS MY 2023. Stakeholders urged NCQA to identify an appropriate replacement measure, to avoid a gap in measuring dental quality in HEDIS. NCQA and the Dental Quality Alliance (DQA), the performance measure development organization established by the American Dental Association (ADA), worked to determine if one or more existing DQA pediatric measures could be adapted for inclusion in HEDIS, and concluded that both OED and TFC are robust replacements. NCQA desires for the adapted measures to align as much as possible with the original DQA measures. Therefore, NCQA is prioritizing alignment with both DQA measures.

NCQA seeks general feedback and specific feedback on the following questions:

1. Do you support alignment of the proposed HEDIS measures with the DQA measures? Or do you support proposed differences in the HEDIS measures identified below.

2. **Oral Evaluation, Dental Services:**
   a. This DQA measure focuses solely on services provided by dental providers. Should the HEDIS measure recognize evaluations provided by other types of medical providers, such as pediatricians or family physicians?
   b. The DQA measure specifications includes nine age stratifications. NCQA proposes four age stratifications and a total rate for the HEDIS measure. Do you support fewer stratifications?

3. **Topical Fluoride for Children:**
   a. The DQA measure specifications includes three indicators that delineate type of provider (dentists, other medical providers, either type of provider). NCQA proposes to assess only the combined indicator (either type of provider). Should NCQA include more indicators by provider type in the HEDIS measure?
   b. The DQA measure captures fluoride varnish. Should this measure capture all types of fluoride applications, not just fluoride varnish?
   c. The DQA measure specification includes eight age stratifications. NCQA proposes four stratifications and a total rate. Do you support fewer stratifications?
   d. The DQA measure specifies an allowable gap of 31 days. NCQA proposes an allowable gap of 45 days to align with other HEDIS measures. Do you support 45 days vs. 31 days?

Supporting documents include the draft measure specifications and evidence workup.

**NCQA acknowledges the contributions of the Dental Expert Work Group and the Technical Measurement Advisory Panel.**

¹HEDIS® is a registered trademark of the National Committee for Quality Assurance (NCQA).
**Topical Fluoride for Children (TFC)**

This measure has been included in and/or adapted for HEDIS with the permission of the Dental Quality Alliance (DQA) and American Dental Association (ADA). ©2022 DQA on behalf of ADA, all rights reserved.

**SUMMARY OF CHANGES TO HEDIS MY 2023**

- First-year measure.

**Description**

The percentage of members 1–20 years of age who received at least two topical fluoride applications during the measurement year.

**Eligible Population**

<table>
<thead>
<tr>
<th>Product line</th>
<th>Medicaid.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ages</td>
<td>1–20 years as of December 31 of the measurement year. Report four age stratifications and a total rate.</td>
</tr>
<tr>
<td></td>
<td>• 1–2 years.</td>
</tr>
<tr>
<td></td>
<td>• 3–5 years.</td>
</tr>
<tr>
<td></td>
<td>• 6–14 years.</td>
</tr>
<tr>
<td></td>
<td>• 15–20 years.</td>
</tr>
<tr>
<td></td>
<td>Total.</td>
</tr>
</tbody>
</table>

The total is the sum of the age stratifications.

<table>
<thead>
<tr>
<th>Continuous enrollment</th>
<th>The measurement year.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allowable gap</td>
<td>No more than one gap in enrollment of up to 31 days during the measurement year. To determine continuous enrollment for a Medicaid beneficiary for whom enrollment is verified monthly, the member may not have more than a 1-month gap in coverage (e.g., a member whose coverage lapses for 2 months [60 days] is not considered continuously enrolled).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Anchor date</th>
<th>December 31 of the measurement year.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benefit</td>
<td>Dental or medical.</td>
</tr>
<tr>
<td>Event/diagnosis</td>
<td>None.</td>
</tr>
<tr>
<td>Required exclusion</td>
<td>Members in hospice or using hospice services anytime during the measurement year. Refer to General Guideline 17: Members in Hospice.</td>
</tr>
</tbody>
</table>
Administrative Specification

Denominator  The eligible population.

Numerator  Two or more fluoride applications (Topical Application of Fluoride Value Set) during the measurement year on different dates of service.

Data Elements for Reporting

Organizations that submit HEDIS data to NCQA must provide the following data elements.

Table TFC-1: Data Elements for Topical Fluoride for Children

<table>
<thead>
<tr>
<th>Metric</th>
<th>Age Stratification</th>
<th>Data Element</th>
<th>Reporting Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>TopicalFluorideforChildren</td>
<td>1-2</td>
<td>Benefit</td>
<td>Metadata</td>
</tr>
<tr>
<td></td>
<td>3-5</td>
<td>EligiblePopulation</td>
<td>For each Stratification</td>
</tr>
<tr>
<td></td>
<td>6-14</td>
<td>ExclusionAdminRequired</td>
<td>For each Stratification</td>
</tr>
<tr>
<td></td>
<td>15-20</td>
<td>NumeratorByAdmin</td>
<td>For each Stratification</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>Rate</td>
<td>(Percent)</td>
</tr>
</tbody>
</table>

¹The NCQA Value Set Directory includes Current Dental Terminology (CDT) codes, © 2022 American Dental Association. All rights reserved. Use of the measures and CDT codes by NCQA, including inclusion in HEDIS, is contingent on NCQA and the ADA/DQA entering into an appropriate license agreement.
Oral Evaluation, Dental Services (OED)
Topical Fluoride for Children (TFC)
Measure Workup

Measure Descriptions

- **Oral Evaluation, Dental Services (OED):** The percentage of members under 21 years of age who received a comprehensive or periodic oral evaluation by a dental provider during the measurement year.

- **Topical Fluoride for Children (TFC):** The percentage of members 1–20 years of age who received at least two topical fluoride applications.

Topic Overview

Prevalence and Importance

Oral examinations include physical examination, review of appropriate images and evaluation for risk of tooth decay. Examination visits may also include the application of topical fluoride. Topical fluoride plays an important role in preventing dental decay (cavities) caused by dental caries in children. Dental caries is the most common chronic disease in children in the United States. From 2015–2016, prevalence of total (untreated and treated) caries-related tooth decay was 46% for children 2–19 years (Fleming, 2018). As children age, the prevalence increases from 21% (2–5 years) to 51% (6–11 years), to 54% (12–19 years). Overall, the prevalence of untreated caries was 13.0%. If untreated, dental caries can lead to difficulties with eating, speaking and learning (Griffin, 2016).

Identifying caries early on is important to reverse the disease process, prevent progression of caries and reduce incidence of future lesions. In 2014, 52% of all children and 60% of children below the federal poverty level did not have a dental visit during the year.

<table>
<thead>
<tr>
<th>Financial importance and cost-effectiveness</th>
</tr>
</thead>
</table>
| Between 1996 and 2013, more than $26 billion was spent on dental care for children and adolescents. Every year, more than 34 million school hours are lost due to unplanned (emergency) dental care. In 2017, there were 2.1 million dental-related ER visits (both children and adults); Medicaid paid for about 69% of these visits for children (CDC, 2021). States are obligated to provide dental benefits to children covered by Medicaid and the Children’s Health Insurance Program (CHIP) (Medicaid.gov, 2010). Coverage includes dental services for children as part of the Early and Periodic Screening, Diagnostic and Treatment benefit (Medicaid.gov, 2010). States that have a separate CHIP program can provide a package of dental benefits that meet CHIP requirements or provide a benchmark dental benefit package (Medicaid.gov, 2010).

There can be significant payoffs to investing in oral health. In one simulation study conducted in Virginia for Medicaid eligible children younger than 3 years, the authors estimated that receiving fluoride varnish would reduce the percentage of 7½ year old children with tooth decay from 63% to 40%. Primary care physicians applying fluoride varnish would save Medicaid more than $75 per child, totaling almost $2 million/year for Virginia Medicaid (Scherrer & Naavaal, 2019).

Underscoring the importance of topical fluoride application, it has been estimated that providing fluoridated water to communities for 1 year could save $6.5 billion in future dental treatment costs. Persons in communities with
fluoridated water have fewer cavities than persons in those without it (NIHCM, 2021).

**Supporting Evidence for Examination and Topical Fluoride Application**

The American Academy of Pediatric Dentistry (AAPD) recommends that children receive their first clinical oral examination at the time of their first tooth eruption and no later than their first birthday (AAPD, 2018). Thereafter, it is recommended that the frequency of examinations be based on the child’s individual needs and susceptibility to disease. Recommendations from the National Institute for Health and Care Excellence (NICE) also support an individualized approach to determining the frequency of dental checks (NICE, 2004). NICE recommends that that shortest interval between visits for children younger than 18 be no less than 3 months and no greater than 12 months (NICE, 2004). AAPD and NICE recommendations are not graded. AAPD recommendations were developed from an evaluation of more than 40 articles from published literature, as well as expert consensus opinion by experienced researchers and clinicians. The NICE guideline development process includes relevant literature review, expert committee review and stakeholder feedback.

The U.S. Preventive Services Task Force (USPSTF) recommends that primary care clinicians prescribe oral fluoride supplementation for children younger than 5, starting at 6 months for those whose water supply is deficient in fluoride, and apply varnish to the primary teeth of all infants and children, starting at the age of primary tooth eruption (USPSTF, 2021). The AAPD recommends that topical fluoride treatments be provided every 6 months, or at an interval appropriate to the child’s individual needs, starting at 12–24 months and continuing into adolescence (AAPD, 2018). A Cochrane systematic review to determine the effectiveness of fluoride varnishes in children and adolescents (up to 16 years) found an association between fluoride and a decreased risk of caries (Marinho et al., 2013). In a systematic review conducted by a panel of experts convened by the American Dental Association, the authors recommend fluoride be administered (in varying forms and concentrations) to all children, to prevent dental caries (Weyant et al., 2013).

Adverse outcomes associated with untreated dental cavities can be numerous; they include pain, infection, increased ER visits and decreased quality of life (Çolak et al., 2013;USPSTF, 2021).

**Health care disparities**

Health care disparities in oral health range from income based to racial and ethnic disparities. The National Institute for Health Care Management found that low-income children are twice as likely to have untreated dental cavities than higher-income children (NIHCM, 2021). When examining the percentage of children with caries-related lesions based on data from 2011–2016, Black and Hispanic children are more likely to have cavities than White children (NIHCM, 2021). Historically, the Native American population has had less access to dental care. American Indian or American Native children have the highest level of tooth decay—more than 4 times higher than White children (NIHCM, 2021). By age 5, 75% have experienced tooth decay (NIHCM, 2021).

**Gaps in care**

The barriers to achieving optimal oral health include provider shortage, lack of access to fluoridated water and financial barriers (NIHCM, 2021). More than 62 million people live in a health professional shortage area (HRSA, 2021). There are also approximately 100 million Americans without access to fluoridated tap water. Lack of transportation and childcare or work leave issues are also barriers (NIHCM, 2021).


### Specific Guideline Recommendations

#### Clinical Practice Guidelines: Screening and Interventions to Prevent Dental Caries in Children Younger Than Age 5 Years

<table>
<thead>
<tr>
<th>Organization, Year</th>
<th>Target Population</th>
<th>Recommendation</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>USPSTF, 2021</td>
<td>Children younger than age 5 years</td>
<td>Primary care clinicians prescribe oral fluoride supplementation starting at age 6 months for children whose water supply is deficient in fluoride.</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Primary care clinicians apply fluoride varnish to the primary teeth of all infants and children starting at the age of primary tooth eruption.</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Routine oral screening examinations: No recommendation</td>
<td>I</td>
</tr>
</tbody>
</table>

#### Clinical Practice Guidelines: Dental Caries in Children from Birth Through Age 5 Years: Screening

<table>
<thead>
<tr>
<th>Organization, Year</th>
<th>Target Population</th>
<th>Recommendation</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>USPSTF, 2014</td>
<td>Children from Birth Through Age 5 Years</td>
<td>Primary care clinicians prescribe oral fluoride supplementation starting at age 6 months for children whose water supply is deficient in fluoride.</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Primary care clinicians apply fluoride varnish to the primary teeth of all infants and children starting at the age of primary tooth eruption.</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Routine oral screening examinations: No recommendation</td>
<td>I</td>
</tr>
</tbody>
</table>
Proposed New Measures for HEDIS® Measurement Year (MY) 2023:
Oral Evaluation, Dental Services (OED)
Topical Fluoride for Children (TFC)

NCQA seeks comments on proposed new measures for potential inclusion in the HEDIS measure set for MY 2023:

- **Oral Evaluation, Dental Services:** The percentage of members under 21 years of age who received a comprehensive or periodic oral evaluation with a dental provider during the MY.

- **Topical Fluoride for Children** (formerly **Topical Fluoride for Children at Elevated Caries Risk**): The percentage of members 1–20 years of age who received at least two topical fluoride applications during the MY.

Good oral health is a vital component of a child’s overall health. A primary goal of dental or oral health care is to prevent tooth decay, also known as cavities, caused by dental caries. Dental cavities are one of the most common chronic conditions in children in the United States.

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   b. The DQA measure specifications includes nine age stratifications. NCQA proposes four age stratifications and a total rate for the HEDIS measure. Do you support fewer stratifications?

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   a. The DQA measure specifications includes three indicators that delineate type of provider (dentists, other medical providers, either type of provider). NCQA proposes to assess only the combined indicator (either type of provider). Should NCQA include more indicators by provider type in the HEDIS measure?
   b. The DQA measure captures fluoride varnish. Should this measure capture all types of fluoride applications, not just fluoride varnish?
   c. The DQA measure specification includes eight age stratifications. NCQA proposes four stratifications and a total rate. Do you support fewer stratifications?
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Supporting documents include the draft measure specifications and evidence workup.

**NCQA acknowledges the contributions of the Dental Expert Work Group and the Technical Measurement Advisory Panel.**

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Oral Evaluation, Dental Services (OED)

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SUMMARY OF CHANGES TO HEDIS MY 2023

- First-year measure.

Description

The percentage of members under 21 years of age who received a comprehensive or periodic oral evaluation with a dental provider during the measurement year.

Eligible Population

<table>
<thead>
<tr>
<th>Product line</th>
<th>Medicaid.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ages</td>
<td>Under 21 years as of December 31 of the measurement year. Report four age stratifications and a total rate:</td>
</tr>
<tr>
<td></td>
<td>• 0–2 years         • 15–20 years.</td>
</tr>
<tr>
<td></td>
<td>• 3–5 years.        • Total.</td>
</tr>
<tr>
<td></td>
<td>• 6–14 years.</td>
</tr>
<tr>
<td>Continuous enrollment</td>
<td>180 days during the measurement year.</td>
</tr>
<tr>
<td>Allowable gap</td>
<td>No gaps in enrollment during the continuous enrollment period.</td>
</tr>
<tr>
<td>Anchor date</td>
<td>None.</td>
</tr>
<tr>
<td>Benefit</td>
<td>Dental.</td>
</tr>
<tr>
<td>Event/diagnosis</td>
<td>None.</td>
</tr>
<tr>
<td>Required exclusion</td>
<td>Members in hospice or using hospice services anytime during the measurement year. Refer to General Guideline 17: Members in Hospice.</td>
</tr>
</tbody>
</table>

Administrative Specification

| Denominator | The eligible population. |
| Numerator¹ | A comprehensive or periodic oral evaluation with a dental provider during the measurement year (Oral Evaluation Value Set with NUCC Provider Taxonomy Value Set). |

¹The NCQA Value Set Directory includes Current Dental Terminology (CDT) codes, © 2022 American Dental Association. All rights reserved. Use of the CDT codes by NCQA, including inclusion in HEDIS, is contingent on NCQA and the ADA/DQA entering into an appropriate license agreement.

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Data Elements for Reporting

Organizations that submit HEDIS data to NCQA must provide the following data elements.

**Table OED-1: Data Elements for Oral Evaluation, Dental Services**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Age Stratification</th>
<th>Data Element</th>
<th>Reporting Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>OralEvaluationDentalServices</td>
<td>0-2</td>
<td>Benefit</td>
<td>Metadata</td>
</tr>
<tr>
<td></td>
<td>3-5</td>
<td>EligiblePopulation</td>
<td>For each Stratification</td>
</tr>
<tr>
<td></td>
<td>6-14</td>
<td>ExclusionAdminRequired</td>
<td>For each Stratification</td>
</tr>
<tr>
<td></td>
<td>15-20</td>
<td>NumeratorByAdmin</td>
<td>For each Stratification</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>Rate</td>
<td>(Percent)</td>
</tr>
</tbody>
</table>
Oral Evaluation, Dental Services (OED)
Topical Fluoride for Children (TFC)
Measure Workup

Measure Descriptions

- **Oral Evaluation, Dental Services (OED):** The percentage of members under 21 years of age who received a comprehensive or periodic oral evaluation by a dental provider during the measurement year.

- **Topical Fluoride for Children (TFC):** The percentage of members 1–20 years of age who received at least two topical fluoride applications.

Topic Overview

Prevalence and Importance

Oral examinations include physical examination, review of appropriate images and evaluation for risk of tooth decay. Examination visits may also include the application of topical fluoride. Topical fluoride plays an important role in preventing dental decay (cavities) caused by dental caries in children. Dental caries is the most common chronic disease in children in the United States. From 2015–2016, prevalence of total (untreated and treated) caries-related tooth decay was 46% for children 2–19 years (Fleming, 2018). As children age, the prevalence increases from 21% (2–5 years) to 51% (6–11 years), to 54% (12–19 years). Overall, the prevalence of untreated caries was 13.0%. If untreated, dental caries can lead to difficulties with eating, speaking and learning (Griffin, 2016).

Identifying caries early on is important to reverse the disease process, prevent progression of caries and reduce incidence of future lesions. In 2014, 52% of all children and 60% of children below the federal poverty level did not have a dental visit during the year.

Financial importance and cost-effectiveness

Between 1996 and 2013, more than $26 billion was spent on dental care for children and adolescents. Every year, more than 34 million school hours are lost due to unplanned (emergency) dental care. In 2017, there were 2.1 million dental-related ER visits (both children and adults); Medicaid paid for about 69% of these visits for children (CDC, 2021). States are obligated to provide dental benefits to children covered by Medicaid and the Children’s Health Insurance Program (CHIP) (Medicaid.gov, 2010). Coverage includes dental services for children as part of the Early and Periodic Screening, Diagnostic and Treatment benefit (Medicaid.gov, 2010). States that have a separate CHIP program can provide a package of dental benefits that meet CHIP requirements or provide a benchmark dental benefit package (Medicaid.gov, 2010).

There can be significant payoffs to investing in oral health. In one simulation study conducted in Virginia for Medicaid eligible children younger than 3 years, the authors estimated that receiving fluoride varnish would reduce the percentage of 7½ year old children with tooth decay from 63% to 40%. Primary care physicians applying fluoride varnish would save Medicaid more than $75 per child, totaling almost $2 million/year for Virginia Medicaid (Scherrer & Naavaal, 2019).

Underscoring the importance of topical fluoride application, it has been estimated that providing fluoridated water to communities for 1 year could save $6.5 billion in future dental treatment costs. Persons in communities with

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fluoridated water have fewer cavities than persons in those without it (NIHCM, 2021).

Supporting Evidence for Examination and Topical Fluoride Application

The American Academy of Pediatric Dentistry (AAPD) recommends that children receive their first clinical oral examination at the time of their first tooth eruption and no later than their first birthday (AAPD, 2018). Thereafter, it is recommended that the frequency of examinations be based on the child’s individual needs and susceptibility to disease. Recommendations from the National Institute for Health and Care Excellence (NICE) also support an individualized approach to determining the frequency of dental checks (NICE, 2004). NICE recommends that that shortest interval between visits for children younger than 18 be no less than 3 months and no greater than 12 months (NICE, 2004). AAPD and NICE recommendations are not graded. AAPD recommendations were developed from an evaluation of more than 40 articles from published literature, as well as expert consensus opinion by experienced researchers and clinicians. The NICE guideline development process includes relevant literature review, expert committee review and stakeholder feedback.

The U.S. Preventive Services Task Force (USPSTF) recommends that primary care clinicians prescribe oral fluoride supplementation for children younger than 5, starting at 6 months for those whose water supply is deficient in fluoride, and apply varnish to the primary teeth of all infants and children, starting at the age of primary tooth eruption (USPSTF, 2021). The AAPD recommends that topical fluoride treatments be provided every 6 months, or at an interval appropriate to the child’s individual needs, starting at 12–24 months and continuing into adolescence (AAPD, 2018). A Cochrane systematic review to determine the effectiveness of fluoride varnishes in children and adolescents (up to 16 years) found an association between fluoride and a decreased risk of caries (Marinho et al., 2013). In a systematic review conducted by a panel of experts convened by the American Dental Association, the authors recommend fluoride be administered (in varying forms and concentrations) to all children, to prevent dental caries (Weyant et al., 2013).

Adverse outcomes associated with untreated dental cavities can be numerous; they include pain, infection, increased ER visits and decreased quality of life (Çolak et al., 2013;USPSTF, 2021).

| Health care disparities | Health care disparities in oral health range from income based to racial and ethnic disparities. The National Institute for Health Care Management found that low-income children are twice as likely to have untreated dental cavities than higher-income children (NIHCM, 2021). When examining the percentage of children with caries-related lesions based on data from 2011–2016, Black and Hispanic children are more likely to have cavities than White children (NIHCM, 2021). Historically, the Native American population has had less access to dental care. American Indian or American Native children have the highest level of tooth decay—more than 4 times higher than White children (NIHCM, 2021). By age 5, 75% have experienced tooth decay (NIHCM, 2021). |
| Gaps in care | The barriers to achieving optimal oral health include provider shortage, lack of access to fluoridated water and financial barriers (NIHCM, 2021). More than 62 million people live in a health professional shortage area (HRSA, 2021). There are also approximately 100 million Americans without access to fluoridated tap water. Lack of transportation and childcare or work leave issues are also barriers (NIHCM, 2021). |
References


### Specific Guideline Recommendations

#### Clinical Practice Guidelines: Screening and Interventions to Prevent Dental Caries in Children Younger Than Age 5 Years

<table>
<thead>
<tr>
<th>Organization, Year</th>
<th>Target Population</th>
<th>Recommendation</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>USPSTF, 2021</td>
<td>Children younger than age 5 years</td>
<td>Primary care clinicians prescribe oral fluoride supplementation starting at age 6 months for children whose water supply is deficient in fluoride.</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Primary care clinicians apply fluoride varnish to the primary teeth of all infants and children starting at the age of primary tooth eruption.</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Routine oral screening examinations: No recommendation</td>
<td>I</td>
</tr>
</tbody>
</table>

#### Clinical Practice Guidelines: Dental Caries in Children from Birth Through Age 5 Years: Screening

<table>
<thead>
<tr>
<th>Organization, Year</th>
<th>Target Population</th>
<th>Recommendation</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>USPSTF, 2014</td>
<td>Children from Birth Through Age 5 Years</td>
<td>Primary care clinicians prescribe oral fluoride supplementation starting at age 6 months for children whose water supply is deficient in fluoride.</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Primary care clinicians apply fluoride varnish to the primary teeth of all infants and children starting at the age of primary tooth eruption.</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Routine oral screening examinations: No recommendation</td>
<td>I</td>
</tr>
</tbody>
</table>
Proposed New Measure for HEDIS® Measurement Year (MY) 2023: Social Need Screening and Intervention (SNS-E)

NCQA seeks comments on a proposed new measure for inclusion in HEDIS MY 2023.

Social Need Screening and Intervention: The percentage of members who were screened, using prespecified instruments, at least once during the measurement period for unmet food, housing and transportation needs, and received a corresponding intervention if they screened positive. Six rates are reported:

- **Food screening**: The percentage of members who were screened for unmet food needs.
- **Food intervention**: The percentage of members who received a corresponding intervention within 1 month of screening positive for unmet food needs.
- **Housing screening**: The percentage of members who were screened for unmet housing needs.
- **Housing intervention**: The percentage of members who received a corresponding intervention within 1 month of screening positive for unmet housing needs.
- **Transportation screening**: The percentage of members who were screened for unmet transportation needs.
- **Transportation intervention**: The percentage of members who received a corresponding intervention within 1 month of screening positive for unmet transportation needs.

The measure excludes individuals who are enrolled in hospice or in Institutional Special Needs Plans (I-SNP), or who reside in long-term care institutions (LTI). It is stratified by age (≤17, 18–64, 65+). Screening instruments and intervention codes included in the measure have been identified as appropriate for each domain by The Gravity Project consensus process, a multi-stakeholder, public collective initiative aimed at developing standardized terminology for documentation and exchange of data on social determinants of health (SDOH).

NCQA developed this measure as part of an organization wide effort to advance health equity and hold health plans accountable for assessing and addressing the food, housing and transportation needs of their patient populations. These social needs have been identified as high priority and actionable by a multitude of health system entities, including health plans, providers and other key stakeholders, yet most health care quality measures continue to focus on clinical processes and outcomes—there are currently no national health plan measures that assess and address a patient’s social needs. NCQA sees this as a critical quality measurement gap to fill.

Disparities in morbidity and mortality across social needs have been well documented over the last few decades, as leading health organizations increasingly elevate health equity as a priority.\(^2\)\(^3\) Organizations such as the Centers for Disease Control and Prevention and the World Health Organization, and policy initiatives like Healthy People 2030, have indicated the need to pursue health equity in the face of widening disparities between subgroups in the United States.\(^4\)\(^5\) Additionally, there is wide acknowledgment that social factors such as access to food, housing, transportation and social supports contribute significantly to health disparities.

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outcomes. In fact, 30%–55% of health outcomes are attributed to SDOH. The proposed measure would encourage health plans to identify specific needs and connect members with the resources necessary to overcome social barriers to their wellness.

Testing confirmed a large performance gap in terms of documenting results of screening for social needs. In Medicare, screening performance rates were highest for food (12.6%), followed by transportation (3.5%) and then housing (3.3%). Intervention performance rates were high compared to screening, with highest rates for food (75.1%) followed by transportation (68.5%) and housing (24.3%). Denominator sizes were small (<30) for some intervention indicators, particularly housing and transportation, suggesting that some plans may struggle to meet the minimum denominator size for reporting the intervention indicators.

NCQA seeks general feedback on the measure and specific feedback on the following:

1. **Phasing in the intervention indicators.** Should NCQA implement the measure with the intervention indicators or introduce the intervention component at a later time, given the current small denominators (which may be a barrier to reporting for some plans)?

2. **Follow-up time frame.** If the intervention indicators are retained in the measure, should NCQA shorten the follow-up time frame from 30 days (e.g., 1 week, 2 weeks)?

3. **Exclusion of members in I-SNPs and LTIs.** Should NCQA exclude members who receive these services?

4. **Screening instruments specified.** Current measure specifications require a limited set of standardized, social needs screening instruments: the Accountable Health Communities Health-Related Social Needs screening tool, the PRAPARE, We Care, WellRx and the Hunger Vital Sign. Is this list appropriate? Should NCQA include additional tools in the measure?

NCQA expert panel members strongly support the proposed measure and believe it is an important step toward holding health plans accountable for addressing the social needs of their members.

Supporting documents include the draft measure specification and evidence workup.

**NCQA acknowledges the contributions of the Health Equity Expert and Care Coordination Work Groups, and the Geriatric and Technical Measurement Advisory Panels.**

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6World Health Organization (WHO). (n.d.). *Social Determinants of Health*. [https://www.who.int/westernpacific/health-topics/social-determinants-of-health](https://www.who.int/westernpacific/health-topics/social-determinants-of-health)
Measure title | Social Need Screening and Intervention | Measure ID | SNS-E
--- | --- | --- | ---
Description | The percentage of members who were screened, using prespecified instruments, at least once during the measurement period for unmet food, housing and transportation needs, and received a corresponding intervention if they screened positive. Six rates are reported:

- **Food screening**: The percentage of members who were screened for unmet food needs.
- **Food intervention**: The percentage of members who received a corresponding intervention within 1 month of screening positive for unmet food needs.
- **Housing screening**: The percentage of members who were screened for unmet housing needs.
- **Housing intervention**: The percentage of members who received a corresponding intervention within 1 month of screening positive for unmet housing needs.
- **Transportation screening**: The percentage of members who were screened for unmet transportation needs.
- **Transportation intervention**: The percentage of members who received a corresponding intervention within 1 month of screening positive for unmet transportation needs.


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Adjusted Uncertified Measures: A calculated measure result (a “rate”) from a HEDIS measure that has not been certified via NCQA’s Measure Certification Program, and is based on adjusted HEDIS specifications, may not be called an “Adjusted HEDIS rate” until it is audited and designated reportable by an NCQA-Certified HEDIS Compliance Auditor. Until such time, such measure rates shall be designated or referred to as “Adjusted, Uncertified, Unaudited HEDIS Rates.”

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NCQA Fax: 202-955-3599
NCQA Website: www.ncqa.org
Submit policy clarification support questions via My NCQA (http://my.ncqa.org).

| Clinical recommendation statement | American Academy of Family Physicians:  
The AAFP urges health insurers and payors to provide appropriate payment to support health care practices to identify, monitor, assess and address SDoH.  
American Academy of Pediatrics:  
The AAP recommends surveillance for risk factors related to social determinants of health during all patient encounters. |

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**American Diabetes Association:**
Assess food insecurity, housing insecurity/homelessness, financial barriers, and social capital/social community support and apply that information to treatment decisions. A
Refer patients to local community resources when available. B

<table>
<thead>
<tr>
<th>Citations</th>
</tr>
</thead>
</table>

### Characteristics

<table>
<thead>
<tr>
<th>Scoring</th>
<th>Proportion.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Process.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stratification</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Product line:</td>
</tr>
<tr>
<td>- Commercial.</td>
</tr>
<tr>
<td>- Medicaid.</td>
</tr>
<tr>
<td>- Medicare.</td>
</tr>
<tr>
<td>- Age:</td>
</tr>
<tr>
<td>- ≤17 years.</td>
</tr>
<tr>
<td>- 18–64 years.</td>
</tr>
<tr>
<td>- 65 and older.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Risk adjustment</th>
<th>None.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improvement notation</td>
<td>A higher rate indicates better performance.</td>
</tr>
</tbody>
</table>
| Guidance | Allocation:
The member was enrolled with a medical benefit throughout the participation period. When identifying members in hospice, the requirements described in *General Guideline 17* for identification of hospice members using the monthly... |
membership detail data files are not included in the measure calculation logic and need to be programmed manually.

**Reporting:**
The total is the sum of the age stratifications.

Product line stratifications are not included in the measure calculation logic and need to be programmed manually.

---

### Definitions

<table>
<thead>
<tr>
<th>Participation</th>
<th>The identifiers and descriptors for each organization’s coverage used to define members’ eligibility for measure reporting. Allocation for reporting is based on eligibility during the participation period.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation period</td>
<td>The measurement period.</td>
</tr>
</tbody>
</table>

### Food screening instrument

Eligible screening instruments with thresholds for positive findings include:

<table>
<thead>
<tr>
<th>Instruments</th>
<th>Screening Item</th>
<th>Positive Finding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accountable Health-Communities Health Related Social Needs Screening Tool (AHC HRSN)</td>
<td>Within the past 12 months, you worried that your food would run out before you got money to buy more.</td>
<td>Often true Sometimes true</td>
</tr>
<tr>
<td></td>
<td>Within the past 12 months, the food you bought just didn't last and you didn't have money to get more.</td>
<td>Often true Sometimes true</td>
</tr>
<tr>
<td>Comprehensive Universal Behavior Screen (CUBS)</td>
<td>Tell us about your household and how you purchase food</td>
<td>I can meet basic food needs, but require occasional assistance My household is on food stamps I have no food or means to prepare it. I rely to a significant degree on other sources of free or low-cost food</td>
</tr>
<tr>
<td>Hunger Vital Sign (HVS)</td>
<td>Food insecurity risk</td>
<td>At risk</td>
</tr>
<tr>
<td>Protocol for Responding to and Assessing Patients Assets, Risks and Experiences (PRAPARE)</td>
<td>Have you or any family members you live with been unable to get any of the following when it was</td>
<td>Food</td>
</tr>
<tr>
<td>U.S. Food Security Survey (Household, Adult, Child, 6-item)</td>
<td>Food security status</td>
<td>Low food security</td>
</tr>
<tr>
<td>----------------------------------------------------------</td>
<td>----------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>We Care</td>
<td>Do you always have enough food for your family?</td>
<td>No</td>
</tr>
<tr>
<td>WellRX</td>
<td>In the past 2 months, did you or others you live with eat smaller meals or skip meals because you didn't have money for food?</td>
<td>Yes</td>
</tr>
</tbody>
</table>

### Eligible screening instruments with thresholds for positive findings include:

<table>
<thead>
<tr>
<th>Instruments</th>
<th>Screening Item</th>
<th>Positive Finding(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accountable Health-Communities Health Relates Social Needs Screening Tool (AHC HRSN)</td>
<td>What is your living situation today?</td>
<td>I have a place to live today, but I am worried about losing it in the future I do not have a steady place to live (I am temporarily staying with others, in a hotel, in a shelter, living outside on the street, on a beach, in a car, abandoned building, bus or train station, or in a park)</td>
</tr>
<tr>
<td></td>
<td>Think about the place you live. Do you have problems with any of the following?</td>
<td>Pests, such as bugs, ants, or mice Oven or stove not working Mold Smoke detectors missing or not working Lead paint or pipes Water leaks Lack of heat</td>
</tr>
<tr>
<td>Comprehensive Universal Behavior Screen (CUBS)</td>
<td>Tell us about your housing</td>
<td>I'm in stable housing that is safe but only marginally adequate I'm in transitional, temporary or substandard housing; and/or current</td>
</tr>
</tbody>
</table>
### Protocol for Responding to and Assessing Patients, Assets, Risks and Experiences (PRAPARE)

<table>
<thead>
<tr>
<th>What is your housing situation today?</th>
<th>I do not have housing (staying with others, in a hotel, in a shelter, living outside on the street, on a beach, in a car, or in a park)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are you worried about losing your housing?</td>
<td>Yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>What is your housing situation today?</th>
<th>I do not have housing (staying with others, in a hotel, in a shelter, living outside on the street, on a beach, in a car, or in a park)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are you worried about losing your housing?</td>
<td>Yes</td>
</tr>
</tbody>
</table>

| Do you think you are at risk of becoming homeless? | Yes |

| Are you homeless? Or worried that you might be in the future? | Yes |

### Transportation screening instrument

Eligible transportation screening instruments with thresholds for positive findings include:

<table>
<thead>
<tr>
<th>Instruments</th>
<th>Screening Item</th>
<th>Positive Finding(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accountable Health-Communities Health Relates Social Needs Survey (AHC HRSN)</td>
<td>In the past 12 months, has lack of reliable transportation kept you from medical appointments, meetings, work or from getting things needed for daily living?</td>
<td>Yes</td>
</tr>
<tr>
<td>Comprehensive Universal Behavior Screen (CUBS)</td>
<td>Access to transportation/mobility status</td>
<td>My transportation is available and reliable, but limited and/or inconvenient; drivers are licensed and minimally insured My transportation is available, but unreliable, unpredictable, unaffordable; may have car but no insurance, license, etc.</td>
</tr>
<tr>
<td>Protocol for Responding to and Assessing Patients Assets, Risks and Experiences (PRAPARE)</td>
<td>Has lack of transportation kept you from medical appointments, meetings, work, or from getting things needed for daily living</td>
<td>Yes, it has kept me from medical appointments or from getting my medications. Yes, it has kept me from non-medical meetings, appointments, work, or getting things that I need.</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>PROMIS</td>
<td>Current level of confidence I can use public transportation</td>
<td>I am not at all confident. I am a little confident. I am somewhat confident.</td>
</tr>
<tr>
<td>WellRx</td>
<td>Do you have trouble finding or paying for transportation?</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Interventions**

An intervention on, or up to 30 days after, the date of the first positive screening.

**Initial population**

Members enrolled at the start of the measurement period who also meet criteria for participation.

**Exclusions**

Members in hospice or using hospice services during the measurement period. Members who meet either of the following:

- Enrolled in an Institutional SNP (I-SNP) any time during the measurement period.
- Living long-term in an institution any time during the measurement period, as identified by the LTI flag in the Monthly Membership Detail Data File. Use the run date of the file to determine if a member had an LTI flag during the measurement period.

**Denominator**

**Denominator 1**

The initial population, minus exclusions.

**Denominator 2**

All members in numerator 1 with a positive food screen finding between January 1 and December 1 of the measurement period.

**Denominator 3**

Equal to denominator 1.

**Denominator 4**

All members in numerator 3 with a positive housing screen finding between January 1 and December 1 of the measurement period.
| Denominator 5 | Equal to denominator 1. |
| Denominator 6 | All members in numerator 5 with a positive transportation screen finding between January 1 and December 1 of the measurement period. |

| Numerator    | Numerator 1 | Members in denominator 1 with a documented result for food screening performed between January 1 and December 1 of the Measurement Period. |
|             | Numerator 2 | Members in denominator 2 receiving a food intervention on or up to 30 days after the date of the first positive food screen (31 days total). |
|             | Numerator 3 | Members in denominator 3 with a documented result for housing screening performed between January 1 and December 1 of the Measurement Period. |
|             | Numerator 4 | Members in denominator 4 receiving a housing intervention on or up to 30 days after the date of the first positive housing screen (31 days total). |
|             | Numerator 5 | Members in denominator 5 with a documented result for transportation screening performed between January 1 and December 1 of the Measurement Period. |
|             | Numerator 6 | Members in denominator 6 receiving a transportation intervention on or up to 30 days after the date of the first positive transportation screen (31 days total). |

Data criteria (element level)

**Value Sets:**

- **SNIE_HEDIS_MY2023-1.0.0**
  - Food Intervention (https://www.ncqa.org/fhir/valueset/2.16.840.1.113883.3.464.1004.2262)
  - Housing Intervention (https://www.ncqa.org/fhir/valueset/2.16.840.1.113883.3.464.1004.2263)
  - Transportation Intervention (https://www.ncqa.org/fhir/valueset/2.16.840.1.113883.3.464.1004.2264)

- **NCQA_Hospice-1.0.0**
  - Hospice Encounter (https://www.ncqa.org/fhir/valueset/2.16.840.1.113883.3.464.1004.1761)
  - Hospice Intervention (https://www.ncqa.org/fhir/valueset/2.16.840.1.113883.3.464.1004.1762)
Data Elements for Reporting

Organizations that submit data to NCQA must provide the following data elements in a specified file.

**Table SNS-E-: Metadata Elements for Social Need Screening and Intervention**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Age</th>
<th>Data Element</th>
<th>Reporting Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>FoodScreening</td>
<td>0-17</td>
<td>InitialPopulation</td>
<td>For each Metric and Stratification</td>
</tr>
<tr>
<td>FoodIntervention</td>
<td>18-64</td>
<td>ExclusionsByEHR</td>
<td>For each Metric and Stratification</td>
</tr>
<tr>
<td>HousingScreening</td>
<td>65+</td>
<td>ExclusionsByCaseManagement</td>
<td>For each Metric and Stratification</td>
</tr>
<tr>
<td>HousingIntervention</td>
<td>Total</td>
<td>ExclusionsByHIERegistry</td>
<td>For each Metric and Stratification</td>
</tr>
<tr>
<td>TransportationScreening</td>
<td></td>
<td>ExclusionsByAdmin</td>
<td>For each Metric and Stratification</td>
</tr>
<tr>
<td>TransportationIntervention</td>
<td></td>
<td>Exclusions</td>
<td>(Sum over SSoRs)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Denominator</td>
<td>For each Metric and Stratification</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NumeratorByEHR</td>
<td>For each Metric and Stratification</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NumeratorByCaseManagement</td>
<td>For each Metric and Stratification</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NumeratorByHIERegistry</td>
<td>For each Metric and Stratification</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NumeratorByAdmin</td>
<td>For each Metric and Stratification</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Numerator</td>
<td>(Sum over SSoRs)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rate</td>
<td>(Percent)</td>
</tr>
</tbody>
</table>
Health Equity and Social Determinants of Health (SDOH) in HEDIS®

Workup

Topic Overview

NCQA seeks to promote health equity through performance measurement and strives to ensure that factors beyond clinical determinants are considered in the Healthcare Effectiveness Data and Information Set (HEDIS). As a part of this effort, NCQA is exploring the development of new measures aimed at explicitly addressing social determinants of health (SDOH), such as assessing for and addressing social needs.

SDOH in HEDIS

Currently in HEDIS, NCQA incorporates SDOH through a limited number of stratifications, including an existing socioeconomic status (SES) and disability stratification applied to four measures, and a new race and ethnicity stratification that was first applied to five measures beginning in measurement year (MY) 2022, with plans to expand to at least five additional measures each in MY 2023 and MY 2024.

A multitude of other non-clinical determinants of health may be addressed by health plans, medical providers, social service providers and community-based organizations (CBO) to improve patient care and outcomes. Evidence shows that unmet social risks and social needs reflect underlying structural discrimination and unequal access to resources in our society; these social factors also contribute to inequities in health care and health outcomes (AMA, 2020; APHA, 2019). There is wide acknowledgment that social factors such as access to food, housing, transportation and social support contribute significantly to health outcomes. In fact, 30%–55% of health outcomes are attributed to SDOH (WHO, n.d.). HEDIS does not currently require stratifications by social factors other than race, ethnicity, low-income status (LIS)/Dual Medicaid and Medicare eligibility (DE) and disability status, and does not include any social needs-related measures. NCQA sees this gap as an opportunity to expand the scope of HEDIS quality measurement and encourage health plan accountability for taking into account members’ social needs as well as their health care needs.

Background, Prevalence and Importance

Background

The World Health Organization (WHO) defines SDOH as “the conditions in which people are born, grow, work, live and age, and the wider set of forces and systems shaping the conditions of daily life,” including economic policies and systems, development agendas, social norms and political systems (WHO 2020). Several other leading health organizations have developed similar definitions from which to operate when working to achieve health equity (CDC, 2020; Healthy People 2030, 2020). Equally important terms often referred to in the health equity domain include “social risk factors” (adverse social conditions associated with poor health), such as social isolation or housing instability, and “social needs” (immediate necessities, as determined by an individual’s preferences and priorities), such as seeking safety from a violent partner or requesting assistance applying to rent subsidy programs.

Such language is often employed to highlight the influence of various factors on health care access, as well as on outcomes (Alderwick, 2019). Disparities in morbidity and mortality across multiple social factors have been well documented over the last few decades as leading health organizations elevate health equity as a priority (Baciu, 2017; Penman-Aguilar, 2016). Organizations such as the Centers for Disease Control and Prevention (CDC) and the WHO, and policy initiatives like Healthy People 2030, have indicated the need to pursue health equity in the face of widening disparities between various subgroups in the United States (CDC, 2020; CSDH 2008; Pendo, 2020). Health care disparities occur across many dimensions, including race and ethnicity, gender, sexual orientation, socioeconomic status, disability status and geographic location (KFF 2020).

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Although social risk factors and needs may best be addressed at the societal level through economic and social policy changes, they may also be addressed at the organizational level through effective health plan interventions. Social needs cited as considerably impacts on health inequity include inadequate access to nutritious food, transportation barriers, insecure or unstable housing and social isolation (AMA, 2019; AAFP, 2019). Health systems, health plans, providers and other key stakeholders are actively investing financial resources in addressing these factors through a number of programs and initiatives ((APHA, 2019; Hinton et al., 2020; Hostetter & Klein, 2020). Given the focus on these four domains, NCQA explores each in depth in the following section.

Overview of Select Social Needs

**Food**

Food insecurity, defined as the disruption of food intake or eating patterns because of lack of money and other resources, affected approximately 10.5% of American households at some time during 2019 (Nord et al., 2005; US Department of Agriculture [USDA], 2020). This prevalence increases to 13.6% when there are children in the household (USDA, 2020). In 2016, 38% of Medicare members younger than 65 years and 9% of Medicare members 65 years and older reported experiencing food insecurity (Madden et al., 2020). Recent data collected by the Kaiser Family Foundation shows that food insecurity is a challenge for Medicaid members during the COVID-19 pandemic, with 20% of Medicaid adults reporting food insecurity in their household in early March (Hall et al., 2020). Food insecurity rates have been found to be higher in single parent households, Black and Hispanic households and households with incomes below the poverty line (USDA, 2020; Healthy People, 2020). Unemployed individuals, disabled adults and residents with limited transportation have also been identified as groups with higher risk of experiencing food insecurity (Healthy People, 2020).

Research suggests food insecurity is closely associated with decreased nutrient intake, poorer health and increased rates of behavioral and mental health conditions in all individuals (Burke et al., 2016; Gunderson & Ziliak, 2015). In children specifically, food insecurity was linked to higher odds of having asthma and having anemia compared to children living in food-secure households (Gunderson & Ziliak, 2015). In adults, evidence has found a strong correlation between food insecurity and increased rates of several chronic diseases, such as diabetes, hypertension and COPD (Gunderson & Ziliak, 2015; Seligman et al., 2010; Gregory & Coleman-Jensen, 2017). Food insecurity is associated with limitation in activities in daily living in older adults (Gunderson & Ziliak, 2015). Food insecurity may make it challenging for individuals to afford or adhere to appropriate diets to properly manage their medical conditions, for example, adhering to a diabetic diet to manage blood sugar levels.

At a national level, food assistance programs like the Supplemental Nutrition Assistance Program (SNAP), the Women, Infants and Children (WIC) program, and the National School Lunch Program (NSLP) are efforts to address barriers to healthy food access and have been shown to reduce food insecurity (Gregory & Coleman-Jensen, 2017; Healthy People, 2020; Ratcliffe et al., 2011). However, there are a number of interventions health plans have implemented to help address food insecurity. These include identifying members living with food insecurity through screenings, referring members and their families to food banks and assistance programs and creating new food distribution programs (Feeding America, 2021).

There are also documented examples of health plans partnering with local organizations to provide food assistance to their members. Health Partners Plans (HPP) developed the Food-as-Medicine program, where they partner with a local organization to provide members who are identified as experiencing
food insecurity 21 meals a week (Beaton, 2018). This program has documented success in reducing hospital admissions, ED visits and provider visits. Humana also has implemented meal sharing programs and food bank partnerships as part of its Bold Goal initiative to address food insecurity in older adults. BlueCross BlueShield of Arizona implemented the Nourishing Arizona program, a mobile produce program, for its membership (Beaton, 2018). In addition, Medi-Cal, the California state Medicaid program, implemented the first statewide meal program in the US (Badaracco et al., 2020). The percentage of Medicare Advantage (MA) plans covering meals for their members increased to 46% after CMS expanded supplemental benefits in 2019 to give plans the ability to address SDOH like food insecurity and to offer produce prescriptions or the delivery of medically tailored meals as a health care intervention to members (Badaracco et al., 2020; CMS, 2019).

Transportation

The American Hospital Association reports that 3.6 million individuals forgo needed medical care each year due to inadequate access to transportation. Transportation barriers occur for a variety of reasons, including, but not limited to, public transportation infrastructure, health care provider supply, transportation costs, vehicle access and time burden (AHA, 2017). In a survey conducted by Kaiser Permanente in 2019, 32% of American families reported experiencing barriers to transportation. The survey indicated that 1 in 5 Americans with unmet transportation needs reported their health as fair or poor (Kaiser Permanente, 2019). In 2019 McKinsey & Company conducted the Consumer Social Determinants of Health Survey, which found that people with an unmet transportation need were 2.6 times more likely to report multiple ED visits and 2.2 times as likely to report an inpatient stay over a 12-month period than people without an unmet transportation need.

Missed appointments, or “no-shows,” have been linked to lower rates of preventive care, poorer health outcomes and higher acute-care utilization. A study of over 140,000 adult patients across 15 primary care practices in Massachusetts found that patients with higher no-show rates were more likely to have incomplete cervical and colorectal cancer screening, uncontrolled hBA1C and cholesterol and higher rates of ED visits and hospitalization (Hwang et al., 2015). However, access to medical care is not the only mechanism through which transportation barriers can influence health. Transportation has also been linked to access to nutritious food (Dennis et al., 2017), employment (Blumenberg & Pierce, 2016) and social isolation (National Center for Mobility Management, 2020). Because of this, CMS recently expanded the type of transportation benefits MA plans are able to provide—including coverage for nonmedical transportation (Kornfield et al., 2020).

Evidence indicates that transportation barriers may affect certain populations more than others, such as those with lower incomes and those residing in rural communities. A systematic review of transportation barriers and access to care found that individuals with lower SES were more likely to experience transportation barriers to health care access (Syed et al., 2013). A Pew Research Firm analysis calculated that the average car travel time to the nearest hospital for Americans living in rural areas was 17 minutes, compared to roughly 10 minutes for those living in urban areas. This indicates that the burden of travel time and vehicle access may be greater for individuals living in rural regions than those living in urban or suburban areas. Roughly 18% of Americans live more than 10.5 miles from the nearest hospital (Lam et al., 2018). Additional risk factors may include functional status; an analysis of the National Health Interview Survey from 1997–2017 found that the rate of individuals experiencing transportation barriers was highest among those of
lower income, Hispanic ethnicity and with functional limitations (Wolfe et al., 2020).

Organizations can address transportation barriers by understanding the drivers of inadequate transportation among their patients, assessing individual transportation access, partnering with community organizations to address transportation needs and supporting policies to improve transportation infrastructure and access in their communities (AHA, 2017). Examples of interventions that organizations are pursuing to address transportation barriers among their patients include partnering with ride-sharing services to provide transportation to medical appointments and enhancing virtual care access. Ride-sharing partnerships have grown in use in recent years, although evidence has been mixed as to their effectiveness. While some studies have shown a decrease in patient no-shows after implementation of ride-sharing programs (Silver et al., 2012), others have shown that such programs may not be appropriate or effective for all populations (Chaiyachati et al., 2018). For example, drivers of ride-sharing services may not be appropriately trained to support individuals with functional limitations to the extent that nonmedical emergency transport services are.

Housing

Housing barriers can be experienced as housing insecurity, housing instability and homelessness. Housing insecurity may be defined as difficulty obtaining safe, adequate and affordable housing, where housing instability may refer to challenges such as difficulty paying rent, overcrowding or moving frequently (Cox et al., 2017; Frederick et al., 2014). According to a nationally representative survey conducted by Kaiser Permanente in 2019, 35% of American families reported experiencing stress over a housing need. According to the National Alliance to End Homelessness, 17 out of every 10,000 Americans experienced homelessness on any given night as of January 2019 (NAEH, 2020). Housing can influence health outcomes through a number of different pathways, including stability of housing access, safety and quality of housing, affordability of housing (which may impact an individual’s ability to afford other necessities like food and health care) and through neighborhood characteristics which can hinder or promote health (Taylor, 2018). Housing issues have been linked to a multitude of health outcomes, including self-reported health, stress, depression, anxiety and premature death (Burgard et al., 2012). Specifically, housing insecurity and instability have been linked to poorer access to primary and preventive care for adults (Martin et al., 2019), asthma exacerbation in children (Federico et al., 2020) and poorer treatment adherence and outcomes among people living with HIV (Aidala et al., 2016). According to a brief prepared by the American Hospital Association, homeless individuals are 5 times more likely to be admitted to the hospital (Health Research & Educational Trust, 2017).

Once a housing need is identified, follow-up interventions can include assistance with housing coordination, counseling and education, or referral to housing support services. Selected housing interventions for low-income people have been found to improve health outcomes and decrease health care costs. A large number of interventional studies demonstrate the potential for improving health through improved housing quality and safety. For example, studies in which asthma triggers are removed have repeatedly demonstrated health improvements and cost reductions among both children and adults (Taylor, L. 2018). Plan-level interventions can include paying for services such as housing location services, eviction prevention services, and training on tenant rights and responsibilities (Bailey, P. 2020).
While the health care system has an important role in connecting patients to housing, interventions at the community and policy level are also essential in reducing the burden of housing insecurity. According to the Center on Budget and Policy Priorities, at least 17 million households that are eligible for federal rental assistance do not receive it due to limited funding (Bailey, P. 2020).

**Social isolation and loneliness**

The National Academies of Sciences, Engineering, and Medicine (NASEM) defines social isolation as the objective lack of or limited social contact with others, marked by a person having few social network ties, living alone or having infrequent social contact with others. Loneliness is defined as the perception of social isolation or the subjective feeling of being lonely (NASEM, 2020). 35% of adults 45 and older report feeling lonely; 1 in 4 adults 65 and older are socially isolated (NASEM, 2020; CDC, 2020; Veazie et al., 2019). The prevalence of social isolation is concerning in older adults, who are at higher risk due to various risk factors such as the loss of family and friends, living alone, physical limitations, sensory impairment and chronic illness (CDC, 2020; Veazie et al., 2019). The prevalence of social isolation in older adults is notable, given that the older adult population is experiencing rapid growth; By 2060, nearly 25% of the United States will be 65 and older (Veazie et al., 2019; Healthy People 2030, n.d.). Other groups such as immigrants, racial and ethnic minorities and members of the LGBTQ community may also experience higher rates of social isolation and loneliness; however, literature providing evidence on the prevalence in these groups is sparse (CDC, 2020; Alcaraz et al., 2019; Caffrey, 2019).

Evidence shows that both social isolation and loneliness in adults 50 and older are closely linked to morbidity and mortality. In this population, social isolation is associated with a 50% increase in the risk of dementia, 29% increase in risk of heart disease and 32% increase in risk of stroke (CDC 2020; NASEM 2020). Additionally, older adults with heart failure that experience loneliness also have a 68% increased risk of hospitalization and a 57% increased risk in ED visits (CDC 2020; NASEM, 2020). A review of the National Health and Nutrition Examination Survey and National Death Index found that social isolation predicts mortality in a magnitude similar to that of smoking and high blood pressure, verifying that social isolation is a strong risk factor for mortality (Pantell et al., 2013).

Literature highlights significant barriers to addressing and preventing social isolation and loneliness at the health plan level, including lack of time in the clinic to assess for this social risk and lack of reimbursement for assessment and discussion with members under fee-for-service (FFS) payment systems (Escalante et al., 2021). While it is difficult to overcome these barriers, health plans have begun to address loneliness in their membership through interventions and initiatives centered on promoting social connections. For example, Humana developed “Papa Pal,” a program that matches college students with MA members to provide social companionship and technology assistance and aid with daily activities (Humana, 2019). United Health Group has collaborated with the AARP to raise awareness for the AARP’s “Connect2Affect” digital risk assessment platform. This platform is intended to reduce social isolation among adults 50 and older by promoting increased connections via a variety of resources, beginning with a social isolation assessment questionnaire (United Health Group, 2020).

**Screening tools for social needs**

*Screening for food insecurity*: Several health care facilities have incorporated food insecurity screenings into their EHRs to collect this information during patient visits (Feeding America, 2021). Most commonly used is the 2-question
Hunger Vital Sign screening assessment, which has high sensitivity and specificity for identifying individuals experiencing food insecurity (Humana & Feeding America, 2020). Other screening assessments, such as U.S. Household Food Security Survey Module: Six-Item Short Form Economic Research Service and the U.S. Household Food Security Module, can also be used to identify food insecurity, though these questionnaires are longer (Health Care Without Harm, 2018).

**Screening for transportation needs:** A multitude of existing screening tools can be used to screen for transportation needs, including, but not limited to, the AAFP Social Needs Screening tool, the PRAPARE instrument and the Accountable Health Communities Health-Related Social Needs Survey (SIREN, n.d.). As of February 2021, the Gravity Project by SIREN had identified 16 existing tools that include questions assessing patient transportation needs; 4 have existing LOINC codes that can document screening results electronically. The Gravity Project is working to develop a comprehensive, and standardized electronic coding terminology across screening and intervention in the transportation domain.

**Screening for housing needs:** A multitude of existing screening tools can be used to screen for housing needs, including, but not limited to, the AAFP Social Needs Screening tool, PRAPARE, and the Accountable Health Communities Health-Related Social Needs Survey (SIREN, n.d.). The Gravity Project identified 23 instruments that include screening questions related to a patient’s housing needs. Housing has been identified as a priority domain by the Gravity Project. As of December of 2020, the Gravity Project had developed data standards for the housing instability and homelessness domains and is expected to facilitate the submission and creation of screening and intervention coding terminology in the near future (Gravity Project, 2020).

**Screening for social isolation and loneliness:** A number of tools are available to screen for social isolation and loneliness, but the NASEM considers two assessments to be among the best for identifying these social risks: the UCLA Loneliness Scale and the Berkman-Syme Social Network Index (NASEM, 2020). The UCLA Loneliness Scale is a self-administered 20-item tool that evaluates teen and adult patients' subjective feelings of loneliness. A 3-item version of this tool is used widely in research and clinical settings as a strategy to briefly assess loneliness (Stanford University, n.d.). The Berkman-Syme Social Network Index is used to identify social isolation by assessing for participation in 12 types of social relationships, including those with family members, friends and colleagues (NASEM, 2020; Whitaker Institute, n.d.). It was recommended for inclusion in EHRs by the National Academy of Medicine (NAM) in 2014 and has been implemented in clinical settings to allow providers to measure social integration in patients (NASEM, 2020; NAM, 2015).

Social needs often overlap; individuals experiencing one social need may experience additional social needs that compound health risk. McKinsey’s 2019 Consumer Health Insights Survey found that half of those reporting at least 1 unmet social need reported multiple unmet social needs; among Medicaid patients surveyed with at least 1 need, 67% reported multiple unmet social needs (McKinsey & Company, 2019). For example, food insecurity may not exist in isolation and may be closely linked to another social need such as access to reliable transportation and neighborhood characteristics (Healthy People, 2030). Individuals experiencing homelessness may also experience social isolation and loneliness resulting from stigma. While each individual social need may require targeted interventions and links to need-specific resources, it is important to consider that social needs often intersect and compound an individual’s health risks.
Importance

Public health leaders have increasingly called for collaborative, coordinated approaches across different disciplines to address social determinants of health. It is estimated that 45%–57% of SDOH drivers exist outside the health care system; thus, calls for response to health disparities have echoed a need to implement interdisciplinary approaches (APHA, 2019; Daniel, 2018; AMA 2019).

The American College of Physicians published a set of policy recommendations on SDOH, expressing support for cross-agency collaboration to maximize the impact of changes in policy (Daniel et al., 2018). The American Public Health Association (APHA) similarly indicated that cross-cutting interventions must be employed by organizations in different fields at the national, local and individual levels, in addition to work implemented through nongovernmental organizations (Chisolm, 2019). The need for the implementation and maintenance of measurable objectives when assessing disparities and health equity-driven goals is another topic in which many leading health care organizations are invested.

Healthy People 2030 has expressed interest in strengthening the link between performance measurement and addressing social risks (APHA, 2019). The APHA also highlights the importance of measurement-oriented initiatives in decreasing health disparities. Researchers find that creating approaches with operational objectives can help health care organizations assess whether they are on track to meet health equity goals at various levels (individual, community, state, national).

COVID-19

The COVID-19 pandemic accentuates the need to address health disparities and underscores that living in an underserved environment and facing social adversity correlates directly to biased rates of infection and poor health outcomes (Holuka, 2020). Early studies show that several groups are at increased risk of contracting COVID-19 and dying from the coronavirus, including individuals 65 and older, racial and ethnic minorities and groups from economically depressed communities (Hatcher, 2020; Kim, 2020).

Financial impact

Beyond the human toll, unmet social needs and resulting health disparities place a considerable economic burden on society. Total overall costs of health inequities and premature deaths between 2003 and 2006 amounted to $1.24 trillion (APHA, 2019). Experts estimate that eliminating health disparities during this time frame would have reduced this cost by $229.4 billion (LaVeist, 2009).

Social needs can incur significant costs to individuals and society. For example, transportation barriers resulting in missed appointments cost the U.S. health care system up to $150 billion each year (Stewart, 2019). Organizations have found that investment in social services has shown reduced costs. Evaluation of a managed care organization social services referral program demonstrated a 10% reduction in mean expenditure per patient among patients reporting that their social needs were met (Pruitt et al., 2018). A social ROI analysis evaluated the impact of a hospital’s affordable housing program on its community and found that for every dollar the hospital spent on its patients via the affordable housing program, between $1.30 and $1.92 returned to the community, suggesting that increased access to affordable housing for patients can produce a positive social value (Drabo et al., 2021).
Data Availability and Use (Social Needs)

Although the importance of addressing social needs for the purposes of equitable quality measurement is apparent, challenges remain, including how to accurately and feasibly identify social needs. Some data elements may be more readily available than others, and some data sources may demonstrate greater accuracy than others. Below is an analysis of the availability of social needs data in administrative claims and EHRs.

Claims

Documentation of social needs in administrative claims is increasing but remains uncommon.

In 2016, Medicare introduced “z-codes,” a set of ICD-10 diagnosis codes related to SDOH. Z-codes are designed to capture social factors that influence a patient’s health status, including, but not limited to, socioeconomic and psychosocial circumstances (CMS, 2020).

Analysis of z-code utilization among Medicare FFS beneficiaries found that among 33.7 million total beneficiaries in 2017, approximately 1.4% had claims with documented z-codes. The most commonly used z-codes were for homelessness, problems related to living alone, disappearance or death of a family member, problems related to psychosocial circumstances and problems in relationships with a spouse or partner.

The analysis concluded that the data likely underestimates patient social needs among Medicare FFS beneficiaries and that although SDOH screening may occur, the extent to which patient social needs are being documented in claims is unclear (CMS, 2020).

Another study examining z-code utilization from 2016–2017 using the National Inpatient Sample, a publicly available, all-payer, inpatient care database, resulted in similar findings. Of over 14 million hospitalizations, just 1.9% included a z-code. The study concluded that z-codes are not an accurate representation of the true burden of social needs among hospitalized patients (Truong et al., 2020).

There are some important considerations in evaluating the appropriateness of relying on claims to identify, prioritize and address social needs across a population. The effort of Gottlieb and colleagues to map social screening tools to existing z-codes revealed challenges: There may not be a social code that appropriately matches to an identified need; multiple social codes may apply; meaning may be lost in selecting a particular social code (Gottlieb et al., 2017). For example, because “lack of adequate food or safe drinking water” collapses several distinct social needs, meaning may be lost when attempting to understand and address population-level needs.

Despite the low utilization and limitations of ICD-10 social codes, efforts are underway to increase utilization and usefulness of SDOH documentation in claims.

• In 2019, the American Hospital Association released *ICD-10-CM Coding for Social Determinants of Health* in an effort to increase utilization of z-codes (American Hospital Association, 2019).

• The American Medical Association, in partnership with UnitedHealthcare, announced the desire to expand the existing set of z-codes to increase specificity and allow more accurate documentation of patient social needs (American Medical Association, 2019).
EHRs

EHR systems represent an opportunity to capture and utilize rich patient-level demographic and social needs data. The Office of the National Coordinator for Health IT’s most recent certification criteria for Certified Electronic Health Record Systems requires that systems be able to collect structured information related to patient social, behavioral and psychological data, including, but not limited to, financial resource strain, education and social circumstances (ONC, 2015).

Although evidence indicates that demographic data is routinely documented in EHR systems, there remains considerable variability in how patient social needs are screened for and documented in EHR systems. A study of EHR data for over 5 million patients seen in a multi-level health care system in Maryland found that ZIP code was documented for 95% of patients, race for 90% of patients and ethnicity for 50% of patients. By contrast, less than 1% of patients had data related to a social need documented in structured fields (Hatef et al., 2019).

Barriers to documentation of SDOH in EHR systems include variability in availability of structured screening tools in each system and lack of staff training on screening for and documenting SDOH in the EHR. Variation in availability of structured SDOH fields may be attributed in part to EHR vendor preferences and priorities. A qualitative study of EHR vendor perspectives on and approaches to SDOH data collection in EHRs revealed that EHR vendors are actively investing in SDOH products, but vendors also highlighted that lack of standardization in SDOH screening instruments may lead to variation in how they approach SDOH data collection (Freij et al., 2019).

Further variability is introduced in how—and if—clinicians document social needs, from screening tools to EHR fields. A study analyzing the feasibility of implementing an EHR-based SDOH screening tool found that clinicians may face challenges in screening for and documenting social needs due to a lack of sustainable resources to manage the follow-up workload involved in linking patients with SDOH needs to appropriate resources (Gold et al., 2018).

Social needs referral platforms

A fast-growing market of technology-based platforms has allowed greater connection between patients, medical providers, social service providers and community-based organizations. This section highlights a few examples of these platforms and portals that may be used to address social needs.

Aunt Bertha developed a social care network to help individuals navigate the complex social service systems beyond the health care industry. It targets individuals seeking social care and helps customers find free and reduced-cost services, such as food pantries or assistance with housing payments. Aunt Bertha partners with verified nonprofits and social service organizations, which are added to a repository of resources that individuals can search for and connect with on the network platform. The network offers advanced features, such as EHR integration and referral tracking, so patients and/or providers and organizations are notified when connections are made. As of March 2021, 5.92 million people had engaged with Aunt Bertha’s networking platform across all 50 states, while 29.4 million searches had been conducted by users (Aunt Bertha, n.d.).

NowPow is a community referral platform that uses evidence-based, personalized referrals to help individuals meet health and social needs. NowPow allows providers across the health care and social care continuum (e.g., community health workers, outreach workers) to transmit health and social referrals through a centralized, standardized platform that streamlines the
referral workflow for all involved parties. This platform can be integrated with EHRs, health information exchanges and case management systems. It builds networks across organization types, including health care, CBO and education, allowing health care professionals to connect directly with network partners in the community to close the referral loop on all health and social needs. NowPow’s architecture also supports resource supply-and-demand analytics across entire communities, making it useful for both individual- and population-level assessment of social needs referrals and uptake of services (NowPow, n.d.).

Unite Us builds coordinated care networks of health and social service providers. Network partners are connected through a shared technology platform, which supports screening and referral collaboration, communitywide care and secure bidirectional communication and alerts. The Unite Us infrastructure allows outcome tracking, so providers can assess and address service gaps while improving quality of care and reducing costs. The platform is embedded in the EHR system of every network partner, enabling streamlined electronic referral care plan management across all providers. Unite Us ensures sustained network growth by helping each partner build its platform framework to effectively analyze data and make it actionable within the communities the partner organization serves (Unite Us, n.d.).

In addition to existing tools, more opportunities to engage with social needs referral platforms are on the horizon. Epic Systems has partnered with several health systems in Wisconsin to embed an SDOH referral tool into provider EHRs. The goal is to allow care teams to easily access and document information related to screening and referrals for SDOH without having to navigate third-party vendor portals. The information exchange will also include a directory of community-based organizations that providers can use to directly refer patients to external resources (Raths, 2020).

### Current State of SDOH and Equity in Policy and Measurement

#### National

For Medicare Contract Year 2023, CMS proposes that all Special Needs Plans include standardized questions on food insecurity, access to transportation and housing instability as part of their health risk assessments (CMS 2022).

A number of national programs and organizations have made efforts to highlight disparities in care and encourage collection of data to address SDOH. Notably, in 2021, CMS identified “Leverage Quality Measures to Promote Equity and Close Gaps in Care” as one of its five action plan goals, highlighting a commitment to develop a multi-year plan to address disparities. CMS stated it intent to incentivize plans to close equity gaps through pay-for-performance incentive programs (Schreiber, 2021).

In August 2020, the CDC released the new set of Healthy People 2030 objectives, which included objectives related to SDOH across five domains: Economic Stability, Education Access and Quality, Health Care Access and Quality, Neighborhood and Built Environment and Social and Community Context (CDC, 2020).

In June 2020, the DHHS Assistant Secretary for Planning and Evaluation delivered a report to Congress underscoring the importance of health plans and government agencies in measuring and addressing social risks. The report highlights that health plans can, and should, advocate for stronger collaborations and partnerships within and outside the health care system to advance health equity and improve the quality of care (ASPE, 2020).
The Comprehensive Primary Care+ program, a national advanced primary care medical home model with 2,783 practices and 52 payers participating as of 2020, requires practices to “identify patients’ high priority health-related social needs and resources available in your community to meet those needs” (Center for Medicare and Medicaid Innovation, 2018).

State
Most states analyze and publicly report data on health disparities. States deploy varying approaches to measuring health equity, reporting a wide range of health indicators and relying on a multitude of national (e.g., ACS, National Vital Statistics System) and local (e.g., state surveys, local health departments) data sources.

The Center for Health Care Strategies conducted a qualitative study to understand the extent to which state Medicaid agencies collect SDOH data and how they use the data. Of eight states interviewed, all collect data on housing and employment; seven collect data on family and social supports (Center for Health Care Strategies, 2018). States increasingly require Medicaid Managed Care Organizations (MCO) to address SDOH in their contracts (Kushner & McConnell, 2019).

Some states have contracted with social referral platforms to improve coordination with community resources when delivering care. For example, Unite Us announced a new network in Arizona that will allow exchange of electronic referrals and the ability to track SDOH outcomes in communities across the state (Unite Us, 2021). North Carolina developed and implemented its own social referral platform, NCCARE360, which streamlines and standardizes referrals, mobilizes community partnerships and allows easy information sharing between medical and social services (NCDHHS, n.d.).

A handful of states have developed social risk factor screening measures in response to increasing interest in the impact of SDOH on Medicaid enrollee health status. States are actively sharing best practices and convening expert work groups to discuss decisions related to implementation of SDOH screening measures (e.g., where screening should be performed, measure data sources) (Bailit Health, 2020).

Quality measurement & endorsement organizations
Quality measurement organizations have recognized the importance of addressing equity through measurement of disparities and SDOH. In 2019, the National Quality Forum partnered with Aetna to issue a national call to action to address SDOH and convened a multi-stakeholder summit to develop a set of related recommendations. Included was a call to “develop key sets of measures to incorporate and align social determinants of health measurement and activity across the health ecosystem” (National Quality Forum, 2019b). NQF has recently partnered with Humana to develop three electronic quality measures related to food insecurity (National Quality Forum, 2019a).

NCQA also issues Health Plan Accreditation and administers the Patient-Centered Medical Home (PCMH) program. As a part of its Population Health Management (PHM) program health plan Accreditation standards, entities must assess the characteristics and needs of their patient populations, including SDOH, and identify and offer community resources to meet those needs. The PCMH model requires practices to demonstrate processes to collect data on patient social needs (NCQA, 2020).

Funders, academics, other
There are multiple examples of innovative industry efforts to measure, report and use data to shine light on health disparities and equip communities with the information they need to address SDOH. Mathematica, Inc. developed the
Community Connector tool in 2019, a data visualization tool that describes how a community looks in terms of SDOH across six domains.

The Robert Wood Johnson Foundation has also funded a number of innovative initiatives; for example, it partnered with the University of Wisconsin Population Health Institute to maintain the County Health Rankings and Roadmaps program, an interactive tool that maps a range of clinical and social indicators, such as health behaviors, economic factors and physical environment, in almost every county across the 50 states. The tool relies on data from a multitude of national data sets, such as the American Community Survey and the Behavioral Risk Factor Surveillance System. Many indicators in the tool are stratified by age, gender, race, education and/or income (Robert Wood Johnson Foundation, n.d.).

In 2018, the Robert Wood Johnson Foundation funded initiation of the Gravity Project by SIREN, which aims to standardize coded data elements used to document SDOH in EHRs across four activities (screening, diagnosis, planning, interventions) and three social risk domains (food insecurity, housing instability and quality, transportation access). As of March, 2021, the food insecurity domain has been collated into a master list of adjudicated data elements, while housing instability and transportation are currently in draft phase, with target for HL7 inclusion in 2021 (HL7 International, n.d.).

Screening for SDOH

A growing number of guidelines and clinical practice policies in the U.S. relate to screening for social needs and links to resources. The AMA supports expanding access to SDOH screening tools, urges vendors to adopt SDOH templates and supports payment reform policy proposals that incentivize screening for SDOH and referral to community support systems (American Medical Association, 2019).

The American Hospital Association (AHA) Value Initiative developed guidance to assist hospital and health systems leaders as they engage patients in screening conversations. Guidance notes that although screening patients for social needs may be challenging, it is crucial that health care organizations develop screening approaches that enhance patient care and connect individuals to community-based organizations as needed (AHA, 2019).

The American Academy of Pediatrics recommends screening children for social risk factors during all patient encounters, as well as partnering with community organizations, intervention programs and schools to link patients to needed resources (American Academy of Pediatrics, 2016).

In 2020, the U.S. Preventive Services Task Force released a review of its methods for developing primary care-based recommendations for SDOH. It outlined considerations for new approaches for addressing SDOH in future recommendations and concluded that further research on these proposed methodological changes could position it to better integrate social risks into future preventive care recommendations (Davidson et al., 2020).

There is growing acknowledgment in the health care community of the need to identify and address social needs and health disparities. In 2017, the American Academy of Family Physician surveyed 5,000 family physicians and found that 83% agreed that family physicians should identify and help address patients’ SDOH. 78% agreed that family physicians should partner with community organizations to address community health disparities (AAFP, 2019; AAFP, 2017; The Everyone Project, n.d.).
References


### Appendix A: Guidelines, Position Statements and Recommendations

#### Clinical and Policy Practice Guidelines: Social Determinants of Health and Health Equity

<table>
<thead>
<tr>
<th>Organization, Year</th>
<th>Recommendation</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Academy of Pediatrics, 2016</td>
<td>The AAP recommends surveillance for risk factors related to social determinants of health during all patient encounters. Practices can use a written screener or verbally ask family members questions about basic needs such as food, housing, and heat.</td>
<td>Not graded</td>
</tr>
</tbody>
</table>
| American College of Physicians, 2018 | Policy Recommendations:  
1. The American College of Physicians supports increased efforts to evaluate and implement public policy interventions with the goal of reducing socioeconomic inequalities that have a negative impact on health. Supportive public policies that address downstream environmental, geographical, occupation, education, and nutritional social determinants of health should be implemented to reduce health disparities and encourage health equity.  
2. The American College of Physicians recommends that social determinants of health and the underlying individual, communities, and systemic issues related to health inequities be integrated into medical education at all levels. Health care professionals should be knowledgeable about screening and identifying social determinants of health and approaches to treating patients whose health is affected by social determinants throughout their training and medical career.  
3. The American College of Physicians supports increased interprofessional communication and collaborative models that encourage a team-based approach to treating patients at risk to be negatively affected by social determinants of health.  
4. The American College of Physicians supports the adequate and efficient funding of federal, state, tribal, and local agencies in their efforts to address social determinants of health, including investments in programs and social services shown to reduce health disparities of costs to the health care system and agency collaboration to reduce or eliminate redundancies and maximize potential impact.  
5. The American College of Physicians supports increase research into the causes, effects, prevention, and dissemination of information about social determinants of health. A research agenda should include short- and long-term analysis of how social determinants affect health outcomes and increased effort to recruit disadvantaged and underserved populations into large-scale research studies and community-based participatory studies.  
6. The American College of Physicians recommends policymakers adopt a “health in all policies” approach and supports the integration of health considerations into community planning decisions through the use of health impact assessments.  
7. The American College of Physicians recommends development of best practices for utilizing electronic health record (EHR) systems as a tool to improve individual and population health without adding to the administrative burden on physicians.  
8. The American College of Physicians recommends adjusting quality payment models and performance measurement assessments to reflect the increased risk associated with caring for disadvantaged patient populations.  
9. The American College of Physicians recommends increased screening and collection of social determinants of health data to aid in health impact assessments and support evidence-drive decision making. | Not graded |
<table>
<thead>
<tr>
<th>Organization, Year</th>
<th>Recommendation</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Medical Association, 2019</td>
<td>Expanding Access to Screening Tools for Social Determinants of Health/Social Determinants of Health in Payment Models H-160.896. Our AMA supports payment reform policy proposals that incentivize screening for social determinants of health and referral to community support systems.</td>
<td>Not graded</td>
</tr>
</tbody>
</table>
| American Public Health Association, 2019 | The APHA goal is for the United States to become the healthiest nation in a generation by 2030. To accomplish this goal, APHA calls for the conduct of eight science-based key actions:  
- Build safe, healthy communities  
- Help all young children graduate from high school  
- Reverse growing income inequalities  
- Remove barriers to good health for everyone  
- Provide affordable, nutritious food for everyone  
- Effectively prepare for and respond to the health impacts of climate change  
- Provide quality health care to everyone  
- Strengthen public health infrastructure  
Furthermore, considerable literature exists denoting additional specific strategies in smaller localities that have led to improvements in health equity through addressing the social determinants of health. These strategies include, but are not limited to, research strategies (such as community-based participatory research), housing program and policy strategies (such as tenant-based rental assistance programs), and educational program and policy strategies (such as center-based early childhood education, full-day kindergarten programs, and high school completion programs). | Not graded |
| Institute of Medicine, 2009           | Recommendation 3-1: An entity collecting data from individuals for purposes related to health and health care should:  
- Collect data on granular ethnicity using categories that are applicable to the populations it serves or studies. Categories should be selected from a national standard list (see Recommendation 6-1a) on the basis of health and health care quality issues, evidence or likelihood of disparities, or size of subgroups within the population. The selection of categories should also be informed by analysis of relevant data (e.g., Census data) on the service or study population. In addition, an open-ended option of “Other, please specify: ” should be provided for persons whose granular ethnicity is not listed as a response option.  
- Elicit categorical responses consistent with the current OMB standard race and Hispanic ethnicity categories, with the addition of a response option of “Some other race” for persons who do not identify with the OMB race categories.  
Recommendation 3-2: Any entity collecting data from individuals for purposes related to health and health care should collect granular ethnicity data in addition to data in the OMB race and Hispanic ethnicity categories and should select the granular ethnicity categories to be used from a national standard set. When respondents do not self-identify as one of the OMB race categories or do not respond to the Hispanic ethnicity question, a national scheme should be used to roll up the granular ethnicity categories to the applicable broad OMB race and Hispanic ethnicity categories to the extent feasible. | Not graded |
Recommendation 5-1: Where directly collected race and ethnicity data are not available, entities should use indirect estimation to aid in the analysis of racial and ethnic disparities and in the development of targeted quality improvement strategies, recognizing the probabilistic and fallible nature of such indirectly estimated identifications. Race and ethnicity identifications based on indirect estimation should be distinguished from self-reports in data systems, and if feasible, should be accompanied by probabilities. Interventions and communications in which race and ethnicity identifications are based on indirect estimation may be better suited to population-level interventions and communications and less well suited to use in individual-level interactions. An indirectly estimated probability of an individual’s race and ethnicity should never be placed in a medical record or used in clinical decision making. Analyses using indirectly estimated race and ethnicity should employ statistically valid methods that deal with probabilistic identifications.

Recommendation 6-3: Accreditation and standards-setting organizations should incorporate the variables of race, Hispanic ethnicity, granular ethnicity, and language need outlined in this report and associated categories (as updated by HHS) as part of their accreditation standards and performance measure endorsements. The Joint Commission, NCQA, and URAC should ensure collection in individual health records of the variables of race, Hispanic ethnicity, granular ethnicity, and language need as outlined in this report so these data can be used to stratify quality performance metrics, organize quality improvement and disparity reduction initiatives, and report on progress.

U.S. Preventive Services Task Force, 2018

The USPSTF recommends that clinicians screen for intimate partner violence (IPV) in women of reproductive age and provide or refer women who screen positive to ongoing support services.

B Recommendation

Grading System Key

**U.S. Preventive Services Task Force: What the Grade Means and Suggestions for Practice**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Definition</th>
<th>Suggestion for Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>The USPSTF recommends the service. There is high certainty that the net benefit is substantial.</td>
<td>Offer or provide this service.</td>
</tr>
<tr>
<td>B</td>
<td>The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.</td>
<td>Offer or provide this service.</td>
</tr>
<tr>
<td>C</td>
<td>The USPSTF recommends selectively offering or providing to individual patients based on professional judgment and patient experiences. There is at least moderate certainty that the net benefit is small.</td>
<td>Offer or provide this service only for selected patients depending on individual circumstances.</td>
</tr>
<tr>
<td>D</td>
<td>The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits.</td>
<td>Discourage the use of this service.</td>
</tr>
<tr>
<td>I Statement</td>
<td>The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.</td>
<td>Read the clinical considerations section of the USPSTF Recommendation Statement. If the service is offered, patients should understand the uncertainty about the balance of benefits and harms.</td>
</tr>
</tbody>
</table>
Appendix B: Environmental Scan Methodology

To gain a broad understanding of efforts underway in the realm of SDOH and health equity, NCQA conducted an environmental scan in fall 2020. The intent was to inform recommendations on how to accurately identify SES, race, ethnicity and SDOH using available data sources.

Literature Review Steps

1. In the initial search and title review, NCQA identified 651 peer-reviewed and 100 gray literature sources. NCQA excluded 458 peer-reviewed and 41 grey literature sources.

2. During the abstract review phase, NCQA analyzed 193 peer-reviewed and 59 gray literature sources. NCQA excluded 151 peer-reviewed and 8 grey literature sources.

3. In the final found of review, NCQA analyzed 42 peer-reviewed and 33 gray literature sources in full. These sources constitute the reference points for our research questions.

Our key research questions were as follows:

1. What race, ethnicity and SDOH data is available via administrative claims, community-level proxies and EHR? What is the feasibility, validity and reliability of that data?

2. What health outcomes show the greatest disparities by socioeconomic status? What health disparities are the highest policy priorities?

3. What is the current state of race, ethnicity and SDOH in quality measurement?

4. What are potential unintended consequences of measuring or reporting disparities in quality of care?
Proposed New Measure for HEDIS® Measurement Year (MY) 2023: Emergency Department Visits for Hypoglycemia in Older Adults With Diabetes (EDH)

NCQA seeks comments on a proposed new measure for inclusion in HEDIS MY 2023:

- **Emergency Department Visits for Hypoglycemia in Older Adults With Diabetes:** For members 65 years of age and older with diabetes (types 1 and 2), the risk-adjusted ratio of observed-to-expected emergency department (ED) visits for hypoglycemia during the MY.

The measure reports a total rate and a rate among members receiving basal insulin; both rates are stratified by dual eligibility status. Lower rates indicate better performance on this measure.

Although the focus of diabetes treatment in younger adults is to prevent hyperglycemia (elevated blood glucose), as adults age, they become more susceptible to adverse effects of glucose-lowering treatment. Older adults are more likely to experience severe hypoglycemia (low blood sugar), leading to fall-related events and fractures, increased risk of cardiovascular events and cognitive decline. Given these potentially devastating consequences, clinical practice guidelines for the treatment of older adults with diabetes emphasize that prevention of hypoglycemia is paramount to patient safety, and encourages avoidance of intensive glycemic control. Health plans have an opportunity to identify their older patients with diabetes who are at highest risk of hypoglycemia and to implement appropriate interventions to prevent it.

To address the harms associated with hypoglycemia, NCQA developed the proposed measure and tested the concept using 2018–2019 claims data, including 42 health plans and 777,913 members. Testing demonstrated that the measure can be feasibly reported by health-plans with a sufficient denominator size for HEDIS reporting. The average observed rate of ED visits for hypoglycemia was 2.1 visits per 100 members with diabetes. Advisory panels expressed overall support for this measure and agreed that hypoglycemia is a high-priority health issue in older adults with diabetes.

Based on initial testing results and expert feedback, NCQA developed and tested a two-part risk adjustment model for this measure. The model uses predictor variables such as end stage renal disease, congestive heart failure and dementia to predict how many members are expected to have at least one ED visit for hypoglycemia, and then how many ED visits those members are expected to have. Testing demonstrated that the risk adjustment model performed adequately and was calibrated well. The mean plan-level observed-to-expected (O/E) ratio was 0.97, with variation between the 90th percentile (worst-performing plans) demonstrating an O/E of 1.48, and the 10th percentile (best-performing plans) demonstrating an O/E of 0.58.

O/E rates of ED visits for hypoglycemia were higher among members on insulin (O/E of 2.4), prompting the decision to report a separate rate for these members. The separate insulin rate will have a corresponding risk adjustment model that accounts for excess risk tied to insulin use and is uniquely calibrated to predict the expected number of ED visits for hypoglycemia among members who fall into the rate. NCQA has restricted the insulin rate to members on basal insulin, given that exclusively short-acting regimens are considered inappropriate for older adults (we would therefore not want to account for this avoidable excess risk when calculating expected ED visits).

Higher O/E rates were also observed among dual eligible beneficiaries (O/E of 3.7), an indication that the measure should speak to this variation in performance. NCQA advisory panels raised the option of stratification by dual eligibility, alone or in combination with risk adjustment for dual eligibility. Historically, NCQA does not risk adjust for social factors like socioeconomic status (for which dual eligibility may be a proxy), given concerns about masking disparities in care and setting lower expectations for communities facing barriers, but NCQA did explore dual eligibility risk adjustment in testing and discussed the topic extensively with expert panels.

Testing revealed that dual eligibility does appear to have an effect on plan performance, showing that on average, plans with a small number of dual eligible beneficiaries perform better and plans with a large
number of dual eligible beneficiaries perform worse. This raises concerns about potential unearned performance advantages and disadvantages tied to the size of a plan’s dual eligible population. However, results also demonstrated variation in plan performance by dual eligibility. Some plans with large populations of dual eligible beneficiaries achieved high performance on this measure, and vice versa, suggesting that plans have the ability to influence performance for this population.

In light of these results, NCQA considered several potential approaches to specifying dual eligibility in this measure, to find the best method of promoting accountability for addressing hypoglycemia in dual eligible beneficiaries and reducing disparities in care:

1. Specify the measure with dual eligible-stratified rates and a total rate, with no risk adjustment for dual eligibility in any rate. This option enables transparency in disparities in care but would not address the effect that dual-eligible population size has on performance on the total rate (which groups dual eligible beneficiaries and non-dual eligible beneficiaries together).

2. Specify the measure with only stratified rates (no total rate reported) and no risk adjustment for dual eligibility in any rate. This option addresses concerns about grouping dual eligible and non-dual eligible beneficiaries, while providing transparency into performance differences between groups.

3. Specify risk adjustment for dual eligibility in the total rate and no adjustment for dual eligibility in the stratified rates. This would similarly address concerns about grouping dual members and non-dual members together in the total rate, while also identifying disparities through unadjusted stratified rates; however, this option triggers NCQA’s concerns about setting lower expectations for dual eligible beneficiaries through risk adjustment.

Advisory panels ultimately recommended that NCQA pursue the second option. Experts were concerned that such risk adjustment would set a lower performance bar for dual eligible beneficiaries and eclipse disparities in care. Panels expressed that the option without a total rate best supports accountability for addressing disparities in care for dual eligible beneficiaries. Based on this feedback, NCQA recommends moving forward with option 2.

NCQA seeks general feedback on the measure and specific feedback on the following questions:

1. Do you support reporting a separate rate among members receiving basal insulin?

2. Do you support specifying the measure with stratification by dual eligibility and no total rate reported?
   a. Do you think a total rate should be reported for this measure? If so, do you see any potential unintended consequences of not risk adjusting the total rate?

3. Do you support the decision not to risk adjust this measure by dual eligibility? If not, what are your concerns?

Supporting documents include the draft measure specification and evidence workup.

**NCQA acknowledges the contributions of the Diabetes, Geriatric, Utilization and Technical Measurement Advisory Panels.**
Emergency Department Visits for Hypoglycemia in Older Adults With Diabetes (EDH)

Summary of Changes to HEDIS MY 2023

- First-year measure.

Description

For members 67 years of age and older with diabetes (type 1 and type 2), the risk-adjusted ratio of observed-to-expected (O/E) emergency department (ED) visits for hypoglycemia during the measurement year:

- For all members 67 years of age and older with diabetes (type 1 and type 2), the risk-adjusted ratio of O/E ED visits for hypoglycemia during the measurement year, stratified by dual eligibility.
- For a subset of members 67 years of age and older with diabetes (type 1 and type 2) who had at least one dispensing event of basal insulin every 180 days from July 1 of the year prior to the measurement year through December 31 of the measurement year, the risk-adjusted ratio of O/E ED visits for hypoglycemia, stratified by dual eligibility.

Definitions

<table>
<thead>
<tr>
<th>Classification</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classification period</td>
<td>The year prior to the measurement year.</td>
</tr>
<tr>
<td>PPV</td>
<td>Predicted probability of a visit. The predicted probability of a member having an ED visit for hypoglycemia in the measurement year.</td>
</tr>
<tr>
<td>PUCV</td>
<td>Predicted unconditional count of visits. The unconditional count of ED visits for hypoglycemia for members during the measurement year.</td>
</tr>
<tr>
<td>Basal insulin</td>
<td>Long- or intermediate-acting insulin.</td>
</tr>
</tbody>
</table>

Eligible Population: Rate 1—All Members With Diabetes

Refer to General Guideline 10: Reporting for small denominator limits.

- **Product lines**: Medicare.
- **Stratification**: Report the following dual-eligibility stratifications:
  - Dual eligible.
  - Not dual eligible.

Follow the SES Stratification instructions in the Guidelines for Risk Adjusted Utilization Measures to categorize members into SES strata. Map members from their SES strata to the corresponding dual eligible strata according to the table below.
### SES Strata vs. Dual Eligible Strata

<table>
<thead>
<tr>
<th>SES Strata</th>
<th>Dual Eligible Strata</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIS/DE</td>
<td>Dual Eligible</td>
</tr>
<tr>
<td>LIS/DE and Disability</td>
<td>Dual Eligible</td>
</tr>
<tr>
<td>Non-LIS/DE, Non-disability</td>
<td>Not Dual Eligible</td>
</tr>
<tr>
<td>Disability</td>
<td>Not Dual Eligible</td>
</tr>
<tr>
<td>Other</td>
<td>Not Dual Eligible</td>
</tr>
<tr>
<td>Unknown</td>
<td>Not Dual Eligible</td>
</tr>
</tbody>
</table>

### Ages

Members 67 years and older as of December 31 of the measurement year.

### Continuous enrollment

The measurement year and the year prior to the measurement year.

### Allowable gap

No more than one gap in enrollment of up to 45 days during each year of continuous enrollment.

### Anchor date

December 31 of the measurement year.

### Benefit

Medical and pharmacy.

### Event/diagnosis

There are two ways to identify members with diabetes: by claim/encounter data and by pharmacy data. The organization must use both methods to identify the eligible population, but a member only needs to be identified by one method to be included in the measure. Members may be identified as having diabetes during the measurement year or the year prior to the measurement year.

**Claim/encounter data.** Members who met any of the following criteria during the measurement year or the year prior to the measurement year (count services that occur over both years):

- At least one acute inpatient encounter (Acute Inpatient Value Set) with a diagnosis of diabetes (Diabetes Value Set) **without** telehealth (Telehealth Modifier Value Set; Telehealth POS Value Set).

- At least one acute inpatient discharge with a diagnosis of diabetes (Diabetes Value Set) on the discharge claim. To identify an acute inpatient discharge:
  1. Identify all acute and nonacute inpatient stays (Inpatient Stay Value Set).
  2. Exclude nonacute inpatient stays (Nonacute Inpatient Stay Value Set).
  3. Identify the discharge date for the stay.

- At least two outpatient visits (Outpatient Value Set), observation visits (Observation Value Set), telephone visits (Telephone Visits Value Set), e-visits or virtual check-ins (Online Assessments Value Set), ED visits (ED Value Set), nonacute inpatient encounters (Nonacute Inpatient Value Set) or nonacute inpatient discharges (instructions below; the diagnosis must be on the discharge claim), on different dates of service, with a diagnosis of diabetes (Diabetes Value Set). Visit type need not be the same for the two encounters. To identify a nonacute inpatient discharge:
  1. Identify all acute and nonacute inpatient stays (Inpatient Stay Value Set).
2. Confirm the stay was for nonacute care based on the presence of a nonacute code (Nonacute Inpatient Stay Value Set) on the claim.

3. Identify the discharge date for the stay.

Only include nonacute inpatient encounters (Nonacute Inpatient Value Set) without telehealth (Telehealth Modifier Value Set; Telehealth POS Value Set).

*Pharmacy data.* Members who were dispensed insulin or hypoglycemics/antihyperglycemics on an ambulatory basis during the measurement year or the year prior to the measurement year (Diabetes Medications List).

### Diabetes Medications

<table>
<thead>
<tr>
<th>Description</th>
<th>Prescription</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Alpha-glucosidase inhibitors</strong></td>
<td>• Acarbose • Miglitol</td>
</tr>
<tr>
<td><strong>Amylin analogs</strong></td>
<td>• Pramlintide</td>
</tr>
<tr>
<td><strong>Antidiabetic combinations</strong></td>
<td>• Alogliptin-metformin • Glimepiride-pioglitazone • Metformin-pioglitazone</td>
</tr>
<tr>
<td></td>
<td>• Alogliptin-pioglitazone • Glipizide-metformin • Metformin-rosiglitazone</td>
</tr>
<tr>
<td></td>
<td>• Canagliflozin-metformin • Glyburide-metformin • Metformin-saxagliptin</td>
</tr>
<tr>
<td></td>
<td>• Dapagliflozin-metformin • Linagliptin-metformin • Metformin-sitagliptin</td>
</tr>
<tr>
<td></td>
<td>• Empagliflozin-inaagliptin</td>
</tr>
<tr>
<td><strong>Insulin</strong></td>
<td>• Insulin aspart • Insulin isophane human • Insulin regular human</td>
</tr>
<tr>
<td></td>
<td>• Insulin aspart-insulin aspart protamine • Insulin lispro</td>
</tr>
<tr>
<td></td>
<td>• Insulin degludec • Insulin lispro-insulin lispro protamine</td>
</tr>
<tr>
<td></td>
<td>• Insulin detemir • Insulin regular human</td>
</tr>
<tr>
<td></td>
<td>• Insulin glargine • Insulin human inhaled</td>
</tr>
<tr>
<td></td>
<td>• Insulin human inhaled</td>
</tr>
<tr>
<td><strong>Meglitinides</strong></td>
<td>• Nateglinide • Repaglinide</td>
</tr>
<tr>
<td><strong>Glucagon-like peptide-1 (GLP1) agonists</strong></td>
<td>• Albiglutide • Liraglutide (excluding Saxenda®)</td>
</tr>
<tr>
<td></td>
<td>• Dulaglutide • Semaglutide</td>
</tr>
<tr>
<td></td>
<td>• Exenatide</td>
</tr>
<tr>
<td><strong>Sodium glucose cotransporter 2 (SGLT2) inhibitor</strong></td>
<td>• Canagliflozin • Dapagliflozin (excluding Farxiga®) • Empagliflozin</td>
</tr>
<tr>
<td><strong>Sulfonylureas</strong></td>
<td>• Chlorpropamide • Glipizide • Tolazamide</td>
</tr>
<tr>
<td></td>
<td>• Glimepiride • Glyburide • Tolbutamide</td>
</tr>
<tr>
<td><strong>Thiazolidinediones</strong></td>
<td>• Pioglitazone • Rosiglitazone</td>
</tr>
<tr>
<td><strong>Dipeptidyl peptidase-4 (DDP-4) inhibitors</strong></td>
<td>• Alogliptin • Saxagliptin</td>
</tr>
<tr>
<td></td>
<td>• Linagliptin • Sitagliptin</td>
</tr>
</tbody>
</table>

*Note:* Glucophage/metformin as a solo agent is not included because it is used to treat conditions other than diabetes; members with diabetes on these medications are identified through diagnosis codes only.
Required exclusions

Exclude members who meet either of the following criteria:

- Members who did not have a diagnosis of diabetes (Diabetes Value Set), in any setting, during the measurement year or the year prior to the measurement year and who had a diagnosis of polycystic ovarian syndrome, gestational diabetes or steroid-induced diabetes (Diabetes Exclusions Value Set), in any setting, during the measurement year or the year prior to the measurement year.

- Members in hospice or using hospice services any time during the measurement year. Refer to General Guideline 17: Members in Hospice.

**Eligible Population: Rate 2—Members Receiving Basal Insulin**

**Product line**

Medicare.

**Stratification**

Report the following dual-eligibility stratifications:

- Dual eligible.
- Not dual eligible.

Follow the SES Stratification instructions in the Guidelines for Risk Adjusted Utilization Measures to categorize members into SES strata. Map members from their SES strata to the corresponding dual eligible strata according to the table below.

<table>
<thead>
<tr>
<th>SES Strata</th>
<th>Dual Eligible Strata</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIS/DE</td>
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</tr>
<tr>
<td>LIS/DE and Disability</td>
<td>Dual Eligible</td>
</tr>
<tr>
<td>Non-LIS/DE, Non-disability</td>
<td>Not Dual Eligible</td>
</tr>
<tr>
<td>Disability</td>
<td>Not Dual Eligible</td>
</tr>
<tr>
<td>Other</td>
<td>Not Dual Eligible</td>
</tr>
<tr>
<td>Unknown</td>
<td>Not Dual Eligible</td>
</tr>
</tbody>
</table>

**Ages**

Members 67 years and older as of December 31 of the measurement year.

**Continuous enrollment**

The measurement year and the year prior to the measurement year.

**Allowable gap**

No more than one gap in enrollment of up to 45 days during each year of continuous enrollment.

**Anchor date**

December 31 of the measurement year.

**Benefit**

Medical and pharmacy.

**Event/diagnosis**

All members who meet eligible population criteria for rate 1 and received basal insulin. Identify members in the eligible population who received at least one dispensing event of basal insulin (Basal Insulin Medications List) every 180 days from July 1 of the year prior to the measurement year through December 31 of the measurement year.
Basal Insulin Medications

<table>
<thead>
<tr>
<th>Description</th>
<th>Prescription</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basal insulin</td>
<td>• Insulin aspart-insulin aspart protamine</td>
</tr>
<tr>
<td></td>
<td>• Insulin degludec</td>
</tr>
<tr>
<td></td>
<td>• Insulin detemir</td>
</tr>
<tr>
<td></td>
<td>• Insulin glargine</td>
</tr>
<tr>
<td></td>
<td>• Insulin isophane human</td>
</tr>
<tr>
<td></td>
<td>• Insulin isophane-insulin regular</td>
</tr>
<tr>
<td></td>
<td>• Insulin lispro-insulin lispro protamine</td>
</tr>
<tr>
<td></td>
<td>• Insulin regular human</td>
</tr>
</tbody>
</table>

Required exclusions

Exclude members who meet either of the following criteria:

- Members who did not have a diagnosis of diabetes (Diabetes Value Set), in any setting, during the measurement year or the year prior to the measurement year and who had a diagnosis of polycystic ovarian syndrome, gestational diabetes or steroid-induced diabetes (Diabetes Exclusions Value Set), in any setting, during the measurement year or the year prior to the measurement year.
- Members in hospice or using hospice services any time during the measurement year. Refer to General Guideline 17: Members in Hospice.

Calculation of Observed Events

**Step 1** Count each visit to an ED for hypoglycemia once, regardless of the intensity or duration of the visit. Count multiple ED visits for hypoglycemia on the same date of service as one visit. Identify all ED visits for hypoglycemia during the measurement year using:

- An ED visit (ED Value Set) with a diagnosis of hypoglycemia (Hypoglycemia Value Set).

**Step 2** Calculate the number of visits per member. For members with more than one visit, retain only the first five. Do not report visits beyond the first five.

**Step 3** Calculate the total using all ED visits identified after completing steps 1–2. Assign each remaining ED visit to an age and stratification category using the reporting instructions below.

Risk Adjustment Determination

For each member in the eligible population, use the steps in the Risk Adjustment Comorbidity Category Determination in the Guidelines for Risk Adjusted Utilization Measures to identify risk adjustment categories based on presence of comorbidities.

Risk Adjustment Weighting and Calculation of Expected Events

Calculation of risk-adjusted outcomes (counts of ED visits for hypoglycemia) uses predetermined risk weights generated by two separate regression models to predict how many ED visits for hypoglycemia each member might have during the measurement year. Refer to the reporting indicator column in the risk adjustment tables to ensure that weights are linked appropriately.

For each member in the eligible population, assign predicted probability of a visit (PPV) risk weights.
**Step 1** Link the PPV weights for each member with a comorbidity HCC category.

**Step 2** Link the age-gender PPV weights for each member.

**Step 3** Sum all PPV weights associated with the member (HCC, age and gender).

**Step 4** Use the formula below to calculate the predicted probability of each member having at least one visit, based on the sum of the weights for each member.

\[
PPV = \frac{e^{\left(\sum PPV\ \text{Weights}\text{ForEachMember}\right)}}{1 + e^{\left(\sum PPV\ \text{Weights}\text{ForEachMember}\right)}}
\]

**Note:** Truncate intermediate calculations to 10 decimal places.

Assign predicted unconditional count of visits (PUCV) risk weights for each member in the eligible population.

**Step 1** Link the PUCV weights for each member with a comorbidity HCC category. Assign a weight of 1 if a member does not have comorbidities to which weights can be linked.

**Step 2** Link the age-gender PUCV weights for each member.

**Step 3** Use the formula below to calculate the predicted unconditional count of visits in the measurement year.

\[
PUCV = \text{Age/gender Weight} \times \text{HCC Weight}
\]

**Note:** Multiply by each HCC associated with the member. For example, assume a member with HCC-51, HCC-85, HCC-134. The formula would be:

\[
PUCV = \text{Age/gender Weight} \times \text{HCC-51} \times \text{HCC-85} \times \text{HCC-134}
\]

**Note:** Truncate intermediate calculations to 10 decimal places.

**Expected count of ED visits**

Use the formula below to report the final member-level expected count of ED visits for hypoglycemia for each category. Round to four decimal places using the .5 rule and enter these values into the reporting table.

\[
\text{Expected Count of ED Visits} = PPV \times PUCV
\]

**Step 4** Use the formula below to calculate the covariance of the predicted outcomes for each category (i.e., metric and dual-eligibility stratification). For categories with a single member \(n_c=1\), set the covariance to zero. Do not round the covariance before using it in step 5.

\[
COV_c = \frac{\sum_{m=1}^{n_c} (PPV_m - \text{mean}(PPV)_c) \times (PUCV_m - \text{mean}(PUCV)_c)}{n_c - 1}
\]

Where:
- \(c\) denotes an individual category
- \(n_c\) is the number of members in the category indicated by \(c\)
- \(m\) is an individual member within the category indicated by \(c\)
- \(PPV_m\) is the unrounded PPV for the member denoted by \(m\)
- \(\text{mean}(PPV)_c\) is the unrounded mean PPV in the category indicated by \(c\)
- \(PUCV_m\) is the unrounded PUCV for the member denoted by \(m\)
- \(\text{mean}(PUCV)_c\) is the unrounded mean PUCV in the category indicated by \(c\)
**Step 5** After the covariance between the PPV and PUCV is calculated for a given category, follow the formula below to calculate the variance for the category.

\[
Variance_c = \sum_{m=1}^{n_c} (PPV_m \times PUCV_m)^2 \times \left( 1 + (1 - PPV_m)^2 + \left( \frac{2 \times COV_c}{PPV_m \times PUCV_m} \right) \right)
\]

Where:
- \(c\) denotes an individual category
- \(n_c\) is the number of members in the category indicated by \(c\)
- \(m\) is an individual member within the category indicated by \(c\)
- \(PPV_m\) is the unrounded PPV for the member denoted by \(m\)
- \(PUCV_m\) is the unrounded PUCV for the member denoted by \(m\)
- \(n_c\) is the number of members in the category indicated by \(c\)

Round the variance for reporting to four decimal places using the .5 rule.

---

**Reporting: Number of Members in the Eligible Population**

The number of members in the eligible population for each metric and dual-eligibility stratification, reported as the MemberCount.

**Reporting: Number of Observed Events Among Members in the Eligible Population**

The number of observed ED visits with a diagnosis of hypoglycemia for each metric and dual-eligibility stratification, reported as the ObservedCount.

**Calculated: Observed Events per 1,000 Members in the Eligible Population**

The number of observed ED visits (ObservedCount) divided by the number of members in the eligible population (MemberCount), multiplied by 1,000 within each metric and dual-eligibility stratification. Calculated by IDSS as the ObservedRate.

**Reporting: Number of Expected Events Among Members in the Eligible Population**

The number of expected ED visits with a diagnosis of hypoglycemia within each metric and dual-eligibility stratification, reported as the ExpectedCount.

**Calculated: Expected Visits per 1,000 Members in the Eligible Population**

The number of expected ED (ExpectedCount) divided by the number of members in the eligible population (MemberCount), multiplied by 1,000 within each metric and dual-eligibility stratification. Calculated by IDSS as the ExpectedRate.

**Reporting: Variance Among Members in the Eligible Population**

The variance (from Risk Adjustment Weighting and Calculation of Expected Events) within each metric and dual-eligibility stratification, reported as the CountVariance.

**Calculated: O/E Ratio Among Members in the Eligible Population**

The Number of Observed Events Among Members in the Eligible Population (ObservedCount) divided by Number of Expected Events Among Members in the Eligible Population (ExpectedCount) within each metric and dual-eligibility stratification. Calculated by IDSS as the OE.
**Note**

- Supplemental data may not be used for this measure.

**Table EDH-A-3: Data Elements for Emergency Department Visits for Hypoglycemia in Older Adults With Diabetes**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Dual Eligibility</th>
<th>Data Element</th>
<th>Reporting Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
<td>DualEligible</td>
<td>Benefit</td>
<td>Metadata</td>
</tr>
<tr>
<td>BasalInsulin</td>
<td>NotDualEligible</td>
<td>MemberCount</td>
<td>For each Metric and Stratification</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ObservedCount</td>
<td>For each Metric and Stratification</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ObservedRate</td>
<td>$1000 \times \frac{\text{ObservedCount}}{\text{MemberCount}}$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExpectedCount</td>
<td>For each Metric and Stratification</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExpectedRate</td>
<td>$1000 \times \frac{\text{ExpectedCount}}{\text{MemberCount}}$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CountVariance</td>
<td>For each Metric and Stratification</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OE</td>
<td>$\frac{\text{ObservedCount}}{\text{ExpectedCount}}$</td>
</tr>
</tbody>
</table>
Emergency Department Visits for Hypoglycemia in Older Adults With Diabetes (EDH)
Measure Workup

**Topic Overview**

**Measure Description**

*Emergency Department Visits for Hypoglycemia in Older Adults With Diabetes* assesses the risk-adjusted ratio of observed-to-expected emergency department (ED) visits for hypoglycemia during the measurement year among members 67 years of age and older with diabetes (type 1 and type 2).

**Background and Importance**

According to the most recent National Diabetes Statistics Report, 26.8% of adults 65 and older in the U.S. have diabetes; 90%–95% have type 2 diabetes (Centers for Disease Control and Prevention (CDC), 2020). The prevalence of type 2 diabetes in older adults is expected to double in the next two decades because the size of the older population is expanding (American Diabetes Association (ADA, 2018a).

In younger, healthy adults, the focus of diabetes treatment is to prevent hyperglycemia and diabetic complications with strict glycemic control and intensive treatment; however, in older adults, avoidance of hypoglycemia (in addition to hyperglycemia) is considered crucial to safe and effective diabetes treatment. Older adults, many of whom have comorbidities, frailty, or limited life expectancy, are both less likely to realize the benefits of intensive treatment and more likely to experience dangerous adverse events of such treatment, most notably hypoglycemia (American Geriatrics Society Choosing Wisely Workgroup, 2013).

According to analysis by the National Electronic Injury Surveillance System–Cooperative Adverse Drug Event Surveillance, between 2007 and 2011 there were an estimated 97,648 potentially preventable ED visits resulting from insulin-related hypoglycemia and errors annually (Geller et al., 2014). Although evidence suggests the risk of hypoglycemia may be reduced through appropriate treatment, older adults continue to experience hypoglycemia, potentially due to overtreatment and intense glycemic control.

**Health importance**

Older adults with diabetes are at higher risk of hypoglycemia resulting from diabetes treatment than younger adults (Abdelhafiz et al., 2015). Common adverse events resulting from hypoglycemia include cardiovascular disease, falls and fractures, dementia, low health-related quality of life, potential risk of strokes and increased mortality (Hart et al., 2018; Mattishent et al., 2016; Zheng et al., 2021).

Patients with diabetes who experience a hypoglycemic event are at significantly higher risk of repeat severe hypoglycemic episodes, as well as other negative outcomes such as cardiovascular events (O’Reilly et al., 2021). Hypoglycemia may be influenced by a variety of factors, including malnutrition or food insecurity (Abdelhafiz et al., 2015; Seligman et al., 2010), tight glycemic control (Yu et al., 2016) and use of intensive antihyperglycemic medications (Bodmer et al., 2008).

While the consequences of hypoglycemia can be devastating in older adults, it may be possible to reduce hypoglycemia risk through effective treatment management. Multiple clinical practice guidelines recommend adjusting treatment regimens in older adults to minimize hypoglycemia risk. For example, the American Diabetes Association (ADA) recommends routine monitoring of hypoglycemic episodes and adjusting glycemic targets and pharmacologic regimens to avoid hypoglycemia in older adults (ADA, 2021). The Endocrine Society recommends that clinicians design outpatient diabetes regimens...
specifically to minimize hypoglycemia (Endocrine Society, 2019). The AACE/ACE cites minimizing hypoglycemia as a guiding principle in its diabetes treatment algorithm and emphasizes that reducing risk of hypoglycemia should be a key consideration when selecting antihyperglycemic agents (Garber et al., 2020).

**Risk factors**
A number of factors influence whether an individual with diabetes is likely to experience severe hypoglycemia: increased age, race, annual household income, diabetes type, prior hypoglycemia, and number and type of comorbidities (McCoy et al., 2020, Schroeder et al., 2017, Chow et al, 2018). A recent study of approximately 200,000 adults with diabetes in the U.S. found that having type 1 diabetes was associated with a 34% increase in the risk of experiencing a hypoglycemia-related ED visit or hospitalization (McCoy et al., 2020). The same study found that the risk for individuals 75 and older was 56% higher than for those 18–44. The study examined 16 comorbidities; the risk of hypoglycemia increased with the number of comorbidities and was highest for individuals with end stage renal disease (ESRD), chronic kidney disease stages 3 and 4, myocardial infarction and falls.

Research also suggests an association between increased risk of hypoglycemia-related ED visits or hospitalizations and intense glycemic control using high-risk agents, such as insulin or sulfonylureas, and potential overtreatment in older adults (Lega et al., 2021). One study found that basal insulin use was associated with a 12.5-fold increase in risk of hypoglycemia-related ED visits and hospitalizations, compared to patients treated with medications other than sulfonylurea and insulin (e.g., metformin). Risk increased significantly when the patient used short-acting insulin (23.2-fold higher) or a combination of basal and short-acting insulin (27.7-fold higher) (McCoy et al., 2020).

**Hypoglycemia occurrence**
Hypoglycemia is a common occurrence in older adults with diabetes. A systematic review and meta-analysis of studies examining hypoglycemia prevalence among patients with type 2 diabetes found that across over 500,000 total participants, the pooled prevalence of mild or moderate hypoglycemia was 45% and the pooled prevalence of severe hypoglycemia (defined as episodes requiring third-party assistance) was 6%. Prevalence rates were even higher among individuals on insulin, with a rate of 52% for mild or moderate and 21% for severe (Edridge et al., 2015). A study of hypoglycemia frequency among patients with type 1 diabetes and patients with insulin-treated type 2 diabetes in Scotland found that 45% of patients reported experiencing at least one episode of hypoglycemia during the study period (Donnelly et al., 2005).

While both of these studies included patients of all ages, additional evidence indicates that rates of hypoglycemia increase with age. A retrospective cohort study of over 160,000 patients with type 2 diabetes found the incidence rate of hypoglycemia among individuals 65–74 was almost twice as high as for those 20–64 and over four times as high among those 75 and older (Ikeda et al., 2018). Another study found the incidence rate of severe hypoglycemic events among patients 65 and older (193.2 per 10,000 person years) was higher than the overall incidence rate of the study population (153.8 per 10,000 person years), although older adults made up a small portion of the study sample (Quilliam et al., 2011). The phase 3 trial of the Glycemia Reduction Approaches in Diabetes: A Comparative Effectiveness Study (GRADE) study found that severe hypoglycemia occurred more commonly among participants treated with glimepiride than with sitagliptin, lixisenatide and insulin glargine (Barnard, 2021). Instances of severe hypoglycemia in older adults can result in loss of consciousness, sometimes requiring an ED visit or hospitalization. According to
the National Diabetes Statistics Report, in 2016 there were 235,000 ED visits for hypoglycemia in the U.S. (CDC, 2020). A retrospective cohort study of 536,581 adults with type 2 diabetes between 2004 and 2008 found that 3.5% of patients included in the study experienced at least one hypoglycemic event requiring an ED visit, hospitalization, or outpatient encounter (Quilliam et al., 2011).

An analysis of the National Hospital Ambulatory Medical Care Survey from 1993–2005 found that overall, there were 34 ED visits for hypoglycemia per 1,000 persons with diabetes (3.4%) (Ginde et al., 2008). The same analysis showed that hypoglycemia accounted for 3.7 of every 1,000 ED visits due to any cause, a rate that increased with age—almost twice as high among persons 65–74 (12 per 1,000) as for those 45–64 (5.5 per 1,000). A separate analysis of the Nationwide Emergency Department Sample found that in 2011, 2.2% of all ED visits experienced by adults with diabetes were related to hypoglycemia. Notably, adults 65 and older accounted for 49.5% of all hypoglycemia-related ED visits. Adults 45–64 experienced a hypoglycemia-related ED visit rate of one ED visit per 100 adults with diabetes, while adults 75 and older experienced a rate of 2.4 per 100 (Wang et al., 2015).

**Financial importance and cost-effectiveness**

Hypoglycemia-related expenditures contribute substantially to health care system costs. An analysis of the National Electronic Injury Surveillance System—Cooperative Adverse Drug Event Surveillance and National Health Interview Survey from 2007–2011 estimated that ED visits for insulin-related hypoglycemia and errors cost over $600 million, with adults 65 and older accounting for over 40% of ED visits (Geller et al., 2014).

A more recent study using claims data from approximately 9,500 patients who experienced a severe hypoglycemia event between 2016 and 2017 found that the median cost of an ED visit was $678. This significantly increased to over $9,600 if the ED visit resulted in hospitalization (Bajpai et al., 2021). Another study that tracked adults with type 2 diabetes on oral anti-diabetes medications initiating basal insulin demonstrated that the mean total cost per hypoglycemia episode was $986. Over half of the studied population was 65 and older. Hypoglycemia-related medical expenses accounted for 12.6% of total health care expenditures for patients in the study (Fonseca et al., 2017).

**Opportunity to improve care**

Available evidence suggests that reducing risk of severe hypoglycemia in older adults is possible with appropriate interventions, including, but not limited to, relaxation of glycemic targets, avoidance of overtreatment, simplification of treatment regimens and continuous glucose monitoring (CGM). In one study of a hypoglycemia risk reduction project for older veterans with diabetes and renal impairment, pharmacists recommended terminating glyburide prescriptions. The rate of serious hypoglycemic events, defined as an ED visit or hospitalization for hypoglycemia, decreased substantially for patients with severe renal impairment included in the intervention group. The incidence rate among that group declined from 0.169 per 1,000 person-days to 0.039 per 1,000 person-days following the intervention. In comparison, the incidence rate in the non-targeted cohort declined from 0.133 to just 0.088 (Aspinall et al., 2011).

A recent study in the U.K. that examined use of information booklets by ambulance clinicians saw a decrease in repeat ambulance attendances for hypoglycemia, suggesting that patient education is an important and low-cost intervention to reduce risk (Botan et al., 2021). A health educational program with coaching from trained nurses at Kaiser Foundation Health Plan of Washington was found to greatly reduce severe hypoglycemia in patients with type 1 diabetes and will be tested with patients with type 2 diabetes (Ralston, 2021). Canary Health, a digital health company, observed reduced hypoglycemic
symptoms, in addition to other improved health outcomes, in individuals with diabetes using Canary Health’s online self-management program, Better Choices, Better Health® (Lorig et al., 2016).

A study exploring simplification of insulin regimens for older adults with type 2 diabetes found that the mean duration of time spent in a hypoglycemic state reduced steadily in 8 months after simplification. Simplification was achieved by switching multiple-dose insulin regimens to once-a-day glargine, with or without noninsulin agents, over 5 months (Munshi et al., 2016). In addition to treatment deintensification efforts, CGM permits greater personalization of anti-hyperglycemic treatment and has also been found to contribute to reduced hypoglycemia incidence. A recently published randomized clinical trial of older adults with type 1 diabetes found that CGM resulted in reduced time spent in a hypoglycemic state, compared to standard intermittent blood glucose monitoring, including a reduction in severe hypoglycemic events, defined as those involving seizure or loss of consciousness (Pratley et al., 2020).

Health plans and clinicians can use risk stratification tools to identify members with higher risk of severe hypoglycemic events and/or ED utilization. Karter and colleagues (2017) previously developed and validated such a tool to identify the 12-month risk of hypoglycemia-related ED or hospital utilization among patients with type 2 diabetes. The model included 6 variables, including age, presence of severe kidney disease or ESRD and prior hypoglycemia-related utilization. Individuals identified as high risk for hypoglycemia were up to 34.6 times more likely to experience a hypoglycemia-related ED visit or hospitalization than those classified as low risk. Schroeder and colleagues (2017) developed and validated a 16-variable risk prediction model to predict an individual’s 6-month risk of severe hypoglycemic event. The model included age, race, diabetes type, BMI, hypoglycemia history and relevant comorbidities. The observed rate of severe hypoglycemia in individuals classified as highest risk was 50 times higher than that of those classified as lowest risk.

Incorporating these risk assessments into clinical workflows can help plans and clinicians focus hypoglycemia prevention efforts on patients at highest risk. Health plans can also identify patients at higher risk by tracking glucose levels over time or ED utilization. Researchers validated a hypoglycemia-related ED visit algorithm in ICD-9 by comparing visits identified by claims against medical chart review to confirm hypoglycemia. The algorithm looked for hypoglycemia in any diagnosis position (up to 10 available in the dataset) on the claim. Of the 68 ED visits identified using codes that map to ICD-10 codes in the value set for this measure, 59 were confirmed via chart review, for a positive predictive value of 86.7%.

One study proposing solutions to address hypoglycemia suggested health care settings that manage low-income populations identify patients with diabetes who experience food insecurity and establish protocols for referring such patients to food pantries, soup kitchens and federal nutrition programs such as the Supplemental Nutrition Assistance Program. This can help beneficiaries avoid food shortages at the end of each month, thus leading to a reduction in hypoglycemia (Seligman et al., 2014). The Endocrine Society’s “Hypoglycemia Quality Collaborative Strategic Blueprint” recommends health plan education on reimbursement and benefit design to influence provider and patient behavior and improve hypoglycemia prevention and management.
the National Diabetes Statistics Report, the overall prevalence of diabetes among Black, non-Hispanic adults is 16.3%, as compared to 11.9% among White, non-Hispanic adults (CDC, 2020). Analysis of national survey data from sources including the National Vital Statistics System and the American Community Survey show that diabetes mortality is at least 60% higher among the American Indian and Alaska Native populations than the White population (Gopal et al., 2017). Rates of ED visits for hypoglycemia among adults have been found to be almost twice as high for Black and Hispanic individuals than for White, non-Hispanic individuals (Ginde et al, 2008).

Growing evidence has linked SDOH such as socioeconomic status and geographic location to disparities in diabetes prevalence and outcomes, including hypoglycemia risk. Long-term trend data from 1935–2016 show diabetes prevalence is higher among lower socioeconomic groups and individuals living in the southern and midwestern states (Gopal et al., 2017). Findings from a recent study comparing older adults with diabetes enrolled in Medicare Advantage (MA) with those insured by commercial plans from 2016–2019 suggest that MA enrollees may be less likely to be treated with newer medications to manage glucose levels, which may contribute to greater disparities among patients with lower income (McCoy et al., 2021).

One study using claims data on almost 600,000 commercially insured Americans 19–64 concluded that individuals experiencing food insecurity (without reliable access to a sufficient quantity of affordable, nutritious food) are at higher risk for hypoglycemia in the last week of the month, due to the exhaustion of food budgets (Basu et al., 2017). This study observed that in the last 7 days of each month, lower-income patients had increased risk of ER visits or inpatient hospitalizations for hypoglycemia. The risk of end-of-month hypoglycemia was mitigated when nutritional support was provided to low-income populations. The authors estimated that addressing monthly episodes of hypoglycemia could save $54.1 million per year in ER and inpatient hospitalization costs (Basu et al., 2017).

Another study of inpatient admissions in California for individuals 18 and older from 2000–2008 demonstrated that admissions for hypoglycemia were 27% higher among those with lower-median incomes than higher-median incomes in the last week of the month. The study noted that social factors such as inadequate access to primary care services among Medicaid patients could have contributed to such high numbers. Demand for food sources at the end of the month, coupled with an increasing rate of diabetes among low-income Americans, is likely to lead to increased rates of hypoglycemic episodes in this population (Seligman et al, 2014).

Although these studies did not focus specifically on older adults, it is a fact that food insecurity is a growing problem among older adults. According to The State of Senior Hunger, a 2020 annual report released by Feeding America, 7.3% of seniors reported being food insecure in 2018. This number was as high as 29.3% among those living below the federal poverty line. The rates of food insecurity among Black seniors were over twice as high as that of White seniors (Ziliak & Gunderson, 2020). It is reasonable to infer that older adults with low income may also experience the monthly cycle of hypoglycemia, leading to increased risk at month’s end as food budgets exhaust.
References


Proposed Changes to Existing Measure for HEDIS® Measurement Year (MY) 2023:  
Adult Immunization Status (AIS-E)

Proposed Measure Retirements for HEDIS MY 2023:  
Flu Vaccinations for Adults Ages 18–64 (FVA)  
Flu Vaccinations for Adults Ages 65 and Older (FVO)  
Pneumococcal Vaccination Status for Older Adults (PNU)

NCQA seeks public comments on proposed changes to the Adult Immunization Status (AIS-E) measure and proposed retirement of three immunization measures reported using the CAHPS® Health Plan Survey method.

Proposed Changes to Adult Immunization Status

The AIS-E measure assesses the percentage of adults who are up to date on recommended routine vaccinations, with separate indicators for influenza; tetanus and diphtheria (Td) or tetanus, diphtheria, and acellular pertussis (Tdap); zoster; and pneumococcal vaccinations. AIS-E is specified for commercial and Medicaid members 18–64 years of age and Medicare members ages 65 and older. The measure is specified for the HEDIS Electronic Clinical Data Systems (ECDS) reporting standard and captures receipt of vaccinations using data from electronic sources including administrative claims, immunization registries and EHRs.

Proposed measure updates were supported by our expert panels and are described below.

| Pneumococcal indicator | The Advisory Committee on Immunization Practices released new pneumococcal vaccination guidelines in early 2022 that recommend two new conjugate vaccines: the 20-valent (PCV20) and 15-valent (PCV15). Both include additional serotypes and provide better coverage against pneumococcal disease when compared to the existing 13-valent conjugate (PCV13) and polysaccharide (PPSV23) vaccines. ACIP also recommends a simplified vaccination schedule for younger adults with underlying conditions vs. older adults, and includes guidance on administering PCV20 or PCV15 to adults who have previously been vaccinated (Table 1).

Table 1. ACIP Pneumococcal Vaccine Recommendations, January 2022

<table>
<thead>
<tr>
<th>When to Vaccinate</th>
<th>Pneumococcal Vaccination History</th>
<th>Vaccines to Administer</th>
</tr>
</thead>
</table>
| Adults age 19-64 with certain chronic and immunocompromising conditions and adults 65 and older | No or unknown vaccination history | • PCV20, or  
• PCV15 followed by PPSV23 |
| Previously received PPSV23 only | | • Follow with PCV20 or PCV15 |
| Previously received PCV13 | | • Follow with previously recommended PPSV23 |

1HEDIS® is a registered trademark of the National Committee for Quality Assurance.  
2CAHPS® is a registered trademark of the Agency for Healthcare Research and Quality (AHRQ).  
NCQA proposes to update the pneumococcal vaccination indicator to align with these updated recommendations, including the following changes (Table 2):

- Assess vaccination of all adults 65 and older, including those with/without underlying conditions. The measure would not include younger adults because it may not be feasible to identify underlying conditions (e.g., smoking status).
- Revise the numerator time frame to count receipt of vaccines between 18 years and the end of the measurement period because members with certain conditions may be vaccinated at younger ages.
- For the numerator, count receipt of PCV20, PCV15, PCV13 or PPSV23, given that some adults are not recommended to be re-vaccinated with the new vaccines.

<table>
<thead>
<tr>
<th>Table 2. Proposed Updates to AIS-E Pneumococcal Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current AIS-E Pneumococcal Indicator</strong></td>
</tr>
<tr>
<td>Adults 65+ who had the following between age 60 and the end of measurement period: <strong>PPSV23</strong>.</td>
</tr>
<tr>
<td>• Includes adults with chronic medical conditions.</td>
</tr>
<tr>
<td>• Excludes adults with immunocompromising conditions.</td>
</tr>
<tr>
<td><strong>Proposed AIS-E Pneumococcal Indicator</strong></td>
</tr>
<tr>
<td>Adults 65+ who had any of the following between age 18 and end of measurement period: <strong>PCV20, PCV15, PCV13 or PPSV23</strong>.</td>
</tr>
<tr>
<td>• Includes adults with chronic medical conditions.</td>
</tr>
<tr>
<td>• Includes adults with immunocompromising conditions.</td>
</tr>
</tbody>
</table>

**Age range**

To address concerns that commercial and Medicaid plans report the measure only for younger adults and Medicare plans report only for older adults, we propose to specify that all three product lines report the measure for all adults, in accordance with guidelines. In addition, we propose adding age stratifications to assess measure performance among members younger than 65, 65 and older and all ages combined. Specifically, all product lines would report the following rates:

- **Influenza indicator**: 18–64, 65 and older, total rate.
- **Td/Tdap indicator**: 18–64, 65 and older, total rate.
- **Zoster indicator**: 50–64, 65 and older, total rate.
- **Pneumococcal indicator**: 65 and older.

**Proposed Retirement of CAHPS Immunization Measures**

NCQA also seeks comments on the proposed retirement of the following measures reported using the CAHPS Health Plan Survey method:

- Flu Vaccinations for Adults Ages 18–64 (FVA).
- Flu Vaccinations for Adults Ages 65 and Older (FVO).
- Pneumococcal Vaccination Status for Older Adults (PNU).

AIS-E will be publicly reported in MY 2022, which presents an opportunity to streamline the adult immunization measures in HEDIS. Stakeholders have suggested retiring the three CAHPS immunization measures, which rely on patient recall of vaccination receipt, and focusing on AIS-E, which provides specific clinical information about vaccination. In addition, expansion of the age range for AIS-E will ensure that vaccination status is captured across all age groups represented in the CAHPS measures.

Supporting documents include the current measure specifications, evidence workup and performance data.

NCQA acknowledges the contributions of the Geriatric, Technical and Adult Immunization Measurement Advisory Panels.
<table>
<thead>
<tr>
<th>Measure title</th>
<th>Adult Immunization Status*</th>
<th>Measure ID</th>
<th>AIS-E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>The percentage of members 19 years of age and older who are up to date on recommended routine vaccines for influenza, tetanus and diphtheria (Td) or tetanus, diphtheria and acellular pertussis (Tdap), zoster and pneumococcal.</td>
<td></td>
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<td>Copyright and disclaimer notice</td>
<td><em>Developed with support from the Department of Health and Human Services (DHHS), Office of the Assistant Secretary for Health (OASH), National Vaccine Program Office (NVPO).</em></td>
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</tbody>
</table>

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Clinical recommendation statement
The Advisory Committee on Immunization Practices recommends annual influenza vaccination; and tetanus, diphtheria and acellular pertussis (Tdap) and/or tetanus and diphtheria (Td) vaccine; herpes zoster vaccine; and pneumococcal vaccination for adults at various ages.

Citations
Stratification
3. Medicare, 66 years and older.

Risk adjustment
None.

Improvement notation
A higher rate indicates better performance.

Guidance
Allocation:
The member was enrolled with a medical benefit throughout the participation period.

Requirements:
- All measure rates are specified based on clinical guideline recommendations for the age group included in the rate.
- Commercial and Medicaid plans report measure rates for members 19–65 years at the start of the measurement period and Medicare plans report measure rates for members 66 years and older at the start of the measurement period.

Note: The following table describes which measure rates and age groups should be reported by commercial, Medicaid and Medicare plans.

<table>
<thead>
<tr>
<th>Measure Rate</th>
<th>Medicare Plans</th>
<th>Commercial &amp; Medicaid Plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate 1: Immunization status: Influenza</td>
<td>Age 66 and older</td>
<td>Age 19-65</td>
</tr>
<tr>
<td>Rate 2: Immunization status: Td/Tdap</td>
<td>Age 66 and older</td>
<td>Age 19-65</td>
</tr>
<tr>
<td>Rate 3: Immunization status: Zoster</td>
<td>Age 66 and older</td>
<td>Age 50-65</td>
</tr>
<tr>
<td>Rate 4: Immunization status: Pneumococcal</td>
<td>Age 66 and older</td>
<td>N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measure Rate</th>
<th>Ages Reported by Commercial, Medicaid &amp; Medicare Plans for Each Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate 1: Immunization status: Influenza</td>
<td>• Age 19-64&lt;br&gt;• Age 65 and older&lt;br&gt;• Total</td>
</tr>
<tr>
<td>Rate 2: Immunization status: Td/Tdap</td>
<td>• Age 19-64&lt;br&gt;• Age 65 and older&lt;br&gt;• Total</td>
</tr>
</tbody>
</table>
### Rate 3: Immunization status: Zoster

- Age 50-64
- Age 65 and older
- Total

### Rate 4: Immunization status: Pneumococcal

- Age 65 and older

#### Reporting:
Product line stratifications are not included in the measure calculation logic and need to be programmed manually.

### Definitions

<table>
<thead>
<tr>
<th>Participation</th>
<th>The identifiers and descriptors for each organization’s coverage used to define members’ eligibility for measure reporting. Allocation for reporting is based on eligibility during the participation period.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation period</td>
<td>The measurement period.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Initial population</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Initial population 1</strong></td>
</tr>
<tr>
<td>Members 19 years and older at the start of the measurement period who also meet the criteria for participation.</td>
</tr>
<tr>
<td><strong>Initial population 2</strong></td>
</tr>
<tr>
<td>Same as the initial population 1.</td>
</tr>
<tr>
<td><strong>Initial population 3</strong></td>
</tr>
<tr>
<td>Members 50 years and older at the start of measurement period who also meet the criteria for participation.</td>
</tr>
<tr>
<td><strong>Initial population 4</strong></td>
</tr>
<tr>
<td>Members 66 years and older at the start of the measurement period who also meet the criteria for participation.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Exclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Members with active chemotherapy any time during the measurement period.</td>
</tr>
<tr>
<td>Members with bone marrow transplant any time during the measurement period.</td>
</tr>
<tr>
<td>Members with history of immunocompromising conditions, cochlear implants, anatomic or functional asplenia, sickle cell anemia and HB-S disease or cerebrospinal fluid leaks any time during the member’s history through the end of the measurement period.</td>
</tr>
<tr>
<td>Members in hospice or using hospice services any time during the measurement period.</td>
</tr>
<tr>
<td>Denominator</td>
</tr>
<tr>
<td>-------------</td>
</tr>
<tr>
<td>The initial population 1, minus exclusions.</td>
</tr>
<tr>
<td>Denominator 2</td>
</tr>
<tr>
<td>Same as denominator 1.</td>
</tr>
<tr>
<td>Denominator 3</td>
</tr>
<tr>
<td>The initial population 3, minus exclusions.</td>
</tr>
<tr>
<td>Denominator 4</td>
</tr>
<tr>
<td>The initial population 4, minus exclusions.</td>
</tr>
<tr>
<td>Numerator 3—Immunization Status: Zoster</td>
</tr>
<tr>
<td>- Members who received at least one dose of the herpes zoster live vaccine or two doses of the herpes zoster recombinant vaccine at least 28 days apart, any time on or after the member’s 50th birthday and before or during the measurement period, <strong>or</strong></td>
</tr>
<tr>
<td>- Members with anaphylaxis due to the herpes zoster vaccine any time before or during the measurement period.</td>
</tr>
<tr>
<td>- Members who were administered the 23-valent pneumococcal polysaccharide vaccine on or after the member’s 60th birthday and before or during the measurement period. <strong>or</strong></td>
</tr>
<tr>
<td>- Members who were administered at least one dose of an adult pneumococcal vaccine on or after the member’s 19th birthday and before or during the measurement period, <strong>or</strong></td>
</tr>
<tr>
<td>- Members with anaphylaxis due to the pneumococcal vaccine any time before or during the measurement period.</td>
</tr>
</tbody>
</table>
# Data criteria (element level)

**Value sets:**

- **AISE_HEDIS_MY2022-1.0.0**
  - Adult Influenza Immunization ([Link](https://www.ncqa.org/fhir/valueset/2.16.840.1.113883.3.464.1004.1913))
  - Adult Influenza Vaccine Procedure ([Link](https://www.ncqa.org/fhir/valueset/2.16.840.1.113883.3.464.1004.1914))
  - Adult Pneumococcal Immunization ([Link](https://www.ncqa.org/fhir/valueset/2.16.840.1.113883.3.464.1004.2405))
  - Adult Pneumococcal Vaccine Procedure ([Link](https://www.ncqa.org/fhir/valueset/2.16.840.1.113883.3.464.1004.2406))
  - Anaphylaxis Due to Diphtheria, Tetanus or Pertussis Vaccine ([Link](https://www.ncqa.org/fhir/valueset/2.16.840.1.113883.3.464.1004.2240))
  - Anaphylaxis Due to Herpes Zoster Vaccine ([Link](https://www.ncqa.org/fhir/valueset/2.16.840.1.113883.3.464.1004.2379))
  - Anatomic or Functional Asplenia ([Link](https://www.ncqa.org/fhir/valueset/2.16.840.1.113883.3.464.1004.1477))
  - Bone Marrow Transplant ([Link](https://www.ncqa.org/fhir/valueset/2.16.840.1.113883.3.464.1004.1325))
  - Cerebrospinal Fluid Leak ([Link](https://www.ncqa.org/fhir/valueset/2.16.840.1.113883.3.464.1004.1448))
  - Chemotherapy Procedure ([Link](https://www.ncqa.org/fhir/valueset/2.16.840.1.113883.3.464.1004.1500))
  - Cochlear Implant ([Link](https://www.ncqa.org/fhir/valueset/2.16.840.1.113883.3.464.1004.1447))
  - Cochlear Implant Device ([Link](https://www.ncqa.org/fhir/valueset/2.16.840.1.113883.3.464.1004.1521))
  - Cochlear Implant Diagnosis ([Link](https://www.ncqa.org/fhir/valueset/2.16.840.1.113883.3.464.1004.1520))
  - Encephalitis Due to Diphtheria, Tetanus or Pertussis Vaccine ([Link](https://www.ncqa.org/fhir/valueset/2.16.840.1.113883.3.464.1004.2241))
  - Herpes Zoster Live Immunization ([Link](https://www.ncqa.org/fhir/valueset/2.16.840.1.113883.3.464.1004.1915))
  - Herpes Zoster Live Vaccine Procedure ([Link](https://www.ncqa.org/fhir/valueset/2.16.840.1.113883.3.464.1004.1917))
  - Herpes Zoster Recombinant Immunization ([Link](https://www.ncqa.org/fhir/valueset/2.16.840.1.113883.3.464.1004.1916))
  - Herpes Zoster Recombinant Vaccine Procedure ([Link](https://www.ncqa.org/fhir/valueset/2.16.840.1.113883.3.464.1004.1918))
  - Immunocompromising Conditions ([Link](https://www.ncqa.org/fhir/valueset/2.16.840.1.113883.3.464.1004.1502))
  - Influenza Virus LAIV Immunization ([Link](https://www.ncqa.org/fhir/valueset/2.16.840.1.113883.3.464.1004.1974))
  - Influenza Virus LAIV Vaccine Procedure ([Link](https://www.ncqa.org/fhir/valueset/2.16.840.1.113883.3.464.1004.1973))
Adult Immunization Status (AIS-E)
Measure Workup

Topic Overview

Importance

Vaccines are recommended for adults to prevent serious diseases. Routine vaccination against influenza, tetanus, diphtheria and pertussis is recommended for all adults, while vaccines for herpes zoster and pneumococcal disease are recommended for older adults (Freedman et al. 2020).

Health Importance and Prevalence

| Influenza vaccine | The influenza vaccine protects against influenza, a serious disease that can lead to hospitalization and death (Centers for Disease Control and Prevention [CDC] 2016a). It is characterized by a variety of symptoms related to the nose, throat and lungs that can range in severity (CDC 2015a). Flu viruses spread mainly by droplets made when people with flu cough, sneeze or talk (CDC 2016a). Flu season in the United States can start as early as October and last as late as May; peak influenza activity occurs most frequently in January and February (CDC 2015a). Although anyone can get the flu, people 65 and older, pregnant women, young children and those with chronic conditions are at higher risk of developing serious complications (CDC 2016a).

The impact of influenza is variable because influenza seasons can vary in severity. The CDC estimates that since 2010, yearly influenza cases have ranged from 9.2–35.6 million; influenza-related hospitalizations, from 140,000–710,000; and influenza-related deaths, from 12,000–56,000 (CDC 2017). Deaths associated with influenza are typically higher in older adults. In an analysis based on the 2010–2011 and 2012–2013 flu seasons, 71%–85% of deaths from influenza were among adults 65 and older (Grohskopf et al. 2016).

Tdap vaccine | There are 11 combination vaccines licensed in the U.S. that protect against tetanus and diphtheria; 8 combinations also protect against pertussis. Tetanus results in painful muscle spasms that can cause fractures, difficulty breathing, arrhythmia and death (CDC 2015b).

Diphtheria can present as a respiratory or cutaneous disease (CDC 2016c). Complications include myocarditis, which can lead to heart failure, and neuritis, which may temporarily paralyze motor nerves. Death occurs in 5%–10% of cases (CDC 2015c).

Pertussis, also known as whooping cough, is a respiratory infection characterized by a prolonged cough; it is highly communicable, transmitted via respiratory droplets from coughing or sneezing. This infection can also lead to secondary pneumonia, the most common cause of pertussis-related deaths (CDC 2015d).

Due to vaccines, tetanus and diphtheria are now uncommon. On average, there were 29 reported cases of tetanus per year from 1996–2009, and nearly all were among people who had never received a tetanus vaccine or were not up to date on their booster shots (CDC 2013). In the past decade, fewer than 5 diphtheria cases were reported to the CDC, although the disease is more prevalent in other countries: In 2014, 7,321 cases of diphtheria were reported to the World Health Organization, and there are likely many more unreported cases (CDC 2016b).
Pertussis is much more prevalent today than tetanus and diphtheria, even though vaccines offer protection against the disease. Before the vaccine was introduced in the 1940s, there were about 200,000 cases of pertussis annually (CDC 2015d). Since widespread use of the vaccine, pertussis cases have decreased by 80% (CDC 2015d). However, pertussis cases have been increasing since the 1980s; currently, there are 10,000–40,000 pertussis cases and up to 20 deaths reported each year (CDC 2015d). Pertussis is usually milder in children, adolescents and adults than in infants and young children who may not be fully immunized. Older adults are often the source of infection for infants and children (CDC 2015d).

Herpes zoster vaccine

The herpes zoster vaccine protects against herpes zoster, commonly known as shingles. Herpes zoster is a painful skin rash caused by reactivation of the varicella zoster virus (CDC 2016c). After a person recovers from primary infection of varicella (chickenpox), the virus stays inactive in the body and can reactivate years later. Most people typically only have one episode of herpes zoster, but second or third episodes are possible. People with compromised immune systems are at higher risk of developing herpes zoster (CDC 2016c).

The most common complication of herpes zoster is post-herpetic neuralgia (PHN) (CDC 2016c), severe, debilitating pain at the site of the rash that has no treatment or cure. Herpes zoster can also lead to serious complications of the eye, pneumonia, hearing problems, blindness, encephalitis or death (CDC 2016c). In the U.S., there are 1 million new cases of herpes zoster each year; 1 of every 3 people will be diagnosed with herpes zoster in their lifetime (CDC 2016c). A person’s risk for developing herpes zoster increases sharply after age 50 (CDC 2016c). As people age, they are more likely to develop PHN; it rarely occurs in people under 40, but can be seen in a third of untreated adults 60 and older (CDC 2016c).

Between 1% and 4% of adults with herpes zoster are hospitalized for complications, and an estimated 96 deaths each year are directly caused by the virus (CDC 2016c). The vaccine can reduce the risk of developing herpes zoster and PHN.

Pneumococcal vaccine

Vaccines protect against pneumococcal disease, which is a common cause of illness and death in older adults and in persons with certain underlying conditions. The major clinical syndromes of pneumococcal disease include pneumonia, bacteremia and meningitis, with pneumonia being the most common (CDC 2015e). Pneumonia symptoms generally include fever, chills, pleuritic chest pain, cough with sputum, dyspnea, tachypnea, hypoxia, tachycardia, malaise and weakness.

There are an estimated 400,000 cases of pneumonia in the U.S. each year and a 5%–7% mortality rate, although it may be higher among older adults and adults in nursing homes (CDC 2015f; Janssens and Krause 2004).

Bacteremia, a blood infection, is another complication of pneumococcal disease (CDC 2015f). Approximately 30% of patients with pneumonia also have bacteremia, and 12,000 patients have bacteremia without pneumonia each year (CDC 2015f). Bacteremia has a 20% mortality rate among all adults and a 60% mortality rate among older adults.

Pneumococcal disease causes 3,000–6,000 cases of meningitis each year (CDC 2015f). Meningitis symptoms may include headache, lethargy, vomiting, irritability, fever, nuchal rigidity, cranial nerve signs, seizures and coma. Meningitis has a 22% mortality rate among adults (CDC 2015f).
Financial Importance and Cost-Effectiveness

Administration of the influenza, Tdap/Td, herpes zoster and pneumococcal vaccines can decrease overall health care costs by preventing severe disease and hospitalization.

**Influenza vaccine**
Influenza is an important cause of outpatient medical visits and worker absenteeism among adults. The average annual burden of seasonal influenza among adults 18–49 includes approximately 5 million illnesses, 2.4 million outpatient visits, 32,000 hospitalizations and 680 deaths (Grohskopf et al. 2016). A study in 2016 estimated that the cost-effectiveness ratio of the influenza vaccine was approximately $100,000 per quality-adjusted life year (Xu et al. 2016). The study also suggested that influenza immunization leads to the most cost savings during moderate or severe influenza seasons.

**Tdap/Td vaccine**
Administering the Tdap vaccine to adults helps prevent the spread of pertussis to infants and prevents such hospitalizations; in 2010, the average cost of hospitalizing an infant with pertussis was $16,339, an increase from $12,377 in 2000 (Davis 2014). Because there has been a rise in pertussis over the past several decades in the U.S., studies have evaluated the cost-effectiveness of providing Tdap immunizations to adults. One study found that providing a dose of Tdap to people at age 11 or 12, as currently recommended, and again at age 21, could reduce outpatient visits for pertussis by 4% and hospitalizations for pertussis by 5%; costs per quality-adjusted life years saved would be $204,556 (Kamiya et al. 2016).

Another study found that vaccinating all adults 2–64 at least once with Tdap is cost-effective (<$50,000 per quality-adjusted life years) if pertussis incidence in adults is greater than 120 cases per 100,000 people (Lee et al. 2006). McGarry et al. found that vaccinating all adults ages 65 and older with Tdap is a cost-effective intervention and would prevent 97,000 cases of pertussis annually—from the payer perspective, it would provide a net cost savings of $44.8 million (2014).

**Herpes zoster vaccine**
In 2004, a systematic literature review estimated that total medical costs in the U.S. from zoster were 1.9 billion (Panatto et al., 2015). A CDC study estimated that vaccination with the recombinant zoster vaccine, compared with no vaccination, cost $31,000 per quality adjusted life year, on average, for immunocompetent adults 50 and older. The number of people needed to be vaccinated with the recombinant zoster vaccine to prevent one case of zoster ranged from 11-17 and to prevent one case of PHN ranged from 70–187 (Dooling et al., 2018). A study of the cost-effectiveness of the live herpes zoster vaccine among people at 50, 60 and 70 years found that vaccination at age 60 would prevent the most cases (26,147 cases per 1 million people), compared with vaccination at 50 or 70 (Hales et al. 2014). It also found that live zoster vaccination at 60 costs $86,000 per quality-adjusted life year, compared with $37,000 at 70 and $287,000 at 50 (Hales et a. 2014).

**Pneumococcal vaccine**
Pneumococcal infections result in significant health care costs each year. Geriatric patients with pneumonia require hospitalization in nearly 90% of cases, and their average length of stay is twice that of younger adults (Janssens and Krause 2004). Pneumonia in the older adult population is associated with high acute-care costs and an overall impact on total direct medical costs and mortality during and after an acute episode (Thomas et al. 2012). Total medical costs for Medicare beneficiaries during and one year following a hospitalization for pneumonia were found to be $15,682 higher than matched beneficiaries without pneumonia (Thomas et al. 2012). It was estimated that in 2010, the total annual excess cost of hospital-treated
Pneumococcal vaccines have been shown to be highly effective in preventing invasive pneumococcal disease. When comparing costs, outcomes and quality adjusted life years, immunization with recommended pneumococcal vaccines was found to be more economically efficient than no vaccination, with an incremental cost-effectiveness ratio of $25,841 per quality-adjusted life year gained (Chen et al. 2014).

**Supporting Evidence**

**Influenza vaccine**

ACIP recommends routine annual influenza vaccination for all people 6 months of age and older (Grohskopf et al. 2017). For people 19 and older, any age-appropriate inactivated influenza vaccine (IIV) formulation or recombinant influenza vaccine (RIV) formulation are acceptable options. ACIP notes that live attenuated influenza vaccine (LAIV) should not be used during the 2017–2018 season for any population. Vaccination should occur before the onset of influenza activity in the community, ideally by the end of October; however, vaccination efforts should continue throughout flu season into February and March (Grohskopf et al. 2017). People who have a history of severe allergic reaction (e.g., anaphylaxis) to any component of the vaccine should not receive the influenza vaccine (CDC 2020).

**Tdap/Td vaccine**

ACIP recommends that regardless of the interval since their last tetanus or diphtheria toxoid–containing vaccine, persons aged 19 and older who have never received a dose of Tdap should receive one dose of Tdap. To ensure continued protection against tetanus and diphtheria, booster doses of either Td or Tdap should be administered every 10 years throughout life (Havers et al., 2020). Pregnant women should receive a dose of Tdap during each pregnancy irrespective of the patient’s prior history of receiving Tdap. Tdap should be administered at 27–36 weeks’ gestation, preferably during the earlier part of this period, although it may be administered at any time during pregnancy. For women not previously vaccinated with Tdap, if Tdap is not administered during pregnancy, it should be administered immediately postpartum (Havers et al., 2020). People who have a history of severe allergic reaction (e.g., anaphylaxis) to any component of the Tdap or Td vaccine should not receive it. Tdap is contraindicated for adults with a history of encephalopathy (e.g., coma or prolonged seizures) not attributable to an identifiable cause within seven days of administration of a vaccine with pertussis components (CDC 2020).

**Herpes zoster vaccine**

There are currently two types of zoster vaccines recommended for older adults: the zoster vaccine live (ZVL) and a recombinant zoster vaccine (RZV). The ZVL is a 1-dose vaccine licensed for immunocompetent adults 50 and older; ACIP recommends ZVL for immunocompetent adults 60 and older. ZVL vaccine coverage for adults 60 and older has increased each year since ACIP first recommended it in 2008 (Dooling et al. 2018).

In October 2017, the Food and Drug Administration approved the RZV for adults 50 and older. In January 2018, ACIP published a guideline recommending RZV for immunocompetent adults 50 and older, irrespective of prior receipt of varicella vaccine or ZVL (Dooling et al. 2018). RZV is a two-dose series; the second dose should be given 2–6 months after the first dose. If the second dose of RZV is given less than four weeks after the first, the second dose should be repeated; if the second dose is more than six months after the first dose, the vaccine series need not be restarted although individuals may be at higher risk for zoster. ZVL remains a recommended
vaccine for immunocompetent adults 60 and older (Dooling et al. 2018). Patients with a severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component should not receive either zoster vaccine (Dooling et al. 2018).

**Pneumococcal vaccine**

In 2021, two new pneumococcal vaccines were licensed for use in the U.S.: the 15-valent pneumococcal conjugate vaccine (PCV15) and the 20-valent pneumococcal conjugate vaccine (PCV20). Both include additional serotypes and therefore provide better coverage against pneumococcal disease when compared to use of the 13-valent pneumococcal conjugate vaccine (PCV13) or 23-valent pneumococcal polysaccharide vaccine (PPSV23). In response to this, ACIP convened in October 2021 and approved new recommendations for pneumococcal disease. The recommendation states that a dose of the newer pneumococcal conjugate vaccine (either PCV20 or PCV15) is beneficial for immunocompetent adults age 65 and older and for adults age 19 to 64 who have certain underlying medical conditions or risk factors given that both populations account for over 90 percent of invasive pneumococcal disease cases in the U.S.¹ (Kobayashi et al., 2022). The rationale for this change is the increasing burden of pneumococcal disease in U.S. adults.

**Gaps in Care**

Healthy People 2020, which provides science-based, 10-year national objectives for improving the health of all Americans, recommends increasing the percentage of adults who are vaccinated against influenza, zoster and pneumococcal disease (U.S. Department of Health and Human Services 2017). Estimates of national vaccination coverage are available through the National Health Interview Survey (NHIS), in which a sample of adults self-report receipt of vaccines. In 2015, 45% of adults 19 and older reported that they received the influenza vaccine during the 2014–2015 flu season, well below the Healthy People 2020 target of 70% (Williams et al. 2017).

64% of adults 65 and older reported having ever received the PPSV23 vaccine and/or the PCV13 vaccine, which is below the Healthy People 2020 target of 90% (Williams et al. 2017). Although there is no corresponding Healthy People 2020 goal for routine Tdap or Td vaccination among adults, only 23% of adults 19 and older responding to the 2015 NHIS reported receiving the Tdap vaccine within the past 10 years, and 62% reported receiving any tetanus toxoid-containing vaccination during the past 10 years (Williams et al. 2017).

In 2015, 31% of adults ages 60 and older reported ever receiving the herpes zoster vaccine (Williams et al. 2017). Although zoster vaccination coverage meets the Healthy People 2020 target of 30% coverage, 70% of adults are not receiving this recommended vaccination due to factors that include vaccine shortages shortly after licensure (Hurley et al. 2010), complications in storing the vaccine and cost to consumers (Hurley et al. 2010).

Barriers to adult vaccination in general include provider and patient lack of knowledge and awareness of the importance of vaccines, missed opportunities for vaccination and operational and systemic barriers (e.g., cost, lack of access to immunization records) (Ventola 2016; Tan 2015). Having health insurance coverage and a usual place for health care is associated with higher vaccination coverage (Williams et al. 2017).

There are evidence-based practices for improving adult vaccination coverage: Health care providers can routinely assess patients’ vaccination history and offer needed vaccines to adults, implement reminder-recall systems, use standing-order programs and analyze practice- or provider-specific vaccination rates (Williams et al. 2017). In addition, providing easy access and convenience for adult vaccination within

¹ Includes alcoholism, chronic heart/liver/lung disease, cigarette smoking, diabetes mellitus, chronic renal failure, nephrotic syndrome, immunodeficiency, iatrogenic immunosuppression, generalized malignancy, human immunodeficiency virus, Hodgkin disease, leukemia, lymphoma, multiple myeloma, solid organ transplants, congenital or acquired asplenia, sickle cell disease or other hemoglobinopathies, CSF leak or cochlear implant.
Health care disparities

There are racial and ethnic disparities in adult vaccination coverage. The 2015 NHIS survey found that White adults were more likely to have received the influenza vaccine (47%) than Blacks (37%) and Hispanics (33%) (Williams et al. 2017). Tdap and Td booster vaccination coverage was higher for White adults 19 and older than Black, Hispanic and Asian adults (Williams et al. 2017). Similarly, pneumococcal vaccination coverage and zoster vaccination coverage was higher for White older adults than for Black, Hispanic and Asian older adults (Williams et al. 2017). Racial and ethnic disparities in pneumococcal vaccination and herpes zoster vaccination coverage widened from 2014–2015 due to increases in vaccination coverage for older White adults (Williams et al. 2017).

Vaccination coverage also varies by age for influenza and Tdap/Td. In the 2015 NHIS survey, older adults were more likely to report receiving the influenza vaccine; 32% of adults 19–49 reported receiving the flu vaccine, compared with 49% of adults 50–64 and 74% of adults 65 and older (Williams et al. 2017); however, adults 65 and older were less likely to report having received the Td or Tdap vaccine than adults 19–64 (Williams et al. 2017).


https://www.cdc.gov/mmwr/volumes/67/wr/mm6703a5.htm


https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6333a3.htm


Guidelines & Recommendations

Table 1: Routine Adult Immunizations: Recommendations from the CDC ACIP*

<table>
<thead>
<tr>
<th>Vaccine Recommendation Date &amp; Title</th>
<th>ACIP Recommendation</th>
<th>Contraindications (CDC 2020)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Influenza (Grohskopf et al. 2017)</td>
<td>ACIP recommends routine annual influenza vaccination for all people ages six months and older. Vaccination should occur before the onset of influenza activity in the community, ideally by the end of October; however, vaccination efforts should continue throughout flu season into February and March.</td>
<td>Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component</td>
</tr>
<tr>
<td>Td/Tdap (Havers et al. 2020)</td>
<td>ACIP recommends that regardless of the interval since their last tetanus or diphtheria toxoid–containing vaccine, persons aged 19 and older who have never received a dose of Tdap should receive one dose of Tdap. To ensure continued protection against tetanus and diphtheria, booster doses of either Td or Tdap should be administered every 10 years throughout life. Pregnant women should receive a dose of Tdap during each pregnancy irrespective of the patient’s prior history of receiving Tdap. Tdap should be administered at 27–36 weeks’ gestation, preferably during the earlier part of this period, although it may be administered at any time during pregnancy.</td>
<td>Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component Tdap: Encephalopathy (e.g., coma, decreased level of consciousness, or prolonged seizures) not attributable to another identifiable cause within seven days of administration of a previous dose of a vaccine with pertussis components</td>
</tr>
<tr>
<td>Zoster (Dooling et al. 2018)</td>
<td>ACIP recommends the two-dose recombinant zoster vaccine (RZV) for use in immunocompetent adults aged 50 and older, irrespective of prior receipt of varicella vaccine or zoster vaccine live (ZVL). ZVL remains a recommended vaccine for prevention of herpes zoster in immunocompetent adults aged 60 and older.</td>
<td>RZV and ZVL: Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component</td>
</tr>
<tr>
<td>Vaccine Recommendation Date &amp; Title</td>
<td>ACIP Recommendation</td>
<td>Contraindications (CDC 2020)</td>
</tr>
<tr>
<td>-------------------------------------</td>
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<td>-----------------------------</td>
</tr>
<tr>
<td>Pneumococcal (Kobayashi et al. 2022)</td>
<td>ACIP recommends that adults age 19-64 with certain chronic or immunocompromising conditions(^2) and adults 65 and older who have not previously received a pneumococcal conjugate vaccine, or whose previous vaccination history is unknown, should receive a pneumococcal conjugate vaccine (either PCV20 or PCV15). If PCV15 is used, this should be followed by a dose of pneumococcal polysaccharide vaccine (PPSV23) at least 1 year later. A minimum interval of 8 weeks can be considered for adults with underlying conditions. Adults who previously received PPSV23 only should receive either PCV20 or PCV15 at least 1 year later. Adults who previously received PCV13 only should receive PPSV23 at least 1 year later (or at minimum 8 weeks later for individuals who are immunocompromised).</td>
<td>PCV20, PCV15, PCV13: Severe allergic reaction (e.g., anaphylaxis) after a previous dose to any vaccine containing diphtheria toxoid or to any component of these vaccines. PPSV23: Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component</td>
</tr>
</tbody>
</table>

\(^*\)ACIP is chartered as a federal advisory committee to provide expert external advice and guidance to the director of CDC on use of vaccines and related agents for the control of vaccine-preventable diseases in the civilian population of the United States. Recommendations for routine use of vaccines in children and adolescents are harmonized to the greatest extent possible with recommendations made by the American Academy of Pediatrics, the American Academy of Family Physicians (AAFP), and the American College of Obstetricians and Gynecologists. Recommendations for routine use of vaccines in adults are reviewed and approved by the American College of Physicians, AAFP, the American College of Obstetricians and Gynecologists and the American College of Nurse-Midwives. ACIP recommendations adopted by the CDC director become agency guidelines on the date published in the Morbidity and Mortality Weekly Report (MMWR).

References (Guidelines)


\(^2\)Includes alcoholism, chronic heart/liver/lung disease, cigarette smoking, diabetes mellitus, chronic renal failure, nephrotic syndrome, immunodeficiency, iatrogenic immunosuppression, generalized malignancy, human immunodeficiency virus, Hodgkin disease, leukemia, lymphoma, multiple myeloma, solid organ transplants, congenital or acquired asplenia, sickle cell disease or other hemoglobinopathies, cerebral spinal fluid leak or cochlear implant.
### HEDIS Health Plan Performance Rates: Adult Immunization Status (AIS-E)

#### Influenza

Table 1. HEDIS AIS-E Measure Performance—Medicaid Plans

<table>
<thead>
<tr>
<th>Measurement Year</th>
<th>Total Number of Plans (N)</th>
<th>Number of Plans Reporting (N (%))</th>
<th>Performance Rates (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mean</td>
</tr>
<tr>
<td>2020*</td>
<td>272</td>
<td>103 (37.9)</td>
<td>18.3</td>
</tr>
<tr>
<td>2019</td>
<td>265</td>
<td>62 (23.4)</td>
<td>15.2</td>
</tr>
<tr>
<td>2018</td>
<td>256</td>
<td>21 (8.2)</td>
<td>11.6</td>
</tr>
</tbody>
</table>

*For 2020 the average denominator across plans was 88,360 individuals, with a standard deviation of 135,430.

Table 2. HEDIS AIS-E Measure Performance—Commercial Plans

<table>
<thead>
<tr>
<th>Measurement Year</th>
<th>Total Number of Plans (N)</th>
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<td></td>
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<tr>
<td>2020*</td>
<td>416</td>
<td>258 (62.0)</td>
<td>20.9</td>
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<tr>
<td>2019</td>
<td>417</td>
<td>166 (39.8)</td>
<td>19.6</td>
</tr>
<tr>
<td>2018</td>
<td>405</td>
<td>71 (17.5)</td>
<td>18.7</td>
</tr>
</tbody>
</table>

*For 2020 the average denominator across plans was 134,816 individuals, with a standard deviation of 178,120.

Table 3. HEDIS AIS-E Measure Performance—Medicare\(^1\) Plans

<table>
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<th>Measurement Year</th>
<th>Total Number of Plans (N)</th>
<th>Number of Plans Reporting (N (%))</th>
<th>Performance Rates (%)</th>
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<td></td>
<td>Mean</td>
</tr>
<tr>
<td>2020*</td>
<td>649</td>
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<tr>
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<tr>
<td>2018</td>
<td>525</td>
<td>44 (8.4)</td>
<td>18.3</td>
</tr>
</tbody>
</table>

*For 2020 the average denominator across plans was 21,227 individuals, with a standard deviation of 84,932.

\(^1\) For measurement year 2019, CMS removed HEDIS reporting requirements for Medicare plans.
### Table 4. HEDIS AIS-E Measure Performance—Medicaid Plans

<table>
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<tr>
<th>Measurement Year</th>
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<th>Number of Plans Reporting (N (%))</th>
<th>Performance Rates (%)</th>
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*For 2020 the average denominator across plans was 88,360 individuals, with a standard deviation of 135,430.

### Table 5. HEDIS AIS-E Measure Performance—Commercial Plans

<table>
<thead>
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<th>Measurement Year</th>
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</table>

*For 2020 the average denominator across plans was 134,816 individuals, with a standard deviation of 178,120.

### Table 6. HEDIS AIS-E Measure Performance—Medicare1 Plans

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<th>Measurement Year</th>
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<th>Number of Plans Reporting (N (%))</th>
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</table>

*For 2020 the average denominator across plans was 21,227 individuals, with a standard deviation of 84,932.
Table 7. HEDIS AIS-E Measure Performance—Medicaid Plans

<table>
<thead>
<tr>
<th>Measurement Year</th>
<th>Total Number of Plans (N)</th>
<th>Number of Plans Reporting (N (%))</th>
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<td>2018</td>
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</table>

*For 2020 the average denominator across plans was 21,145 individuals, with a standard deviation of 34,042.

Table 8. HEDIS AIS-E Measure Performance—Commercial Plans

<table>
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<th>Measurement Year</th>
<th>Total Number of Plans (N)</th>
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<th>Performance Rates (%)</th>
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<tr>
<td>2018</td>
<td>405</td>
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</table>

*For 2020 the average denominator across plans was 44,197 individuals, with a standard deviation of 57,446.

Table 9. HEDIS AIS-E Measure Performance—Medicare1 Plans

<table>
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<th>Measurement Year</th>
<th>Total Number of Plans (N)</th>
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<td>525</td>
<td>44 (8.4)</td>
<td>12.9</td>
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</tbody>
</table>

*For 2020 the average denominator across plans was 21,227 individuals, with a standard deviation of 84,932.
### Pneumococcal

<table>
<thead>
<tr>
<th>Measurement Year</th>
<th>Total Number of Plans (N)</th>
<th>Number of Plans Reporting (N (%))</th>
<th>Performance Rates (%)</th>
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<td>525</td>
<td>44 (8.4)</td>
<td>20.3</td>
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</table>

*For 2020 the average denominator across plans was 21,227 individuals, with a standard deviation of 84,932.
**Proposed Changes to Existing Measure for HEDIS<sup>®</sup> Measurement Year (MY) 2023: Deprescribing of Benzodiazepines in Older Adults (DBO)**

NCQA seeks comments on proposed modifications to the HEDIS measure *Deprescribing of Benzodiazepines in Older Adults (DBO)*. NCQA proposes to update the measure logic to account for members achieving 100% discontinuation without an intermediate taper of ≥20% in the numerator.

**Background**

DBO assesses the percentage of Medicare older adults with routine, inappropriate benzodiazepine use who experienced a ≥20% reduction in dose during the MY. Literature suggests it is important to slowly decrease benzodiazepine dose rather than abruptly stop use of the drug, to minimize potential withdrawal symptoms.<sup>2</sup> The measure was introduced in HEDIS MY 2022 to incentivize appropriate and safe deprescribing for patients with inappropriate use.

Initially, NCQA did not include an explicit 100% reduction threshold, in order to avoid potential patient risk from unintended consequences due to rapid tapers or stopping medication use. With support from expert advisory panels, NCQA proposed a single, moderate tapering threshold of ≥20% that was practical and achievable for all patients. The intent was that patients achieving 100% discontinuation would still meet the numerator criteria when deprescribed appropriately (e.g., through tapered dose reduction, or if patient starts with a low dose and discontinues use within the MY).

Some stakeholders raised questions about how measure logic might account for different member trajectories toward 100% discontinuation. To address these questions, NCQA conducted testing to further explore measure performance and evaluate the frequency and characteristics of members with 100% immediate benzodiazepine discontinuation.

**Methods**

NCQA conducted testing using OptumLabs<sup>®</sup> Data Warehouse, a large Medicare Advantage (MA) administrative claims database.<sup>3</sup> The database includes data for 67 simulated MA plans covering over 4 million MA plan members from the 2019 calendar year. A member was identified with 100% discontinuation if their last observed prescription occurred at least 60 days before the end of the MY.

**Findings**

Overall, 15,494 members were identified with 100% discontinuation during the MY. This represents 13% of all members falling into the measure denominator (N = 118,801). NCQA also explored the overlap between members achieving 100% discontinuation and those captured in the current measure numerator (≥20% reduction). Testing revealed that a large proportion of these members are not currently captured in the measure. Of the 15,494 members achieving 100% discontinuation, 1,779 also meet the ≥20% reduction threshold; the remaining 13,715 members achieve discontinuation without experiencing an intermediate ≥20% reduction in daily dose and thus are not in the numerator.

Further analyses confirmed that members achieving 100% discontinuation without an intermediate ≥20% reduction in dose were doing so in a safe and appropriate manner. Testing investigated the starting and ending doses, as well as duration of benzodiazepine use for 1.) members achieving 100% discontinuation without an intermediate ≥20% reduction in dose, 2.) members achieving 100% discontinuation with an

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<sup>1</sup>HEDIS<sup>®</sup> is a registered trademark of the National Committee for Quality Assurance (NCQA).


<sup>3</sup>Data for this analysis was obtained from the OptumLabs Data Warehouse, a database of health claims, clinical, demographic and other data elements. Study data were accessed using techniques compliant with the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and, because this study involved analysis of pre-existing, de-identified data, it was exempt from Institutional Review Board approval.
intermediate ≥20% reduction in dose (and therefore captured in the current numerator) and 3.) members meeting only the numerator of ≥20% reduction without 100% discontinuation. Duration of use was defined by identifying the PDC, the count of unique scripts and the count of 2-week supply equivalents in the treatment period. Table 1 summarizes the characteristics of benzodiazepine use for these three groups.

**Table 1. Benzodiazepine Use Characteristics by Numerator Compliance**

<table>
<thead>
<tr>
<th>Rate Description</th>
<th># of Members</th>
<th>Average Starting Dose (DME*)</th>
<th>Average Ending Dose (DME)</th>
<th>Average PDC (%)</th>
<th>Average # of Unique Scripts</th>
<th>Average # of 2-Week Supply Equivalents</th>
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<tr>
<td>100% reduction only</td>
<td>13,715</td>
<td>5.14</td>
<td>6.03</td>
<td>66</td>
<td>3.40</td>
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<td>1,779</td>
<td>9.91</td>
<td>2.52</td>
<td>69</td>
<td>4.41</td>
<td>8.50</td>
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<tr>
<td>≥20% reduction only</td>
<td>9,472</td>
<td>9.90</td>
<td>2.53</td>
<td>79</td>
<td>9.89</td>
<td>21.17</td>
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</tbody>
</table>

*Diazepam milligram equivalent. The dose of oral diazepam that is the equivalent of a given dose of another benzodiazepine.

Results show that members with 100% discontinuation without an intermediate ≥20% reduction in dose generally are starting on lower, steady doses and have shorter duration of benzodiazepine use during the MY, compared with those who meet the measure numerator (with or without 100% discontinuation). Approximately 62% (N = 9,670) of members with 100% discontinuation (with or without an intermediate ≥20% reduction in dose) fall into the measure denominator with a qualifying ITE in the first 2 months of the MY. These attributes appear to reflect members who were on benzodiazepines in the prior year and are potentially closer to the end of the tapering process, or who were originally on low-enough doses to safely stop treatment without tapering.

When we included logic to allow 100% discontinuation without an intermediate taper to count toward the numerator, performance for the total rate increases from 10.6% to 23.9% (10th percentile: 18.1%; 90th percentile: 32.3%). For members with a GAD diagnosis, performance increases from 11.7% to 24.3% (10th percentile: 18.7%; 90th percentile: 32.5%). For members without a GAD diagnosis, performance increases from 9.3% to 23.2% (10th percentile: 16.3%; 90th percentile: 32.3%). In general, the impact of adding logic for 100% discontinuation was similar across all rates.

Overall, advisory panels members expressed support for including these discontinuations in the measure rate, noting that the data on dose and duration aligned with an assumption of appropriate (as opposed to unsafe) deprescribing.

NCQA seeks feedback on the following questions:

1. Do you agree with updating the measure logic to account for members achieving 100% discontinuation without an intermediate taper of ≥20% in the numerator?
2. Are there unintended consequences of this measure update?

Supporting documents include the current measure specification and evidence workup.

**Measure Status for MY 2022**

Given the proposed measure update’s likely significant impact on measure performance, DBO will not be collected for MY 2022 reporting. The measure specifications, value sets and medication lists will be removed from *HEDIS MY 2022 Volume 2: Technical Specifications for Health Plans* in the *MY 2022 Technical Update*, which will be released March 31. If approved, DBO will be a first-year measure for MY 2023.

NCQA acknowledges the contributions of the Geriatric Measurement Advisory Panel and the Care Coordination Work Group.
Deprescribing of Benzodiazepines in Older Adults (DBO)

**SUMMARY OF CHANGES TO HEDIS MY 2023**

- Added a direct reference code for palliative care.
- Added the *Rules for Allowable Adjustments of HEDIS* section.
- Added language to clarify numerator compliance for members achieving 100% discontinuation.
- Added step to “Calculating number of days covered” definition for prescriptions dispensed on different days without overlapping days supply.
- Added note that the same assumptions from “Calculating number of days covered” definition apply to “DME daily dose” and “average starting DME” calculations.
- Added instructions for rounding to “Ending DME” and “PDC” definitions.

**Description**

The percentage of members 67 years of age and older who were dispensed benzodiazepines and achieved a 20% decrease or greater in benzodiazepine dose (diazepam milligram equivalent [DME] dose) during the measurement year.

**Definitions**

### Calculating number of days covered

Use the following steps to identify and calculate covered days.

**Step 1**

Identify dispensing events where multiple prescriptions for the same medication are dispensed on the same day. Identify start and end dates for each dispensing event individually. The start date is the dispense date. The end date is the start date plus days supply minus one. The start date through the end date are considered covered days.

*Note:* *This step assumes the member will take the medications concurrently.*

**Step 2**

For all other dispensing events (multiple prescriptions for the same or different medication dispensed on different days, with or without overlapping days supply), sum the days supply.

Identify the start and end dates: The start date is the date of service of the earliest dispensing event and the end date is the start date plus the summed days supply minus one. The start date through the end date are considered covered days. For example:

- If there are three 7-days supply dispensing events for three different medications on January 1, the start date is January 1 and the end date is January 21. Covered days include January 1–21.
- If there are three 7-days supply dispensing events for different medications on January 1, a 7-days supply dispensing event on January 20 and a 7-days supply dispensing event on January 28, the start date is January 1 and the end date is February 4. Covered days include January 1–February 4.
**Step 3** For multiple prescriptions for the same or different medication dispensed on different days without overlapping days supply, identify the start and end dates for each dispensing event individually. The start date is the date of service of the dispensing event and the end date is the start date plus the days supply minus one. The start date through the end date are considered covered days.

**Note:** This step assumes that the member will take one prescription at a time (and start taking the next prescription after exhausting the previous prescription).

**Identifying same or different drugs**

To identify same or different drugs, use the medication lists specified for the measure in the Oral Benzodiazepine Medications table below. The table includes a “Medication Lists” column that identifies the “same” medications by grouping them on the same row. For example, all medications listed in the “Alprazolam” row in the Oral Benzodiazepine Medications table are considered the “same” medication.

**ITE**

Index treatment episode. The first 30 covered days, with no gaps allowed, of a benzodiazepine prescription occurring during January 1 and September 1 of the measurement year. The ITE start date is the date of the earliest benzodiazepine prescription dispense date between January 1 and September 1 of the measurement year that is followed by ≥29 consecutive covered days with no gaps. The end date is the start date plus 29 days.

**Note:** The ITE may comprise multiple dispensing events, as long as there is no gap in covered days between prescriptions.

**DME**

Diazepam milligram equivalent. The dose of oral diazepam that is the equivalent of a given dose of another benzodiazepine (refer to the Oral Benzodiazepine Medications table for conversion factors).

**Benzodiazepine dosage units**

For each dispensing event, use the following calculation to determine the benzodiazepine dosage units per day.

\[
\text{# of Benzodiazepine dosage units per day} = \frac{\text{benzodiazepine quantity dispensed}}{\text{benzodiazepine days supply}}
\]

**DME daily dose**

For each dispensing event, use the following calculation to determine the DME daily dose. Convert each medication into the DME using the appropriate conversion factor and strength associated with the benzodiazepine product of the dispensing event (refer to the Oral Benzodiazepine Medications table for DME conversion factor and strength).

\[
\text{DME daily dose} = (\text{# of benzodiazepine dosage units}) \times (\text{strength [e.g., mg, mcg]}) \times (\text{DME conversion factor [refer to the Oral Benzodiazepine Medications table].})
\]

**Note:** When calculating DME daily dose, the same assumptions from “Calculating number of days covered” apply.

**Average starting DME**

The average DME daily dose for all benzodiazepines dispensed during the ITE.

Calculate the DME daily dose for each dispensing event in the ITE. To calculate the average starting DME, multiply the dispensing event’s DME daily dose by its days supply, then divide by 30 (the length of the ITE).
If multiple dispensing events contribute to the ITE, multiply the days supply of each dispensing event by the corresponding DME daily dose, then sum the results. Count the days supply until the end of the ITE; the total number of days supply across all dispensing events should not exceed 30. Do not round when calculating average DME daily dose.

**Note:** When calculating average starting DME, the same assumptions from “Calculating number of days covered” apply.

**Example A** ITE with a single dispensing event: A prescription for a 45-days supply of lorazepam containing 40 pills, 2.5 mg each pill. The Benzodiazepine Dosage Unit is 0.8889. The DME daily dose is 0.4445. The average starting DME is (0.4445 * 30) / 30 = 0.4445.

**Example B** ITE with multiple consecutive dispensing events: The first dispensing event in the ITE is a 7-days supply of diazepam containing 7 pills, 2 mg each pill. The Benzodiazepine Dosage Unit for the first dispensing event is 1 and the DME daily dose is 2. The Benzodiazepine Dosage Unit for the second dispensing event is 0.5 and the DME daily dose is 5.

The average starting DME is: [(2 * 7) + (5 * 23)] / 30 = 4.3.

**Treatment Period**
The period beginning the day after the ITE end date through the last covered day in the measurement year.

**Ending DME** The DME daily dose for the final dispensing event(s) of the treatment period.

For overlapping dispensing events, use the last covered day of the treatment period to calculate the Ending DME. **Do not round when calculating DME daily dose.**

If the member has no pharmacy claims for a benzodiazepine medication for at least 60 days within the MY after the last covered day of the treatment period, assume the member has achieved 100% discontinuation and set the ending DME to 0.

**Note:** When calculating the number of Benzodiazepine Dosage Units per day for the Ending DME, include any days supply that extends beyond December 31 of the measurement year. For example, if on December 28 a member is dispensed a 30-days supply of benzodiazepine (quantity 30), then the number of benzodiazepine dosage units per day is 1.

**PDC** Proportion of days covered. The number of days a member is covered by at least one benzodiazepine medication prescription, divided by the number of days in the treatment period. **Multiply by 100 and round (using the .5 rule) to the nearest whole number.**

### Eligible Population

**Product line** Medicare.

**Stratification** Report the following two stratifications and a total:
Members with a diagnosis of generalized anxiety disorder (Generalized Anxiety Disorder Value Set) on or between January 1 of the year prior to the measurement year and the ITE start date.

Members without a diagnosis of generalized anxiety disorder (Generalized Anxiety Disorder Value Set) on or between January 1 of the year prior to the measurement year and the ITE start date.

Total.

Note: The stratifications are mutually exclusive and the sum of both stratifications is the total population.

Age
67 years and older as of December 31 of the measurement year.

Continuous enrollment
The measurement year and the year prior to the measurement year.

Allowable gap
No more than one gap in enrollment of up to 45 days during the year prior to the measurement year and no gap during the measurement year.

Anchor date
None.

Benefits
Medical and pharmacy.

Event/diagnosis
Follow the steps below to identify the eligible population.

Step 1
Identify members with two or more benzodiazepine dispensing events on different dates of service (refer to the Oral Benzodiazepine Medications table below for medication lists for identifying benzodiazepine dispensing events) during the measurement year.

Step 2
Of the members identified in step 1, identify those with a qualifying ITE.

Step 3
Of the members identified in step 2, identify those with continuous days covered during the measurement year as defined by PDC \( \geq 50\% \) during the treatment period.

Step 4: Required exclusions
Of the members identified in step 3, exclude those members who met any of the following criteria:

- Members with a diagnosis of seizure disorders (Seizure Disorders Value Set); rapid eye movement sleep behavior disorder (REM Sleep Behavior Disorder Value Set); benzodiazepine withdrawal (Benzodiazepine Withdrawal Value Set); or ethanol withdrawal (Alcohol Withdrawal Value Set) on or between January 1 of the year prior to the measurement year and the ITE start date.

- Members in hospice or using hospice services any time during the measurement year. Refer to General Guideline 17: Members in Hospice.

- Members receiving palliative care (Palliative Care Assessment Value Set; Palliative Care Encounter Value Set; Palliative Care Intervention Value Set; ICD-10-CM code Z51.5) any time during the measurement year.

Administrative Specification

Denominator
The eligible population.
**Numerator**
The percentage of members who achieved a 20% decrease or greater in DME daily benzodiazepine dosage. Follow the steps below to identify numerator compliance.

**Step 1** Identify the average starting DME:
1. Identify the ITE.
2. Calculate benzodiazepine dosage units during the ITE.
3. Calculate average starting DME daily dose.

**Step 2** Identify the ending DME:
1. Identify the final benzodiazepine dispensing event(s) during the treatment period.
2. Calculate benzodiazepine dosage units for the final dispensing event(s).
3. Calculate ending DME daily dose.

**Step 3** Calculate the percentage change between the average starting DME and the ending DME using the formula below.

\[
\frac{\text{Average Starting DME} - \text{Ending DME}}{\text{Average Starting DME}} \times 100
\]

**Step 4** Determine numerator compliance. The member is numerator compliant if either of the following conditions are met:

- If the member's percent reduction is ≥20%, the member is numerator compliant.
- The member achieves 100% discontinuation with an ending DME of 0 and has no pharmacy claims for a benzodiazepine medication for at least 60 days within the MY after the last covered day of the treatment period.
## Oral Benzodiazepine Medications

<table>
<thead>
<tr>
<th>Type of Benzodiazepine</th>
<th>Medication Lists</th>
<th>Strength</th>
<th>DME Conversion Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alprazolam (oral)</td>
<td>Alprazolam 0.25 MG Medications List</td>
<td>0.25 mg</td>
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<td></td>
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<td>Medication Lists</td>
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<td>DME Conversion Factor</td>
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</table>

**Note**

- Although denied claims are not included when assessing the numerator, all claims (paid, suspended, pending and denied) must be included when identifying the eligible population.
- Do not include supplemental data when identifying the eligible population or assessing the numerator. Supplemental data can be used for only required exclusions for this measure.
- Medication lists used for this measure contain any applicable combination products.

**Data Elements for Reporting**

Organizations that submit HEDIS data to NCQA must provide the following data elements.

*Table DBO-3: Data Elements for Deprescribing of Benzodiazepines in Older Adults*

<table>
<thead>
<tr>
<th>Metric</th>
<th>Diagnosis</th>
<th>Data Element</th>
<th>Reporting Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>BenzodiazepinesInOlderAdults</td>
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<td>Benefit</td>
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<td>EligiblePopulation</td>
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<td>For each Stratification</td>
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<td></td>
<td>NumeratorByAdmin</td>
<td>For each Stratification</td>
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<td></td>
<td></td>
<td>Rate</td>
<td>(Percent)</td>
</tr>
</tbody>
</table>
Deprescribing of Benzodiazepines in Older Adults (DBO)
Measure Workup

Measure Description
The Deprescribing of Benzodiazepines in Older Adults (DBO) measure assesses the percentage of Medicare members 67 years of age and older who were dispensed benzodiazepines and achieved a 20% decrease or greater in benzodiazepine dose (diazepam milligram equivalent [DME] dose) during the measurement year.

The deprescribing measure is complementary to the Use of High-Risk Medications in Older Adults (DAE) measure. The DAE measure assesses potentially inappropriate use of benzodiazepines in the Medicare population by measuring “any dispensing” of benzodiazepines (defined as at least two dispensing events) in the measurement year. The DBO measure provides a metric to support safe transition off of benzodiazepines for those members referenced in DAE who are currently and routinely using them.

Topic Overview
Prevalence of Benzodiazepine Use and Prescribing
Use of prescription medications and concurrent use of interacting medications have significantly increased over time, especially in the older adult population (Kantor et al., 2015; Qato et al., 2016). In older adults, certain medications, including benzodiazepines, pose significant risks to patients and are considered potentially inappropriate for this population. Older adults are prescribed benzodiazepines at the highest rate and are most at risk of adverse events among all U.S. adults (Guina & Merrill, 2018; D. T. Maust et al., 2018).

Between 1996 and 2013, the number of adults filling a benzodiazepine prescription in the U.S. increased from 8 million to nearly 14 million. The amount of benzodiazepine medicine found in prescriptions also doubled over this period (Bachhuber et al., 2016). Evidence suggests that in the older adult population, benzodiazepine users are more likely to be female, have a low level of education, have a lower income and have several chronic physical diseases (Baandrup et al., 2018).

In 2015, CMS reported that 17.6% of all Medicare Part D enrollees were dispensed benzodiazepines (Centers for Medicare & Medicaid Services [CMS], 2016). After the expansion of Medicare coverage for prescription benzodiazepines in 2013, the prevalence of benzodiazepine use increased (D. Maust et al., 2019; Zimlich, 2016). This increase in prevalence was found to have potentially contributed to both an increase in fall-related injuries and an increase in medication poisoning among older adults (D. Maust et al., 2019).

Risks of Benzodiazepine Use
Benzodiazepines such as alprazolam are indicated for anxiety and panic disorders (Food and Drug Administration [FDA], 2011). When prescribed at a low dosage for a brief time (less than 30 days), benzodiazepines can effectively treat generalized anxiety disorders, panic disorders and sleep disorders (Dell’osso & Lader, 2013; Salzman, 1991; Vinkers & Olivier, 2012). They are also used for anesthesia and to treat alcohol or benzodiazepine withdrawal, seizures and insomnia (Greller & Gupta, 2017; Guina & Merrill, 2018). However, the use of benzodiazepines in older adults is associated with serious risks.
Benzodiazepines have class-level warnings for users that include dependence and withdrawal reactions, such as seizures, central nervous system depression and impaired performance (FDA, 2011). Benzodiazepines induce sedation, which causes drowsiness, delayed reaction times and impaired balance (Donnelly et al., 2017). This can result in increased risk of hip fractures, falls and fall-related injuries in older adults prescribed short- and long-acting benzodiazepines (Bakken et al., 2014; de Vries et al., 2013; Donnelly et al., 2017; Woolcott et al., 2009; Xing et al., 2014). Although benzodiazepines are indicated for short-term treatment of generalized anxiety disorder (Davidson, 2001; Gorman, 2003; Lydiard et al., 2010), there is risk of continued long-term use in older adults, as many chronic users are rarely encouraged to discontinue the medication (Paquin et al., 2014; Sivertsen et al., 2006).

Studies have found that long-term use of benzodiazepines in older adults is associated with increased risk of dementia (He et al., 2019; Shash et al., 2016; Takada et al., 2016; Zhong et al., 2015). Other harms related to benzodiazepine use include impaired cognition, loss of physical function, depressed mood and suicidal thoughts (Baandrup et al., 2018; Blanco et al., 2018; Greller & Gupta, 2017). Research suggests that benzodiazepines may reduce the efficacy of cognitive behavior therapy in treating anxiety disorders, and experts encourage use of safer treatment alternatives, including serotonin reuptake inhibitor and cognitive behavioral therapy, in the older adult population (Birk 2004; Rothbaum et al., 2014). Benzodiazepines are also known to interact with other medications such as opioids and other sedatives, which may result in an increased risk of opioid-related overdose or death (Hernandez et al., 2018; National Institute on Drug Abuse, 2019). Overdose deaths involving benzodiazepines rose from 1,135 in 1999 to more than 11,537 in 2017, driven by the combination of a benzodiazepine with an opioid (National Institute on Drug Abuse, 2019).

Despite the risks associated with benzodiazepines, these medications are inappropriately prescribed and overused in the older adult population. Since 2003, the use of benzodiazepines in ambulatory care has increased, including co-prescribing with other sedating medications. Evidence shows increased prescribing among primary care physicians in particular, and for conditions other than insomnia and anxiety, such as back and chronic pain (Agarwal & Landon, 2019). Many older patients take benzodiazepines for sleep (Garfinkel & Mangin, 2010). One study found that older adults are more likely to disclose misusing benzodiazepines to help with sleep than younger adults (D. T. Maust et al., 2018). Benzodiazepines are also widely used for long-term treatment of anxiety disorders, although prescribing guidelines recommend benzodiazepine treatment for short-term treatment only, after effective and safer drug alternatives have failed (Canadian Psychiatric Association, 2006; National Institute for Health and Care Excellence, 2011; Paquin et al., 2014). More recently with the onset of the COVID-19 pandemic, several studies have shown an increase in anxiety and insomnia, which could result in an increase in the use of benzodiazepines in order to treat these conditions (Agrawal, 2020).

### Financial Impact of Benzodiazepine Use

Use of benzodiazepines is associated with higher health care service use and costs. Research suggests that benzodiazepines are a common drug implicated in ED visits related to nonmedical use of medications in the U.S. (Geller et al., 2019). Nonmedical use is defined as taking the prescribed drug "not in the way, for the reasons, in the amount, or during the time-period prescribed" (Centers for Disease Control and Prevention [CDC], 2021). In 2008, there were about 272,000 emergency department (ED) visits in the U.S. involving nonmedical use of benzodiazepines; in 2011, this increased to approximately 426,000 ED visits (Substance Abuse and Mental Health Services Administration, 2011). A more recent study estimates that about 10% of all ED visits involving adverse medication-related events in 2016 were related to benzodiazepine use (Moro et al., 2020). Specifically, among older adults, it estimated that half of the ED visits involved nonmedical use (Moro et al., 2020). As one study found, patients with moderate pain prescribed a benzodiazepine were more likely to return to the ED compared to those without a benzodiazepine prescription (Chukwulebe et al., 2019). Individuals susceptible to a benzodiazepine-related drug interaction are at even greater risk of hospitalizations, ED visits, outpatient visits and other higher health care costs (Dionne et al., 2013).

Among all potentially inappropriate medications, benzodiazepines were identified as the third largest medication class contributing to total medication costs of older adults living in residential care, following proton-pump inhibitors and antipsychotics (Harrison et al., 2018). Literature suggests there is increased
risk of falls in older adults taking benzodiazepines (Donnelly et al., 2017). According to the CDC, falls among older adults are very costly. Each year, the U.S. spends about $50 billion on non-fatal fall injuries and $754 million on fatal falls. Of the total spent on non-fatal falls, $29 billion is paid by Medicare and $9 billion is paid by Medicaid (CDC, 2019). It is unknown what percentage of falls are attributed to benzodiazepine use, but as the older population grows, it is expected that the number of fall injuries and cost to treat these injuries will also rise (CDC, 2019).

### Clinical Recommendations Against Benzodiazepine Use in Older Adults

Given the risks and high prevalence, multiple sources of clinical or other guidance recommend against benzodiazepine use in older adults.

#### American Geriatrics Society Beers Criteria®

The American Geriatrics Society (AGS) Beers Criteria® (AGS Beers Criteria®) for Potentially Inappropriate Medication (PIM) Use in Older Adults is an explicit list of PIMs that are typically best avoided by older adults in most circumstances or under specific situations, such as in certain diseases or conditions (American Geriatrics Society, 2019). The criteria recommend avoiding benzodiazepines—all short-, intermediate-, and long-acting forms—for all older adults. The criteria’s rationale states: “Older adults have increased sensitivity to benzodiazepines and decreased metabolism of long-acting agents; in general, all benzodiazepines increase risk of cognitive impairment, delirium, falls, fractures, and motor vehicle crashes in older adults.” According to the criteria, only in rare cases may benzodiazepines be appropriate (i.e., for seizure disorders, rapid eye movement sleep behavior disorder, benzodiazepine withdrawal, ethanol withdrawal, severe generalized anxiety disorder and periprocedural anesthesia), most notably for benzodiazepine withdrawal, a particular risk when deprescribing benzodiazepines in older adults.

#### U.S. Food and Drug Administration Black Box Warning

In August 2016, the FDA issued a black box warning about the potentially deadly combination of benzodiazepines and opioids (FDA, 2016). In September 2017, the FDA updated this advisory to include several recommendations for health care professionals, including educating patients about the serious risks of combined use, even when used as prescribed; tapering the benzodiazepine or CNS depressant to discontinuation, if possible; verifying the diagnosis if a patient is receiving prescribed benzodiazepines or other CNS depressants for anxiety or insomnia and considering other treatment options for these conditions; and coordinating with other prescribers to ensure they are aware of the patient’s full medication regimen (FDA, 2017).

The Centers for Disease Control and Prevention (CDC) supports this advisory, issuing their own recommendation in 2018 for prescribers to revise an opioid order when a patient is concurrently prescribed a benzodiazepine medication (Dowell et al., 2016).

#### STOPP/START Criteria (Version 2)

The STOPP/START criteria for PIM use in older people was originally published in 2008 and updated in 2015 (O’Mahony et al., 2015). Based on expert consensus review of current evidence, the criteria provide a screening tool of older people’s prescriptions (STOPP) and a screening tool to alert to the right treatment (START). The criteria have been used to design patient-safety screening interventions and detect patients at risk of preventable medication-related hospital admissions, among other uses (Barenholtz Levy & Marcus, 2016; Hill-Taylor et al., 2013, p.; van der Stelt et al., 2016). A STOPP criteria for benzodiazepines was added in the 2015 (version 2) update.

STOPP CNS criteria D5 recommends that benzodiazepines should not be taken for $\geq 4$ weeks if there is no indication for longer treatment, due to risk of prolonged sedation, confusion, impaired balance, falls and traffic accidents. The guideline continues, “all benzodiazepines should be withdrawn gradually if taken for $> 2$ weeks as there is a risk of causing a benzodiazepine withdrawal syndrome if stopped abruptly.”
Deprescribing Benzodiazepines Among Older Adults

Clinical guidelines recommend avoidance of benzodiazepines in older adults. To achieve this, new use should be prevented and current users must be transitioned away from benzodiazepines. Immediate discontinuation of benzodiazepines may lead to adverse events and withdrawal symptoms, such as seizures and insomnia, and is not recommended (Hare, 2019; Markota et al., 2016; Reeve et al., 2017); a deprescribing strategy is needed. Deprescribing is the tapering or stopping drugs with the goal of minimizing inappropriate use to improve patient outcomes (Scott et al., 2015). Closely related to the concept of clinical de-intensification (e.g., Choosing Wisely Campaign), deprescribing specifically addresses the steps needed to safely discontinue a medication while avoiding unintended consequences such as withdrawal or adverse events. This includes consideration of other medications the patient may be taking, as well as discussion with the patient to educate on rationale for deprescribing and discuss patient goals. This approach is recommended in older patients receiving high-risk drugs or combinations and may involve multiple steps or components (Scott et al., 2015).

It is important that benzodiazepines are discontinued at a rate that is appropriate and safe for older adults. Rapid tapers can result in higher anxiety levels than those preceding the use of the medication, and possibly seizures (Markota et al., 2016). However, with patient education and close monitoring, older adults can safely reduce their benzodiazepine use (Iyer et al., 2008). Deprescribing success rates (defined as being complete drug-free at end of study) have been found to range from 25% to 85% (Paquin et al., 2014). A randomized trial found a 77% reduction in benzodiazepine use at 6 months, with minimal withdrawal symptoms among long-term users who received education from community pharmacists during the tapering process (Tannenbaum et al., 2014). Successful tapering decreases the risks of adverse events associated with benzodiazepine use, including risk of falls (Markota et al., 2016).

There are several existing interventions related to decreasing benzodiazepine use. Patient and provider education is a common intervention used to target deprescribing efforts at the individual level (Ng et al., 2018). In addition, reimbursement for alternative services, such as behavioral therapy for insomnia or alternative medications for anxiety, give physicians options for common diagnoses that are typically treated with benzodiazepines (Guina & Merrill, 2018). For example, providers can prescribe antidepressants, anticonvulsants or certain antihypertensive agents to patients treated for generalized anxiety disorder with benzodiazepines (Guina & Merrill, 2018; Longo & Johnson, 2000). Initiatives at the state level can also impact deprescribing efforts. In 2019, 20 states required mandatory use of Prescription Drug Monitoring Program (PDMP) data for benzodiazepines (Centers for Disease Control and Prevention, 2020; Liang & Shi, 2019). Providers and plans are encouraged to look at benzodiazepine prescribing practices and monitor PDMP data to avoid a benzodiazepine crisis, particularly during the COVID-19 pandemic as rates of anxiety and insomnia as well as social isolation are expected to increase among older adults (Agrawal, 2020). New Mexico is on the forefront of statewide benzodiazepine deprescribing efforts. The New Mexico Overdose Prevention and Pain Management Advisory Council, established in 2012 under the NM Department of Health, developed guidelines for the use of benzodiazepines in the state (NM Department of Health, 2018) that include prescribing guidance for benzodiazepines and other Z-drugs, as well as tapering instructions for physicians to follow (The New Mexico Overdose Prevention and Pain Management Advisory Council, 2019).

Recommendations Focused on Reducing Benzodiazepine Use When Already Prescribed & Deprescribing Approaches

Although a single consensus guideline for appropriate deprescribing of benzodiazepines has not yet been published, several clinical algorithms have been produced that share common recommendations (National Opioid Use Guideline Group, 2010; Ogbonna & Lembke, 2017; Pottie et al., 2018; VA National Center for PTSD, 2013). These clinical recommendations are summarized in Table 3. Similar guidance is also reflected in various organization-specific guidelines, such as Kaiser of Washington’s Benzodiazepine and Z-Drug Safety Guideline, among others (Kaiser Permanente, 2019; Nebraska Hospital Association, n.d.).
Table 3: Benzodiazepine Deprescribing Approaches Focused on, or Applicable to, Older Adults

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Target Population</th>
<th>Guidance</th>
<th>Short Citation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deprescribing Guidelines in the Elderly Project</td>
<td>Adults ≥65 with any benzodiazepine use for treatment of insomnia</td>
<td>Reduce 25% every 2 weeks, switching to 12.5% reductions near end</td>
<td>Pottie et al., 2018</td>
</tr>
<tr>
<td>VA National Center for Post-Traumatic Stress Disorder</td>
<td>Patients with PTSD on benzodiazepines &gt;2 weeks</td>
<td>Switch high-dose or long-term users to long-acting benzodiazepine Reduce 50% in first 2-4 weeks, maintain 1-2 months, then reduce 25% every 2 weeks</td>
<td>VA National Center for PTSD, 2013</td>
</tr>
<tr>
<td>AAFP Curbside Consultation</td>
<td>Adults ≥65 on benzodiazepines &gt;1 month</td>
<td>Initial reduction 5-25%, followed by further 5-25% reduction every 1-4 weeks</td>
<td>Ogbonna and Lembke, 2017</td>
</tr>
<tr>
<td>NOUGG Canadian Guideline for Chronic Non-Cancer Pain</td>
<td>Unspecified</td>
<td>Reduce by 10% every 1-2 weeks until dose is at 20% of original, then taper 5% every 2-4 weeks</td>
<td>National Opioid Use Guideline Group, 2010</td>
</tr>
</tbody>
</table>

Most guidelines for older adults (aged 65 and older) recommend starting with a larger taper amount (between 20% and 25%) every 2–4 weeks, then taper by 5% to 12.5%. Overall, there is agreement that a slower taper is considered better, with a possibility of lasting anywhere from 6–8 months. Most guidelines identify and prioritize specific high-risk populations such as individuals on supratherapeutic doses, using multiple benzodiazepines, or with drug-drug or drug-disease interactions. In almost all guidelines, the older adult population is called out as a specific risk group, with tailored recommendations (Ogbonna & Lembke, 2017; Pottie et al., 2018; VA National Center for PTSD, 2013).

The level of evidence supporting most existing benzodiazepine deprescribing guidelines is unclear; however, “Deprescribing benzodiazepine receptor agonists: Evidence based clinical practice guideline,” was developed based on systematic review under the GRADE framework (Pottie et al., 2018). Recommendations are specific to older adults using benzodiazepines for insomnia and do not apply to use of benzodiazepines for untreated anxiety, depression or other physical or mental health conditions. Created under the Deprescribing Guidelines in the Elderly project and published in 2018, this guideline’s recommendations have been adopted or promoted by multiple clinical organizations, such as the American Academy of Family Physicians and College of Physicians & Surgeons of Alberta (College of Physicians & Surgeons of Alberta, 2016; Ogbonna & Lembke, 2017). Their recommendations generally agree with those of other guidelines, though specific details may vary depending on the particular clinical population under discussion.
Challenges and Opportunities

One challenge identified in the literature is provider and patient pushback. Providers and patients may be uncertain of the benefits and harms of continuing or discontinuing specific drugs (Scott et al., 2015). The uncertainty may be greater in cases where there is not a single guideline or recommendation in place to advise on appropriate deprescribing of specific medications, such as benzodiazepines. Patients may also fear the adverse drug withdrawal effects and decide not to taper off benzodiazepines to avoid these effects (Scott et al., 2015). Limited availability or reimbursement opportunities for alternative treatments may discourage patients and providers from reducing use of benzodiazepines.

NCQA is aware of potential unintended consequences a deprescribing measure can have. If not specified properly, this measure could incentivize inappropriate deprescribing that could result in attendant harm to the patient. In testing, NCQA explored populations where it may not be fitting to deprescribe benzodiazepines and should be excluded from the measure, such as those with a diagnosis that may be appropriate for benzodiazepine treatment. The current measure specifications reflect our findings and exclude populations where benzodiazepine use may be appropriate. Another possible consequence of a deprescribing measure is patients turning to other methods to obtain benzodiazepine prescriptions; for example, paying for benzodiazepines out of pocket (Barnett et al., 2019).

With a deprescribing measure, there is opportunity to promote harm reduction. This measure concept also fills a measurement gap. Currently, measures on benzodiazepine use focus on avoiding all use of benzodiazepines, or avoiding use of benzodiazepines concurrently with other medications, such as opioids. Other existing measures assess the education patients and caregivers receive on high-risk medications and overall polypharmacy of CNS-active medications. Although there is no current measure that incentivizes safely getting older adults off benzodiazepines, there is documented success of reducing benzodiazepine use at the population level (Carr et al., 2019; Davidson et al., 2020; Reeve et al., 2017; Winstanley et al., 2018), and this measure can further the assessment of such progress in patient safety for older adults.

References


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Proposed Measure Retirement for HEDIS® Measurement Year (MY) 2023: Frequency of Selected Procedures (FSP)

NCQA seeks comments on the proposed retirement of the Frequency of Selected Procedures (FSP) HEDIS measure. The measure summarizes the utilization of frequently performed procedures that often show variation and have highlighted potential for over/underutilization across clinical procedures. Performance scores are non-risk adjusted counts of procedures per 1,000 member years, stratified by age and gender, and include the following procedures:

- Tonsillectomy
- Bariatric weight loss surgery
- Hysterectomy
- Cholecystectomy
- Back surgery
- PCI
- Cardiac catheterization
- CABG
- Prostatectomy
- Total hip replacement
- Total knee replacement
- Carotid endarterectomy
- Mastectomy
- Lumpectomy

FSP was introduced in HEDIS 1994; a recent review, including preliminary feedback during the October 2021 Ad Hoc HEDIS public comment period, indicated that it may no longer be useful in supporting quality. NCQA proposes its retirement for the following reasons:

- Low utility and actionability. Performance scores are not risk adjusted, which makes interpretation of measure results challenging and less useful for plan-to-plan comparison. Users report that the measure lacks accepted performance benchmarks needed for health plans to target performance improvement.
- High resource burden associated with reporting the measure for health plans, vendors and auditors, due to its length and complexity (many required data variables and stratification combinations).
- Potential validity concerns associated with interpreting performance variation over the years, due to the large number of stratifications that contribute to small sample sizes for individual reporting categories.

NCQA seeks feedback on the following questions:

1. Do you support retirement of the FSP measure for HEDIS MY 2023?
2. If the measure is retired, should NCQA explore measurement concepts that would assess risk adjusted utilization of specific procedures for potential overuse? If so, what procedures would be most valuable to assess?
3. Should NCQA consider other measurement concepts for the Utilization domain?

Supporting documents include the current measure specification and performance data for selected indicators and stratifications.

NCQA acknowledges the contributions of the Technical Measurement Advisory Panel.

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Frequency of Selected Procedures (FSP)

SUMMARY OF CHANGES TO HEDIS MY 2023

- Retire measure.

Description

This measure summarizes the utilization of frequently performed procedures that often show wide regional variation and have generated concern regarding potentially inappropriate utilization.

Calculations

Product lines

Report the following tables for each applicable product line.

- Table FSP-1 Medicaid.
- Table FSP-2 Commercial.
- Table FSP-3 Medicare.

Member months

For each product line and table, report all member months for the measurement year. IDSS automatically produces member years data for all product lines. Refer to Specific Instructions for Utilization Tables for more information.

Required exclusion

Members in hospice or using hospice services anytime during the measurement year. Refer to General Guideline 17: Members in Hospice.

Procedures

Report counts for the procedures as specified regardless of the site of care (e.g., inpatient or ambulatory setting). Report the number of procedures rather than the number of members who had the procedures. Do not double-count the same procedure.

Count as one procedure...

To avoid double counting events, all events must be at least 14 days apart. For example, if the date of service for a CABG is February 1, then the service date for the next CABG must be on or after February 15.

If there are two events within 14 days, include only the first procedure. For example, if the date of service for a CABG is February 1, include the February 1 CABG and do not include CABGs that occur on or between February 2 and February 14.

For procedures that occur during an inpatient stay, use the date of service when identifying that events are at least 14 days apart.

Tonsillectomy

Tonsillectomy (Tonsillectomy Value Set). Report tonsillectomy (with or without adenoidectomy).

Do not report adenoidectomy performed alone.

Bariatric weight loss surgery

Bariatric weight loss surgery (Bariatric Weight Loss Surgery Value Set). Report the number of bariatric weight loss surgeries.

Hysterectomy

Report abdominal and vaginal hysterectomy separately.

- Abdominal Hysterectomy Value Set.
• Vaginal Hysterectomy Value Set.

**Cholecystectomy**
Report open and laparoscopic cholecystectomy separately.
- Open Cholecystectomy Value Set.
- Laparoscopic Cholecystectomy Value Set.

**Back surgery**
Back surgery (Back Surgery Value Set). Report all spinal fusion and disc surgery, including codes relating to laminectomy with and without disc removal.

**PCI**
Percutaneous coronary intervention (PCI Value Set). Report all PCIs performed separately. Do not report PCI or cardiac catheterization performed in conjunction with (on the same date of service as) a CABG in the PCI rate or the cardiac catheterization rate; report only the CABG.

**Cardiac catheterization**
Cardiac catheterization (Cardiac Catheterization Value Set). Report all cardiac catheterizations performed separately. Do not report a cardiac catheterization performed in conjunction with (on the same date of service as) a PCI in the cardiac catheterization rate; report only the PCI.

Do not report PCI or cardiac catheterization performed in conjunction with (on the same date of service as) a CABG in the PCI or the cardiac catheterization rate; report only the CABG.

**CABG**
Coronary artery bypass graft (CABG Value Set). Report each CABG only once for each date of service per patient, regardless of the number of arteries involved or the number or types of grafts involved.

Do not report PCI or cardiac catheterization performed in conjunction with (on the same date of service as) a CABG in the PCI or the cardiac catheterization rate; report only the CABG.

**Prostatectomy**
Prostatectomy (Prostatectomy Value Set). Report the number of prostatectomies.

**Total hip replacement**
Total hip replacement (Total Hip Replacement Value Set). Report the number of total hip replacements.

**Total knee replacement**
Total knee replacement (Total Knee Replacement Value Set). Report the number of total knee replacements.

**Carotid endarterectomy**
Carotid endarterectomy (Carotid Endarterectomy Value Set). Report the number of carotid endarterectomies.

**Mastectomy**
Report the number of mastectomies. Report bilateral mastectomy procedures as two procedures.

Identify unilateral mastectomies using any of the following:
- Unilateral Mastectomy Value Set.
- Unilateral Mastectomy Left Value Set.
- Unilateral Mastectomy Right Value Set.
Identify bilateral mastectomies using either of the following:
- Bilateral mastectomy (Bilateral Mastectomy Value Set).
- Unilateral mastectomy (Unilateral Mastectomy Value Set) with a bilateral modifier (Bilateral Modifier Value Set).
- Both of the following on the same date of service:
  - Unilateral mastectomy (Unilateral Mastectomy Value Set) with a left-side modifier (Left Modifier Value Set) (same procedure).
  - Unilateral mastectomy (Unilateral Mastectomy Value Set) with a right-side modifier (Right Modifier Value Set) (same procedure).

**Lumpectomy**  Lumpectomy (Lumpectomy Value Set). Report the number of lumpectomies.

**Note**
- Supplemental data may not be used for this measure.

**Table FSP-1: Data Elements for Frequency of Selected Procedures**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Age</th>
<th>Gender</th>
<th>Data Element</th>
<th>Reporting Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>BariatricWeightLossSurgery</td>
<td>0-19</td>
<td>F</td>
<td>MemberMonths</td>
<td>For each Stratification</td>
</tr>
<tr>
<td></td>
<td>20-44</td>
<td>M</td>
<td>ProcedureCount</td>
<td>For each Stratification</td>
</tr>
<tr>
<td></td>
<td>45-64</td>
<td></td>
<td>Rate</td>
<td>12,000 * ProcedureCount / MemberMonths</td>
</tr>
<tr>
<td>Tonsillectomy</td>
<td>0-9</td>
<td>M+F</td>
<td>MemberMonths</td>
<td>For each Stratification</td>
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<td>10-19</td>
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<td>ProcedureCount</td>
<td>For each Stratification</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td>Rate</td>
<td>12,000 * ProcedureCount / MemberMonths</td>
</tr>
<tr>
<td>HysterectomyAbdominal</td>
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<td>MemberMonths</td>
<td>For each Metric and Stratification</td>
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<td>ProcedureCount</td>
<td>For each Metric and Stratification</td>
</tr>
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<td>Mastectomy</td>
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<td></td>
<td>Rate</td>
<td>12,000 * ProcedureCount / MemberMonths</td>
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<tr>
<td>Lumpectomy</td>
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<td>CholecystectomyOpen</td>
<td>30-64</td>
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<td>MemberMonths</td>
<td>For each Metric and Stratification</td>
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<tr>
<td></td>
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<td></td>
<td>ProcedureCount</td>
<td>For each Metric and Stratification</td>
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<td></td>
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<td></td>
<td>Rate</td>
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<tr>
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<td>For each Metric and Stratification</td>
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<td>45-64</td>
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<td>ProcedureCount</td>
<td>For each Metric and Stratification</td>
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<td></td>
<td>Rate</td>
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<td>BackSurgery</td>
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<td>For each Stratification</td>
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<td>45-64</td>
<td>M</td>
<td>ProcedureCount</td>
<td>For each Stratification</td>
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<td></td>
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### Table FSP-2: Data Elements for Frequency of Selected Procedures

<table>
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<tr>
<th>Metric</th>
<th>Age</th>
<th>Gender</th>
<th>Data Element</th>
<th>Reporting Instructions</th>
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<tr>
<td>BariatricWeightLossSurgery</td>
<td>0-19</td>
<td>F</td>
<td>MemberMonths</td>
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<tr>
<td></td>
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<td>M</td>
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<td>Rate</td>
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<tr>
<td></td>
<td>65+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tonsillectomy</td>
<td>0-9</td>
<td>M+F</td>
<td>MemberMonths</td>
<td>For each Stratification</td>
</tr>
<tr>
<td></td>
<td>10-19</td>
<td></td>
<td>ProcedureCount</td>
<td>For each Stratification</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Rate</td>
<td>12,000 * ProcedureCount / MemberMonths</td>
</tr>
<tr>
<td>HysterectomyAbdominal</td>
<td>15-44</td>
<td>F</td>
<td>MemberMonths</td>
<td>For each Metric and Stratification</td>
</tr>
<tr>
<td>HysterectomyVaginal</td>
<td>45-64</td>
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<td>ProcedureCount</td>
<td>For each Metric and Stratification</td>
</tr>
<tr>
<td>CholecystectomyOpen</td>
<td>65+</td>
<td></td>
<td>Rate</td>
<td>12,000 * ProcedureCount / MemberMonths</td>
</tr>
<tr>
<td>CholecystectomyLaparoscopic</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mastectomy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lumpectomy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CholecystectomyOpen</td>
<td>30-64</td>
<td>M</td>
<td>MemberMonths</td>
<td>For each Metric and Stratification</td>
</tr>
<tr>
<td>CholecystectomyLaparoscopic</td>
<td>65+</td>
<td></td>
<td>ProcedureCount</td>
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</tr>
<tr>
<td>BackSurgery</td>
<td>20-44</td>
<td>F</td>
<td>MemberMonths</td>
<td>For each Stratification</td>
</tr>
<tr>
<td></td>
<td>45-64</td>
<td>M</td>
<td>ProcedureCount</td>
<td>For each Stratification</td>
</tr>
<tr>
<td></td>
<td>65+</td>
<td></td>
<td>Rate</td>
<td>12,000 * ProcedureCount / MemberMonths</td>
</tr>
<tr>
<td>PCI</td>
<td>45-64</td>
<td>F</td>
<td>MemberMonths</td>
<td>For each Metric and Stratification</td>
</tr>
<tr>
<td>CardiacCatheterization</td>
<td>65+</td>
<td>M</td>
<td>ProcedureCount</td>
<td>For each Metric and Stratification</td>
</tr>
<tr>
<td>CABG</td>
<td></td>
<td></td>
<td>Rate</td>
<td>12,000 * ProcedureCount / MemberMonths</td>
</tr>
<tr>
<td>Prostatectomy</td>
<td>45-64</td>
<td>M</td>
<td>MemberMonths</td>
<td>For each Stratification</td>
</tr>
<tr>
<td></td>
<td>65+</td>
<td></td>
<td>ProcedureCount</td>
<td>For each Stratification</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Rate</td>
<td>12,000 * ProcedureCount / MemberMonths</td>
</tr>
<tr>
<td>Metric</td>
<td>Age</td>
<td>Gender</td>
<td>Data Element</td>
<td>Reporting Instructions</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>------</td>
<td>--------</td>
<td>--------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>BariatricWeightLossSurgery</td>
<td>0-64</td>
<td>F</td>
<td>MemberMonths</td>
<td>For each Metric and Stratification</td>
</tr>
<tr>
<td>PCI</td>
<td>65-74</td>
<td>M</td>
<td>ProcedureCount</td>
<td>For each Metric and Stratification</td>
</tr>
<tr>
<td>CardiacCatheterization</td>
<td>75-84</td>
<td></td>
<td>Rate</td>
<td>12,000 * ProcedureCount / MemberMonths</td>
</tr>
<tr>
<td>CABG</td>
<td>85+</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>CarotidEndarterectomy</td>
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<td></td>
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<td></td>
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<tr>
<td>CholecystectomyOpen</td>
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</tr>
<tr>
<td>CholecystectomyLaparoscopic</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>BackSurgery</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>TotalKneeReplacement</td>
<td></td>
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<tr>
<td>TotalHipReplacement</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HysterectomyAbdominal</td>
<td>0-64</td>
<td>F</td>
<td>MemberMonths</td>
<td>For each Metric and Stratification</td>
</tr>
<tr>
<td>HysterectomyVaginal</td>
<td>65-74</td>
<td></td>
<td>ProcedureCount</td>
<td>For each Metric and Stratification</td>
</tr>
<tr>
<td>Mastectomy</td>
<td>75-84</td>
<td></td>
<td>Rate</td>
<td>12,000 * ProcedureCount / MemberMonths</td>
</tr>
<tr>
<td>Lumpectomy</td>
<td>85+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prostatectomy</td>
<td>0-64</td>
<td>M</td>
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<td>For each Stratification</td>
</tr>
<tr>
<td></td>
<td>65-74</td>
<td></td>
<td>ProcedureCount</td>
<td>For each Stratification</td>
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<tr>
<td></td>
<td>75-84</td>
<td></td>
<td>Rate</td>
<td>12,000 * ProcedureCount / MemberMonths</td>
</tr>
<tr>
<td></td>
<td>85+</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**HEDIS Health Plan Performance Rates: Frequency of Selected Procedures (FSP)**

*Note: This sample report for FSP includes selected indicators and selected stratifications for review.*

**Table 1. HEDIS FSP Selected Indicators Performance—Commercial Plans**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Measurement Year</th>
<th>Year</th>
<th>Age</th>
<th>Gender</th>
<th>Number of Plans Reporting (N (%)</th>
<th>Total Number of Plans (N)</th>
<th>Number of Plans Reporting (N (%))</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>10th Percentile</th>
<th>25th Percentile</th>
<th>50th Percentile</th>
<th>75th Percentile</th>
<th>90th Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Back Surgery</td>
<td>2019*</td>
<td>45-64</td>
<td>F</td>
<td>417</td>
<td>391 (93.8)</td>
<td>4.6</td>
<td>2.2</td>
<td>2.4</td>
<td>3.3</td>
<td>4.4</td>
<td>5.6</td>
<td>7.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>M</td>
<td>417</td>
<td>391 (93.8)</td>
<td>5.2</td>
<td>1.9</td>
<td>3.0</td>
<td>4.0</td>
<td>5.2</td>
<td>6.2</td>
<td>7.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2018</td>
<td>45-64</td>
<td>F</td>
<td>405</td>
<td>382 (94.3)</td>
<td>4.7</td>
<td>2.0</td>
<td>2.6</td>
<td>3.4</td>
<td>4.5</td>
<td>5.7</td>
<td>7.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>M</td>
<td>405</td>
<td>382 (94.3)</td>
<td>5.4</td>
<td>2.0</td>
<td>3.0</td>
<td>4.2</td>
<td>5.4</td>
<td>6.5</td>
<td>8.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2017</td>
<td>45-64</td>
<td>F</td>
<td>406</td>
<td>382 (94.1)</td>
<td>4.9</td>
<td>2.1</td>
<td>2.6</td>
<td>3.6</td>
<td>4.7</td>
<td>5.8</td>
<td>7.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>M</td>
<td>406</td>
<td>382 (94.1)</td>
<td>5.5</td>
<td>1.9</td>
<td>3.1</td>
<td>4.3</td>
<td>5.5</td>
<td>6.7</td>
<td>7.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCI</td>
<td>2019*</td>
<td>45-64</td>
<td>F</td>
<td>417</td>
<td>391 (93.8)</td>
<td>1.3</td>
<td>0.8</td>
<td>0.6</td>
<td>0.9</td>
<td>1.2</td>
<td>1.6</td>
<td>2.2</td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>M</td>
<td>417</td>
<td>391 (93.8)</td>
<td>5.2</td>
<td>2.0</td>
<td>3.2</td>
<td>3.9</td>
<td>4.9</td>
<td>6.1</td>
<td>7.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2018</td>
<td>45-64</td>
<td>F</td>
<td>405</td>
<td>382 (94.3)</td>
<td>1.4</td>
<td>1.1</td>
<td>0.6</td>
<td>0.9</td>
<td>1.2</td>
<td>1.6</td>
<td>2.3</td>
<td></td>
<td></td>
</tr>
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<td></td>
<td>M</td>
<td>405</td>
<td>382 (94.3)</td>
<td>5.1</td>
<td>1.8</td>
<td>3.2</td>
<td>4.0</td>
<td>5.0</td>
<td>6.0</td>
<td>7.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2017</td>
<td>45-64</td>
<td>F</td>
<td>406</td>
<td>382 (94.1)</td>
<td>1.4</td>
<td>0.8</td>
<td>0.6</td>
<td>0.9</td>
<td>1.2</td>
<td>1.7</td>
<td>2.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>M</td>
<td>406</td>
<td>382 (94.1)</td>
<td>5.1</td>
<td>1.7</td>
<td>3.3</td>
<td>3.9</td>
<td>5.0</td>
<td>6.0</td>
<td>7.1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*For 2019, the average denominator size across plans was 565,906 individuals, with a standard deviation of 969,007 for females, and 525,656 individuals, with a standard deviation of 907,043 for males.*
### Table 2. HEDIS FSP Selected Indicator Performance—Medicare Plans

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Measurement Year</th>
<th>Age</th>
<th>Gender</th>
<th>Total Number of Plans (N)</th>
<th>Number of Plans Reporting (N (%))</th>
<th>Performance Rates (Procedures / 1,000 Member Years)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mean</td>
</tr>
<tr>
<td>Total Hip Replacement</td>
<td>2018</td>
<td>65-74</td>
<td>F</td>
<td>525</td>
<td>481 (91.6)</td>
<td>5.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>M</td>
<td>525</td>
<td>477 (90.9)</td>
<td>3.9</td>
</tr>
<tr>
<td></td>
<td>2017</td>
<td>65-74</td>
<td>F</td>
<td>505</td>
<td>459 (90.9)</td>
<td>5.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>M</td>
<td>505</td>
<td>454 (89.9)</td>
<td>3.6</td>
</tr>
</tbody>
</table>

*For 2018, the average denominator size across plans was 138,013 individuals with a standard deviation of 388,652 for females, and 109,304 individuals with a standard deviation of 296,609 for males.

### Table 3. HEDIS FSP Selected Indicator Performance—Medicaid Plans

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Measurement Year</th>
<th>Age</th>
<th>Gender</th>
<th>Total Number of Plans (N)</th>
<th>Number of Plans Reporting (N (%))</th>
<th>Performance Rates (Procedures / 1,000 Member Years)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Mean</td>
</tr>
<tr>
<td>Tonsillectomy</td>
<td>2019*</td>
<td>0-9</td>
<td>M+F</td>
<td>265</td>
<td>184 (69.4)</td>
<td>0.6</td>
</tr>
<tr>
<td></td>
<td>2018</td>
<td>0-9</td>
<td>M+F</td>
<td>256</td>
<td>183 (71.5)</td>
<td>0.6</td>
</tr>
<tr>
<td></td>
<td>2017</td>
<td>0-9</td>
<td>M+F</td>
<td>275</td>
<td>187 (68.0)</td>
<td>0.7</td>
</tr>
</tbody>
</table>

*For 2019 the average denominator across plans was 829,811 individuals, with a standard deviation of 900,469.
Proposed Changes to Existing Measure for HEDIS® Measurement Year (MY) 2023:
Adult Immunization Status (AIS-E)

Proposed Measure Retirements for HEDIS MY 2023:
Flu Vaccinations for Adults Ages 18–64 (FVA)
Flu Vaccinations for Adults Ages 65 and Older (FVO)
Pneumococcal Vaccination Status for Older Adults (PNU)

NCQA seeks public comments on proposed changes to the Adult Immunization Status (AIS-E) measure and proposed retirement of three immunization measures reported using the CAHPS® Health Plan Survey method.

Proposed Changes to Adult Immunization Status

The AIS-E measure assesses the percentage of adults who are up to date on recommended routine vaccinations, with separate indicators for influenza; tetanus and diphtheria (Td) or tetanus, diphtheria, and acellular pertussis (Tdap); zoster; and pneumococcal vaccinations. AIS-E is specified for commercial and Medicaid members 18–64 years of age and Medicare members ages 65 and older. The measure is specified for the HEDIS Electronic Clinical Data Systems (ECDS) reporting standard and captures receipt of vaccinations using data from electronic sources including administrative claims, immunization registries and EHRs.

Proposed measure updates were supported by our expert panels and are described below.

| Pneumococcal indicator | The Advisory Committee on Immunization Practices released new pneumococcal vaccination guidelines in early 2022 that recommend two new conjugate vaccines: the 20-valent (PCV20) and 15-valent (PCV15). Both include additional serotypes and provide better coverage against pneumococcal disease when compared to the existing 13-valent conjugate (PCV13) and polysaccharide (PPSV23) vaccines. ACIP also recommends a simplified vaccination schedule for younger adults with underlying conditions vs. older adults, and includes guidance on administering PCV20 or PCV15 to adults who have previously been vaccinated (Table 1). |

Table 1. ACIP Pneumococcal Vaccine Recommendations, January 2022

<table>
<thead>
<tr>
<th>When to Vaccinate</th>
<th>Pneumococcal Vaccination History</th>
<th>Vaccines to Administer</th>
</tr>
</thead>
</table>
| Adults age 19-64 with certain chronic and immunocompromising conditions and adults 65 and older | No or unknown vaccination history | • PCV20, or  
• PCV15 followed by PPSV23 |
| Previously received PPSV23 only |  | • Follow with PCV20 or PCV15 |
| Previously received PCV13 |  | • Follow with previously recommended PPSV23 |

1 HEDIS® is a registered trademark of the National Committee for Quality Assurance.
2 CAHPS® is a registered trademark of the Agency for Healthcare Research and Quality (AHRQ).
NCQA proposes to update the pneumococcal vaccination indicator to align with these updated recommendations, including the following changes (Table 2):

- Assess vaccination of all adults 65 and older, including those with/without underlying conditions. The measure would not include younger adults because it may not be feasible to identify underlying conditions (e.g., smoking status).
- Revise the numerator time frame to count receipt of vaccines between 18 years and the end of the measurement period because members with certain conditions may be vaccinated at younger ages.
- For the numerator, count receipt of PCV20, PCV15, PCV13 or PPSV23, given that some adults are not recommended to be re-vaccinated with the new vaccines.

<table>
<thead>
<tr>
<th>Current AIS-E Pneumococcal Indicator</th>
<th>Proposed AIS-E Pneumococcal Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adults 65+ who had the following between age 60 and the end of measurement period: PPSV23.</td>
<td>Adults 65+ who had any of the following between age 18 and end of measurement period: PCV20, PCV15, PCV13 or PPSV23.</td>
</tr>
<tr>
<td>• Includes adults with chronic medical conditions.</td>
<td>• Includes adults with chronic medical conditions.</td>
</tr>
<tr>
<td>• Excludes adults with immunocompromising conditions.</td>
<td>• Excludes adults with immunocompromising conditions.</td>
</tr>
</tbody>
</table>

**Table 2. Proposed Updates to AIS-E Pneumococcal Indicator**

**Age range**

To address concerns that commercial and Medicaid plans report the measure only for younger adults and Medicare plans report only for older adults, we propose to specify that all three product lines report the measure for all adults, in accordance with guidelines. In addition, we propose adding age stratifications to assess measure performance among members younger than 65, 65 and older and all ages combined. Specifically, all product lines would report the following rates:

- **Influenza indicator:** 18–64, 65 and older, total rate.
- **Td/Tdap indicator:** 18–64, 65 and older, total rate.
- **Zoster indicator:** 50–64, 65 and older, total rate.
- **Pneumococcal indicator:** 65 and older.

**Proposed Retirement of CAHPS Immunization Measures**

NCQA also seeks comments on the proposed retirement of the following measures reported using the CAHPS Health Plan Survey method:

- Flu Vaccinations for Adults Ages 18–64 (FVA).
- Flu Vaccinations for Adults Ages 65 and Older (FVO).
- Pneumococcal Vaccination Status for Older Adults (PNU).

AIS-E will be publicly reported in MY 2022, which presents an opportunity to streamline the adult immunization measures in HEDIS. Stakeholders have suggested retiring the three CAHPS immunization measures, which rely on patient recall of vaccination receipt, and focusing on AIS-E, which provides specific clinical information about vaccination. In addition, expansion of the age range for AIS-E will ensure that vaccination status is captured across all age groups represented in the CAHPS measures.

Supporting documents include the current measure specifications, evidence workup and performance data.

NCQA acknowledges the contributions of the Geriatric, Technical and Adult Immunization Measurement Advisory Panels.
**Flu Vaccinations for Adults Ages 18–64 (FVA)**

**SUMMARY OF CHANGES TO HEDIS MY 2023**

- Retire measure.

**Description**

The percentage of commercial and Medicaid members 18–64 years of age who received a flu vaccination between July 1 of the measurement year and the date when the CAHPS 5.1H survey was completed.

**Eligible Population**

<table>
<thead>
<tr>
<th>Product line</th>
<th>Commercial, Medicaid (report each product line separately).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ages</td>
<td>18–64 years as of July 1 of the measurement year.</td>
</tr>
</tbody>
</table>
| Continuous enrollment | *Commercial*: The measurement year.  
                             *Medicaid*: The last 6 months of the measurement year. |
| Allowable gap | No more than one gap in enrollment of up to 45 days during the continuous enrollment period. To determine continuous enrollment for a Medicaid beneficiary for whom enrollment is verified monthly, the member may not have more than a 1-month gap in coverage (a member whose coverage lapses for 2 months [60 days] is not considered continuously enrolled). |
| Anchor date  | December 31 of the measurement year.                     |
| Current enrollment | Currently enrolled at the time the survey is completed. |

**Protocol and Survey Instrument**

Collected annually as part of the CAHPS Health Plan Survey 5.1H, Adult Version. Refer to *HEDIS Volume 3: Specifications for Survey Measures* for the CAHPS questionnaires and data collection protocols.

**Flu Vaccinations for Adults Ages 18–64 Eligibility Flag**

The health plan assigns a Flu Vaccinations for Adults Ages 18–64 Eligibility Flag for each member in the CAHPS 5.1H Adult Survey sample frame data file. The Flu Vaccinations for Adults Ages 18–64 Eligibility Flag identifies the population eligible for the Flu Vaccinations for Adults Ages 18–64 measure. NCQA calculates the results using responses from respondents with a flag of “1 = Eligible.” The use of an eligibility flag protects member confidentiality (using the date of birth could result in a breach of confidentiality).
**Flu Vaccinations for Adults Ages 18–64 Eligibility Flag**

1 = **Eligible** (the member was born on or between July 2, 1957, and July 1, 2004)

2 = **Ineligible** (the member was born before July 2, 1957, or after July 1, 2004)

---

### Questions Included in the Measure

**Table FVA: Flu Vaccinations for Adults Ages 18–64**

<table>
<thead>
<tr>
<th>Commercial</th>
<th>Medicaid</th>
<th>Question</th>
<th>Response Choices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q34</td>
<td>Q31</td>
<td>Have you had either a flu shot or flu spray in the nose since July 1, YYYY?</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Don’t know</td>
</tr>
</tbody>
</table>

---

### Calculation of Flu Vaccinations for Adults Ages 18–64

**Denominator**

The number of members with a Flu Vaccinations for Adults Ages 18–64 Eligibility Flag of “Eligible” who responded “Yes” or “No” to the question “Have you had either a flu shot or flu spray in the nose since July 1, YYYY?”

**Numerator**

The number of members in the denominator who responded “Yes” to the question “Have you had either a flu shot or flu spray in the nose since July 1, YYYY?”

**Small denominator threshold**

Health plans must achieve a denominator of at least 100 responses to obtain a reportable result. If the denominator is less than 100, NCQA assigns a measure result of NA.

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¹YYYY = the measurement year (2022 for the survey fielded in 2023).
Flu Vaccinations for Adults Ages 65 and Older (FVO)

**SUMMARY OF CHANGES TO HEDIS MY 2023**

- Retire measure.

**Description**

The percentage of Medicare members 65 years of age and older who received a flu vaccination between July 1 of the measurement year and the date when the Medicare CAHPS survey was completed.

**Eligible Population**

<table>
<thead>
<tr>
<th>Product line</th>
<th>Medicare.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ages</td>
<td>65 years and older as of January 1 of the measurement year.</td>
</tr>
<tr>
<td>Continuous enrollment</td>
<td>Six months prior to the sample draw in January.</td>
</tr>
<tr>
<td>Allowable gap</td>
<td>None.</td>
</tr>
<tr>
<td>Current enrollment</td>
<td>Currently enrolled at the time the survey is completed.</td>
</tr>
</tbody>
</table>

**Protocol and Survey Instrument**

Medicare Collected by CMS using the Medicare CAHPS Survey.

To learn more about the MA and Prescription Drug Plan (PDP) CAHPS surveys, including background information, policy updates, survey administration protocols and procedures, training opportunities and participating in the survey, visit the MA and PDP CAHPS website at [www.MA-PDPCAHPS.org](http://www.MA-PDPCAHPS.org).

**Questions Included in the Measure**

*Table FVO: Flu Vaccinations for Adults Ages 65 and Older*

<table>
<thead>
<tr>
<th>Question</th>
<th>Response Choices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have you had a flu shot since July 1, YYYY?¹</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Don’t know</td>
</tr>
</tbody>
</table>

¹YYYY = the measurement year (2022 for the survey fielded in 2023).
Calculation of Flu Vaccinations for Adults Ages 65 and Older

**Denominator**
The number of members who responded “Yes” or “No” to the question “Have you had a flu shot since July 1, YYYY?”

**Numerator**
The number of members in the denominator who responded “Yes” to the question “Have you had a flu shot since July 1, YYYY?”
Pneumococcal Vaccination Status for Older Adults (PNU)

SUMMARY OF CHANGES TO HEDIS MY 2023

- Retire measure.

Description

The percentage of Medicare members 65 years of age and older who have ever received one or more pneumococcal vaccinations.

Eligible Population

<table>
<thead>
<tr>
<th>Product line</th>
<th>Medicare.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ages</td>
<td>65 years and older as of January 1 of the measurement year.</td>
</tr>
<tr>
<td>Continuous enrollment</td>
<td>Six months prior to the sample draw in January.</td>
</tr>
<tr>
<td>Allowable gap</td>
<td>None.</td>
</tr>
<tr>
<td>Current enrollment</td>
<td>Currently enrolled at the time the survey is completed.</td>
</tr>
</tbody>
</table>

Protocol and Survey Instrument

Medicare

Collected by CMS using the Medicare CAHPS Survey.

To learn more about the MA and PDP CAHPS surveys, including background information, policy updates, survey administration protocols and procedures, training opportunities and participating in the survey, visit the MA and PDP CAHPS website at www.MA-PDPCAHPS.org.

Questions Included in the Measure

Table PNU: Pneumococcal Vaccination Status for Older Adults

<table>
<thead>
<tr>
<th>Question</th>
<th>Response Choices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have you ever had one or more pneumonia shots? Two shots are usually given in a person’s lifetime and these are different from a flu shot. It is also called the pneumococcal vaccine.</td>
<td>Yes, No, Don’t know</td>
</tr>
</tbody>
</table>

Calculation of Pneumococcal Vaccination Status for Older Adults

Denominator

The number of members who responded “Yes” or “No” to the question “Have you ever had one or more pneumonia shots? Two shots are usually given in a person’s lifetime and these are different from the flu shot. It is also called the pneumococcal vaccine.”
Numerator  The number of members in the denominator who responded “Yes” to the question “Have you ever had one or more pneumonia shots? Two shots are usually given in a person's lifetime and these are different from a flu shot. It is also called the pneumococcal vaccine.”
Proposed Changes to Existing Measures for HEDIS® Measurement Year (MY) 2023: Expansion of Race and Ethnicity Stratification In Select HEDIS Measures

NCQA seeks comments on the proposed expansion of the race and ethnicity stratification to select HEDIS measures in MY 2023. NCQA’s goal is to advance health equity by leveraging HEDIS to hold health plans accountable for disparities in care among their patient populations. This includes bringing transparency to where gaps exist (or do not exist) and highlighting plans that successfully invest in strategies to reduce disparities in care and outcomes.

NCQA introduced the race and ethnicity stratification to 5 HEDIS measures in MY 2022 (Table 1). Based on feedback from expert panels and external stakeholders, the NCQA team developed a list of candidate measures to which to expand the stratification in MY 2023 (Table 2). NCQA aims to add the stratification to at least 5 more measures this year.

NCQA seeks general feedback on the proposal above and on the following:

1. Measures listed as candidates for stratification in MY 2023. Measures listed in Table 2 were excluded from consideration if they were risk-adjusted, in first-year status, slated for retirement or known to have small denominators. Measures were prioritized for inclusion if they represented a high-priority population for disparities (including those identified in prior public comment and stakeholder feedback), covered multiple product lines and were digital measures that relied on electronic clinical data.

2. Thoughts on additional measures that should be prioritized for future stratification.

Supporting documents include a draft measure specification, evidence workup and HEDIS General Guideline 33. For additional background information, refer to NCQA’s issue brief, Health Equity and Social Determinants of Health in HEDIS: Data for Measurement, which can be downloaded for free from NCQA’s website here.

NCQA acknowledges the contributions of the Health Equity Expert and Care Coordination Work Groups, and the Geriatric, Technical, Behavioral Health and Adult Immunization Measurement Advisory Panels.

---

1 HEDIS® is a registered trademark of the National Committee for Quality Assurance (NCQA).
Table 1. Measures Stratified by Race/Ethnicity in MY 2022.

<table>
<thead>
<tr>
<th>Domain</th>
<th>Measure</th>
<th>Product Lines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effectiveness of Care</td>
<td>Colorectal Cancer Screening (COL, COL-E)</td>
<td>Commercial, Medicare</td>
</tr>
<tr>
<td></td>
<td>Controlling High Blood Pressure (CBP)</td>
<td>Commercial, Medicaid, Medicare</td>
</tr>
<tr>
<td></td>
<td>Hemoglobin A1c Control for Patients With Diabetes (HBD)</td>
<td>Commercial, Medicaid, Medicare</td>
</tr>
<tr>
<td>Utilization</td>
<td>Child and Adolescent Well Care Visits (WCV)</td>
<td>Commercial, Medicaid</td>
</tr>
<tr>
<td>Access and Availability of Care</td>
<td>Prenatal and Postpartum Care (PPC)</td>
<td>Commercial, Medicaid</td>
</tr>
</tbody>
</table>

Table 2. Race/Ethnicity Stratification (RES) Candidate Measures for MY 2023

<table>
<thead>
<tr>
<th>Domain</th>
<th>Measure</th>
<th>Product</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavioral Health</td>
<td>Follow-Up After Emergency Department Visits for Substance Use Disorder (FUA)</td>
<td>Commercial, Medicaid, Medicare</td>
</tr>
<tr>
<td></td>
<td>Pharmacotherapy for Opioid Use Disorder (POD)</td>
<td>Commercial, Medicaid, Medicare</td>
</tr>
<tr>
<td></td>
<td>Depression Screening and Follow-Up for Adolescents and Adults (DSF-E)</td>
<td>Commercial, Medicaid, Medicare</td>
</tr>
<tr>
<td></td>
<td>Utilization of the PHQ-9 to Monitor Depression Symptoms for Adolescents and Adults (DMS-E)</td>
<td>Commercial, Medicaid, Medicare</td>
</tr>
<tr>
<td></td>
<td>Prenatal Depression Screening and Follow-Up (PND-E)</td>
<td>Commercial, Medicaid</td>
</tr>
<tr>
<td></td>
<td>Postpartum Depression Screening and Follow-Up (PDS-E)</td>
<td>Commercial, Medicaid</td>
</tr>
<tr>
<td>Prevention &amp; Screening</td>
<td>Breast Cancer Screening (BCS-E)</td>
<td>Commercial, Medicaid, Medicare</td>
</tr>
<tr>
<td></td>
<td>Adult Immunization Status (AIS-E)</td>
<td>Commercial, Medicaid, Medicare</td>
</tr>
<tr>
<td></td>
<td>Immunizations for Adolescents (IMA, IMA-E)</td>
<td>Commercial, Medicaid</td>
</tr>
<tr>
<td></td>
<td>Prenatal Immunization Status (PRS-E)</td>
<td>Commercial, Medicaid</td>
</tr>
<tr>
<td>Utilization</td>
<td>Well-Child Visits in the First 30 Months of Life (W30)</td>
<td>Commercial, Medicaid</td>
</tr>
<tr>
<td>Access and Availability of Care</td>
<td>Initiation and Engagement of Substance Use Disorder Treatment (IET)</td>
<td>Commercial, Medicaid, Medicare</td>
</tr>
<tr>
<td>Respiratory</td>
<td>Asthma Medication Ratio (AMR)</td>
<td>Commercial, Medicaid</td>
</tr>
<tr>
<td>Care Coordination</td>
<td>Follow-Up After Emergency Department Visit for People With Multiple High-Risk Chronic Conditions (FMC)</td>
<td>Medicare</td>
</tr>
</tbody>
</table>

2Measure abbreviations that include “-E” indicate that the measure is reported using Electronic Clinical Data Systems (ECDS). Some measures are only reported using ECDS, while others may also (or only) rely on traditional measure reporting methods. NCQA included measures that use ECDS, with the intention of capitalizing on the expansive information available in electronic clinical datasets used for patient care and quality improvement.
Follow-Up After Emergency Department Visit for Substance Use (FUA)*

*Adapted from an NCQA measure with financial support from the Office of the Assistant Secretary for Planning and Evaluation (ASPE) under Prime Contract No. HHSP23320100019WI/HHSP23337001T, in which NCQA was a subcontractor to Mathematica. Additional financial support was provided by the Substance Abuse and Mental Health Services Administration (SAMHSA).

SUMMARY OF CHANGES TO HEDIS MY 2023

- Added instructions to report rates stratified by race and ethnicity for each product line.

Description

The percentage of emergency department (ED) visits among members age 13 years and older with a principal diagnosis of substance use disorder (SUD), or any diagnosis of drug overdose, for which there was follow-up. Two rates are reported:

1. The percentage of ED visits for which the member received follow-up within 30 days of the ED visit (31 total days).
2. The percentage of ED visits for which the member received follow-up within 7 days of the ED visit (8 total days).

Eligible Population

<table>
<thead>
<tr>
<th>Product lines</th>
<th>Commercial, Medicaid, Medicare (report each product line separately).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stratifications</td>
<td>For each product line, report the following stratifications by race and total and by ethnicity and total:</td>
</tr>
<tr>
<td></td>
<td>• Race:</td>
</tr>
<tr>
<td></td>
<td>– White.</td>
</tr>
<tr>
<td></td>
<td>– Black or African American.</td>
</tr>
<tr>
<td></td>
<td>– American Indian or Alaska Native.</td>
</tr>
<tr>
<td></td>
<td>– Asian.</td>
</tr>
<tr>
<td></td>
<td>– Native Hawaiian or Other Pacific Islander.</td>
</tr>
<tr>
<td></td>
<td>– Some Other Race.</td>
</tr>
<tr>
<td></td>
<td>– Two or More Races.</td>
</tr>
<tr>
<td></td>
<td>– Asked but No Answer.</td>
</tr>
<tr>
<td></td>
<td>– Unknown.</td>
</tr>
<tr>
<td></td>
<td>– Total.</td>
</tr>
<tr>
<td></td>
<td>• Ethnicity:</td>
</tr>
<tr>
<td></td>
<td>– Hispanic or Latino.</td>
</tr>
<tr>
<td></td>
<td>– Not Hispanic or Latino.</td>
</tr>
<tr>
<td></td>
<td>– Asked but No Answer.</td>
</tr>
<tr>
<td></td>
<td>– Unknown.</td>
</tr>
<tr>
<td></td>
<td>– Total.</td>
</tr>
</tbody>
</table>

Note: Stratifications are mutually exclusive and the sum of all categories in each stratification is the total population.
<table>
<thead>
<tr>
<th><strong>Ages</strong></th>
<th>13 years and older as of the ED visit. Report two age stratifications and a total rate:</th>
</tr>
</thead>
<tbody>
<tr>
<td>13–17 years.</td>
<td></td>
</tr>
<tr>
<td>18 and older.</td>
<td></td>
</tr>
<tr>
<td>Total.</td>
<td></td>
</tr>
</tbody>
</table>

The total is the sum of the age stratifications.

<table>
<thead>
<tr>
<th><strong>Continuous enrollment</strong></th>
<th>The date of the ED visit through 30 days after the ED visit (31 total days).</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Allowable gap</strong></td>
<td>None.</td>
</tr>
<tr>
<td><strong>Anchor date</strong></td>
<td>None.</td>
</tr>
</tbody>
</table>

| **Benefit** | Medical, chemical dependency and pharmacy. |

*Note:* Members with detoxification-only chemical dependency benefits do not meet these criteria.

| **Event/diagnosis** | An ED visit (ED Value Set) with a principal diagnosis of SUD (AOD Abuse and Dependence Value Set) or any diagnosis of drug overdose (Unintentional Drug Overdose Value Set) on or between January 1 and December 1 of the measurement year, where the member was 13 years or older on the date of the visit. |

The denominator for this measure is based on ED visits, not on members. If a member has more than one ED visit, identify all eligible ED visits between January 1 and December 1 of the measurement year and do not include more than one visit per 31-day period, as described below.

| **Multiple visits in a 31-day period** | If a member has more than one ED visit in a 31-day period, include only the first eligible ED visit. For example, if a member has an ED visit on January 1, include the January 1 visit and do not include ED visits that occur on or between January 2 and January 31; then, if applicable, include the next ED visit that occurs on or after February 1. Identify visits chronologically, including only one per 31-day period. |

*Note:* Removal of multiple visits in a 31-day period is based on eligible visits. Assess each ED visit for exclusions before removing multiple visits in a 31-day period.

<table>
<thead>
<tr>
<th><strong>ED visits followed by inpatient admission</strong></th>
<th>Exclude ED visits that result in an inpatient stay. Exclude ED visits followed by an admission to an acute or nonacute inpatient care setting on the date of the ED visit or within the 30 days after the ED visit, regardless of the principal diagnosis for the admission. To identify admissions to an acute or nonacute inpatient care setting:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identify all acute and nonacute inpatient stays (Inpatient Stay Value Set).</td>
<td></td>
</tr>
<tr>
<td>2. Identify the admission date for the stay.</td>
<td></td>
</tr>
</tbody>
</table>

These events are excluded from the measure because admission to an acute or nonacute inpatient setting may prevent an outpatient follow-up visit from taking place.

| **Required exclusion** | Members in hospice or using hospice services any time during the measurement year. Refer to General Guideline 17: Members in Hospice. |
## Administrative Specification

### Denominator

The eligible population.

### Numerators

#### 30-day follow-up

A follow-up visit or a pharmacotherapy dispensing event within 30 days after the ED visit (31 total days). Include visits and pharmacotherapy events that occur on the date of the ED visit.

#### 7-day follow-up

A follow-up visit or a pharmacotherapy dispensing event within 7 days after the ED visit (8 total days). Include visits and pharmacotherapy events that occur on the date of the ED visit.

For both indicators, any of the following meet criteria for a follow-up visit:

- An outpatient visit (Visit Setting Unspecified Value Set) with (Outpatient POS Value Set) with any diagnosis of SUD (AOD Abuse and Dependence Value Set), substance use (Substance Induced Disorders Value Set) or drug overdose (Unintentional Drug Overdose Value Set).
- An outpatient visit (Visit Setting Unspecified Value Set) with (Outpatient POS Value Set) with a mental health provider.
- An outpatient visit (BH Outpatient Value Set) with any diagnosis of SUD (AOD Abuse and Dependence Value Set), substance use (Substance Induced Disorders Value Set) or drug overdose (Unintentional Drug Overdose Value Set).
- An outpatient visit (BH Outpatient Value Set) with a mental health provider.
- An intensive outpatient encounter or partial hospitalization (Visit Setting Unspecified Value Set) with (Partial Hospitalization POS Value Set) with any diagnosis of SUD (AOD Abuse and Dependence Value Set), substance use (Substance Induced Disorders Value Set) or drug overdose (Unintentional Drug Overdose Value Set).
- An intensive outpatient encounter or partial hospitalization (Visit Setting Unspecified Value Set) with (Partial Hospitalization POS Value Set) with a mental health provider.
- An intensive outpatient encounter or partial hospitalization (Partial Hospitalization or Intensive Outpatient Value Set) with any diagnosis of SUD (AOD Abuse and Dependence Value Set), substance use (Substance Induced Disorders Value Set) or drug overdose (Unintentional Drug Overdose Value Set).
- An intensive outpatient encounter or partial hospitalization (Partial Hospitalization or Intensive Outpatient Value Set) with a mental health provider.
• A non-residential substance abuse treatment facility visit (Visit Setting Unspecified Value Set) with (Non-residential Substance Abuse Treatment Facility POS Value Set) with any diagnosis of SUD (AOD Abuse and Dependence Value Set), substance use (Substance Induced Disorders Value Set) or drug overdose (Unintentional Drug Overdose Value Set).

• A non-residential substance abuse treatment facility visit (Visit Setting Unspecified Value Set) with (Non-residential Substance Abuse Treatment Facility POS Value Set) with a mental health provider.

• A community mental health center visit (Visit Setting Unspecified Value Set) with (Community Mental Health Center POS Value Set) with any diagnosis of SUD (AOD Abuse and Dependence Value Set), substance use (Substance Induced Disorders Value Set) or drug overdose (Unintentional Drug Overdose Value Set).

• A community mental health center visit (Visit Setting Unspecified Value Set) with (Community Mental Health Center POS Value Set) with a mental health provider.

• An observation visit (Observation Value Set) with any diagnosis of SUD (AOD Abuse and Dependence Value Set), substance use (Substance Induced Disorders Value Set) or drug overdose (Unintentional Drug Overdose Value Set).

• An observation visit (Observation Value Set) with a mental health provider.

• A peer support service (Peer Support Services Value Set) with any diagnosis of SUD (AOD Abuse and Dependence Value Set), substance use (Substance Induced Disorders Value Set) or drug overdose (Unintentional Drug Overdose Value Set).

• An opioid treatment service that bills monthly or weekly (OUD Weekly Non Drug Service Value Set; OUD Monthly Office Based Treatment Value Set) with any diagnosis of SUD (AOD Abuse and Dependence Value Set), substance use (Substance Induced Disorders Value Set) or drug overdose (Unintentional Drug Overdose Value Set).

• A telehealth visit (Visit Setting Unspecified Value Set) with (Telehealth POS Value Set) with any diagnosis of SUD (AOD Abuse and Dependence Value Set), substance use (Substance Induced Disorders Value Set) or drug overdose (Unintentional Drug Overdose Value Set).

• A telehealth visit (Visit Setting Unspecified Value Set) with (Telehealth POS Value Set) with a mental health provider.

• A telephone visit (Telephone Visits Value Set), with any diagnosis of SUD (AOD Abuse and Dependence Value Set), substance use (Substance Induced Disorders Value Set) or drug overdose (Unintentional Drug Overdose Value Set).

• A telephone visit (Telephone Visits Value Set), with a mental health provider.

• An e-visit or virtual check-in (Online Assessments Value Set), with any diagnosis of SUD (AOD Abuse and Dependence Value Set), substance use (Substance Induced Disorders Value Set) or drug overdose (Unintentional Drug Overdose Value Set).
- An e-visit or virtual check-in (Online Assessments Value Set), with a mental health provider.
- A substance use disorder service (Substance Use Disorder Services Value Set).
- A behavioral health screening or assessment for SUD or mental health disorders (Behavioral Health Assessment Value Set).
- A substance use service (Substance Use Services Value Set).
- A pharmacotherapy dispensing event (Alcohol Use Disorder Treatment Medications List; Opioid Use Disorder Treatment Medications List) or medication treatment event (AOD Medication Treatment Value Set; OUD Weekly Drug Treatment Service Value Set).

**Note**

- Organizations may have different methods for billing intensive outpatient visits and partial hospitalizations. Some methods may be comparable to outpatient billing, with separate claims for each date of service; others may be comparable to inpatient billing, with an admission date, a discharge date and units of service. Organizations whose billing methods are comparable to inpatient billing may count each unit of service as an individual visit. The unit of service must have occurred during the required period for the rate (within 30 days after the ED visit or within 7 days after the ED visit).
- Refer to Appendix 3 for the definition of mental health provider. Organizations must develop their own methods to identify mental health providers. Methods are subject to review by the HEDIS auditor.

**Data Elements for Reporting**

Organizations that submit HEDIS data to NCQA must provide the following data elements.

<table>
<thead>
<tr>
<th>Metric</th>
<th>Age</th>
<th>Data Element</th>
<th>Reporting Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>FollowUp30Day</td>
<td>13-17</td>
<td>Benefit</td>
<td>Metadata</td>
</tr>
<tr>
<td>FollowUp7Day</td>
<td>18+</td>
<td>EligiblePopulation</td>
<td>For each Stratification, repeat per Metric</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>ExclusionAdminRequired</td>
<td>For each Stratification, repeat per Metric</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NumeratorByAdmin</td>
<td>For each Metric and Stratification</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NumeratorBySupplemental</td>
<td>For each Metric and Stratification</td>
</tr>
<tr>
<td>Rate</td>
<td></td>
<td>(Percent)</td>
<td></td>
</tr>
</tbody>
</table>
### Table FUA-B-1/2/3: Data Elements for Follow-Up After Emergency Department Visit for Substance Use: Stratifications by Race

<table>
<thead>
<tr>
<th>Metric</th>
<th>Race</th>
<th>Source</th>
<th>Data Element</th>
<th>Reporting Instructions</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>FollowUp30Day</td>
<td>White</td>
<td>Direct</td>
<td>EligiblePopulation</td>
<td>For each Stratification, repeat per Metric</td>
<td>✓</td>
</tr>
<tr>
<td>FollowUp7Day</td>
<td>BlackOrAfricanAmerican</td>
<td>Indirect</td>
<td>Numerator</td>
<td>For each Metric and Stratification</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>AmericanIndianorAlaskaNative</td>
<td>Total</td>
<td>Rate (Percent)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Asian</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>NativeHawaiianorOtherPacificIslander</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SomeOtherRace</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TwoOrMoreRaces</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>AskedButNoAnswer*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unknown**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*AskedButNoAnswer is only reported for Source = 'Direct.'

**Unknown is only reported for Source = 'Indirect.'

### Table FUA-C-1/2/3: Data Elements for Follow-Up After Emergency Department Visit for Substance Use: Stratifications by Ethnicity

<table>
<thead>
<tr>
<th>Metric</th>
<th>Ethnicity</th>
<th>Source</th>
<th>Data Element</th>
<th>Reporting Instructions</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>FollowUp30Day</td>
<td>HispanicOrLatino</td>
<td>Direct</td>
<td>EligiblePopulation</td>
<td>For each Stratification, repeat per Metric</td>
<td>✓</td>
</tr>
<tr>
<td>FollowUp7Day</td>
<td>NotHispanicOrLatino</td>
<td>Indirect</td>
<td>Numerator</td>
<td>For each Metric and Stratification</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>Rate (Percent)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unknown**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Race and Ethnicity Stratifications
Candidate Measures for HEDIS®† MY 2023
Measure Workup

The following table provides a high-level overview of each measure on the candidate list, including the measure description, product lines, HEDIS domain, evidence on disparities and unique considerations for stratification and status of Electronic Clinical Data System reporting, where applicable.

NCQA recommends stratification at the highest reported measure rate (i.e., not stratifying within existing stratifications or sub-rates), with one potential exception: Asthma Medication Ratio (AMR), which is noted and discussed below.

1. Breast Cancer Screening (BCS-E²)

**Description:** The percentage of women 50–74 years of age who had a mammogram to screen for breast cancer.

**Product Lines:** Commercial, Medicaid, Medicare

**Domain:** Prevention and Screening

**Programs Used In:** Exchange Quality Rating System (QRS), Medicaid Core Set, Medicare Shared Savings Program, Merit-Based Incentive Payment System (MIPS) Program, Physician Compare.

**ECDS Reporting Status:** Originally specified as a traditional measure; has also been specified for optional ECDS reporting. Will be in ECDS-reporting-only status beginning measurement year (MY) 2023.

**Evidence on Disparities:** Between 2010 and 2014, breast cancer mortality for African American women was 41% higher than for White women (Richardson et al 2016). One potential contributing factor is access to mammography screening services (Rust et al., 2015). One study found that mammography use in 2006 was 65% among White women and 59% among Black women (CDC, 2012). Additionally, African American women are more likely than White women to have longer intervals between screening mammograms, which may lead to an increase in later-stage cancer diagnoses (CDC, 2012).

2. Well-Child Visits in the First 30 Months of Life (W30)

**Description:** The percentage of members who had all recommended well-child visits with a PCP during the last 15 months.

**Product Lines:** Commercial, Medicaid

**Domain:** Utilization

**Programs Used In:** Exchange QRS, Medicaid Core Set, HEDIS Quality Measure Rating System (QMRS)

**ECDS Reporting Status:** NA; this measure is only offered for traditional reporting.

**Evidence on Disparities:** In 2014, White children had a higher probability of attending an annual well-child visit than Hispanic children (85.3% vs. 78.9%) (AHRQ, 2016). A study on children born between 2007 and 2009 examined the frequency of well-child visits in infants in relation to their demographics. This study found that White children were more likely to have the recommended number of well-child visits compared to other groups (White: 68.1%; Black: 46.1%; Asian: 66.3%; Hawaiian/Pacific

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1 HEDIS is a registered trademark of the National Committee for Quality Assurance.
2 Measure abbreviations that include “-E” indicate that the measure is reported using Electronic Clinical Data Systems (ECDS). Some measures are only reported using ECDS, while others may also (or only) rely on traditional measure reporting methods. NCQA included measures that use ECDS, with the intention of capitalizing on the expansive information available in electronic clinical datasets used for patient care and quality improvement.

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Islander: 53.4%; Other: 52.4%). When the authors controlled for insurance status, Black children only received 42% of well-child visits, compared to White children, who received 58% (Dabney et al., 2012).

### 3. Adult Immunization Status (AIS-E)

**Description:** The percentage of members 19 years of age and older who are up to date on recommended routine vaccines for influenza, tetanus and diphtheria (Td) or tetanus, diphtheria and acellular pertussis (Tdap), zoster and pneumococcal.

**Product Lines:** Commercial, Medicaid, Medicare

**Domain:** Prevention and Screening

**Programs Used In:** HEDIS QMRS

**ECDS Reporting Status:** Developed for ECDS reporting; will be publicly reported beginning MY 2022.

**Evidence on Disparities:** An analysis of trends in adult vaccination coverage from 2010–2019 found that vaccine uptake differed by race and ethnicity for influenza, pneumococcus, tetanus and zoster vaccinations (Kawai and Kawai, 2021). Another analysis of national vaccination coverage found that racial and ethnic differences in adult vaccinations persist for all vaccines (Lu, 2021). The authors note that coverage is consistently higher in White and Asian adults. For instance, in the 2017–2018 influenza season, 50.7% of Asian adults and 49.3% of White adults received an influenza vaccine, while 39% of Black adults and 37.5% of Hispanic adults received it (Lu, 2021). The same study also found that vaccine rates are generally lower among foreign-born persons.

### 4. Immunizations for Adolescents (IMA, IMA-E)

**Description:** The percentage of adolescents 13 years of age who had one dose of meningococcal vaccine, one tetanus, diphtheria toxoids and acellular pertussis (Tdap) vaccine, and have completed the human papillomavirus (HPV) vaccine series by their 13th birthday.

**Product Lines:** Commercial, Medicaid

**Domain:** Prevention and Screening

**Programs Used In:** Exchange QRS, HEDIS QMRS, Medicaid Core Set, MIPS

**ECDS Reporting Status:** Originally specified as a traditional measure; has also been specified for optional ECDS reporting. NCQA does not have a timeline to fully transition this measure to ECDS-only, so it will continue to be available for optional ECDS reporting for MY 2023.

**Evidence on Disparities:** Literature points to a number of racial and ethnic disparities in adolescent immunization rates. Rates for receiving at least one or two doses of the HPV vaccine are higher among non-Hispanic Black female adolescents (66.9%) than non-Hispanic White female adolescents (59.2%) (Reagan-Steiner, 2015). In addition, HPV and meningococcal immunization rates are higher among Hispanic and non-Hispanic Native American adolescents than non-Hispanic White and non-Hispanic Black adolescents.

### 5. Prenatal Immunization Status (PRS-E)

**Description:** The percentage of deliveries in the Measurement Period in which women had received influenza and tetanus, diphtheria toxoids and acellular pertussis (Tdap) vaccinations.

**Product Lines:** Commercial, Medicaid

**Domain:** Prevention and Screening

**Programs Used In:** HEDIS QMRS

**ECDS Reporting Status:** Developed for ECDS reporting; has been publicly reported since MY 2020.
Evidence on Disparities: Prenatal immunization rates vary based on patient race, ethnicity, age, insurance status and adequacy of prenatal care. A CDC panel survey of women who were pregnant any time between October 2014 and January 2015 found that 39% of non-Hispanic Black women had received the influenza immunization after July 2014, compared with 52% of non-Hispanic White women (Ding et al., 2015). Pregnancy Risk Assessment Monitoring System survey data from the 2009–2010 influenza season revealed that influenza vaccination coverage among women with live births was 51% for non-Hispanic White women, compared with 30% for non-Hispanic Black women and 42% for Hispanic women (Ahluwalia et al., 2014). A study from 2011–2013 using administrative claims data and statewide immunization registry data of Medicaid-enrolled pregnant women in Michigan found that 8% of non-Hispanic Black women, 12% of Asian women and 7% of Arab women received the Tdap immunization during pregnancy, compared with 18% of non-Hispanic White women (Housey et al., 2014).

6. Initiation and Engagement of Substance Use Disorder Treatment (IET)

Description: The percentage of new substance use disorder (SUD) episodes that result in treatment initiation and engagement.

Product Lines: Commercial, Medicaid, Medicare

Domain: Access and Availability of Care

Programs Used In: Medicaid Core Set

ECDS Reporting Status: NA

Evidence on Disparities: In 2017 the rate of illicit drug use among persons 12 years of age or older differed by race and ethnicity. Non-Hispanic or non-Latino persons had higher rates of illicit drug use than Hispanic or Latino persons (19.3% vs. 17.5%) (SAMHSA, 2018). Among non-Hispanic or non-Latino persons, American Indian/Alaskan Natives had the highest rate of illicit drug use (29.3%) compared to Black persons (20.5%), White persons (19.7%), Native Hawaiian/Other Pacific Islander persons (12.7%) and Asian persons (9.5%) in the past year (SAMSHA, 2018).

CMS data show that in 2014, Asian or Pacific Islander patients and Hispanic patients with a new episode of SUD and who initiated treatment were less likely than White patients to have had two or more additional services within 30 days of the initiation visit (CMS, 2018). The same report notes that overall, 1.6% of Asian and Pacific Islander persons, 1.9% of Hispanic persons and 2.2% of White persons had two or more additional services for a new diagnosis of SUD after initiation of treatment. Conversely, Black persons (27.0%) were more likely than White persons (26.1%) to initiate treatment within 14 days of an SUD diagnosis, but were less likely than White persons (1.9% vs. 2.2%) to engage in treatment (two or more additional services with a diagnosis of SUD within 30 days of the initiation of treatment), according to 2014 findings (CMS, 2018).

7. Follow-Up After Emergency Department Visits for Substance Use Disorder (FUA)

Description: The percentage of emergency department (ED) visits among members aged 13 years and older with a principal diagnosis of substance use disorder (SUD), or any diagnosis of drug overdose, for which there was follow-up.

Product Lines: Commercial, Medicaid, Medicare

Domain: Behavioral Health

Programs Used In: Medicaid Core Set

ECDS Reporting Status: NA

Evidence on Disparities: Substance Abuse Mental Health Services Administration 2019 data indicate that across different racial and ethnic groups, past-year misuse of opioids among individuals 12 years of age and older was most common among individuals identifying with two or more races (5.2%).

NCQA recognizes that not all people who become pregnant or give birth identify as women or mothers. However, we use the term “women” in several places to avoid editing of cited data.
followed by American Indian or Alaskan Native (5.1%), White (3.8%), Black or African American (3.4%) and Hispanic or Latino (3.7%) (SAMHSA, 2020) people. Individuals identifying as Asian or Native Hawaiian/Other Pacific Islander reported the lowest past year misuse of opioids (1.6% and 2.8% respectively) (SAMHSA, 2020).

Research has also shown that despite having later age of first exposure to alcohol and drinking less alcohol, African American people, and African American women in particular, tend to be at higher risk of experiencing adverse outcomes attributed to alcohol use disorders than White people (Zapolski et al., 2014; Ransome et al., 2017; Williams et al., 2017).

A study examining the incidence of follow-up treatment following an ED discharge for non-fatal opioid overdose among commercially insured patients found that between 2011 and 2016, Black patients were half as likely to obtain follow-up than non-Hispanic White patients (Kilaru et al., 2020). The same study found that women and Hispanic patients were also less likely to obtain follow-up than non-Hispanic White patients.

8. Pharmacotherapy for Opioid Use Disorder (POD)

Description: The percentage of new opioid use disorder (OUD) pharmacotherapy events with OUD pharmacotherapy for 180 or more days among members 16 years of age and older with a diagnosis of OUD.

Product Lines: Commercial, Medicaid, Medicare

Domain: Behavioral Health

Programs Used In: None

ECDS Reporting Status: NA

Evidence on Disparities: Although use of pharmacotherapy in the treatment of OUD is low across all populations, several groups are particularly vulnerable to negative opioid-related outcomes due to lack of treatment, including pregnant and postpartum women; people with psychiatric comorbidities; individuals with a history of interaction with law enforcement or who have recently been released from incarceration; and the elderly (NASEM, 2018). Additionally, adolescents, uninsured individuals, African American individuals and other minority populations (native Hawaiian, Pacific Islander, Asian American) have been found to have lower odds of using OUD treatment (Wu, 2016).

9. Asthma Medication Ratio (AMR)

Description: The percentage of members 5–64 years of age who were identified as having persistent asthma and had a ratio of controller medications to total asthma medications of 0.50 or greater during the measurement year.

Product Lines: Commercial, Medicaid

Domain: Respiratory

Programs Used In: HEDIS QMRS, Exchange QRS, Medicaid Core Set

ECDS Reporting Status: NA

Evidence on Disparities: A 2018 literature review summarized factors playing a role in development, treatment and prevention of childhood asthma, including racial and ethnic disparities in management of childhood asthma (Naja, et al., 2018). The authors found that racial and ethnic minorities exhibit a disproportionate rate of asthma morbidity in the U.S., with the highest rate of asthma found in the Puerto Rican American population (13.1%), followed by the African American population (9.5%), the White population (7.2%) and the Mexican American population (3.6%). The review also notes considerable asthma care disparities for African American youths compared to White youths, with 4 times more ED visits, 3 times the hospitalization rate and 7.6 times the death rate.
A 2018 study of asthma in children used longitudinal analyses to show that African American race and Hispanic/Latino ethnicity were both significantly associated with worse asthma outcomes (Washington et al., 2018).

A 2020 study on the impact of the COVID-19 pandemic on asthma control found that differences in socioeconomic status and the effects of institutional racism influenced disparities for patients with asthma (Baptist et al., 2020).

Unique consideration: Although this measure captures members 5–64 years of age, literature highlights considerable disparities for people under 18; therefore, NCQA seeks GMAP feedback on whether we should stratify this measure at the highest level, if chosen (aligning with other measures on the candidate list), or by age band, in order to highlight disparities across age groups.

10. Follow-Up After Emergency Department Visit for People With Multiple High-Risk Chronic Conditions (FMC)

Description: The percentage of emergency department (ED) visits for members 18 years of age and older who have multiple high-risk chronic conditions who had a follow-up service within 7 days of the ED visit.

Product Lines: Medicare

Domain: Care Coordination

Programs Used In: Forthcoming in the Medicare Stars Program

ECDS Reporting Status: NA

Evidence on Disparities: There is little research on potential disparities in follow-up after ED transitions, but research has evaluated potential disparities regarding ED visits and transitions more broadly. One study found that older adults, non-Hispanic Black patients, lower income patients and patients with multiple chronic conditions were more likely to visit the ED in a 12-month period (Garcia et al., 2010). Another study found that non-Hispanic White Medicare beneficiaries were more likely than Hispanic and Asian Medicare beneficiaries to have an inpatient readmission after an ED discharge (Gabayan et al., 2015).

11. Depression Screening and Follow-Up for Adolescents and Adults (DSF-E)

Description: The percentage of members 12 years of age and older who were screened for clinical depression using a standardized instrument and, if screened positive, received follow-up care.

Product Lines: Commercial, Medicaid, Medicare

Domain: Behavioral Health

Programs Used In: HEDIS QMRS, Medicaid Promoting Interoperability Program for Eligible Professionals, MIPS, Physician Compare

ECDS Reporting Status: Originally developed for ECDS reporting; will be publicly reported beginning MY 2023.

Evidence on Disparities: A 2008 study found that minority individuals may present depressive symptoms differently than non-Latino White individuals, which causes difficulty for providers who are trained to recognize classic symptoms and screen appropriately. The same study discovered that among those with a diagnosed depressive disorder, 36.3% of Latino patients and 49.1% of African American patients accessed mental health treatment, compared to 59.8% of non-Latino White patients (Algeria et al., 2008).
12. Utilization of the PHQ-9 to Monitor Depression Symptoms for Adolescents and Adults (DMS-E)

**Description:** The percentage of members 12 years of age and older with a diagnosis of major depression or dysthymia, who had an outpatient encounter with a PHQ-9 score present in their record in the same assessment period as the encounter.

**Product Lines:** Commercial, Medicaid, Medicare

**Domain:** Behavioral Health

**Programs Used In:** Physician Compare

**ECDS Reporting Status:** Originally developed for ECDS reporting; will be publicly reported beginning MY 2023.

**Evidence on Disparities:** Using data from a large national survey, researchers found that few Americans with recent major depression receive guideline-concordant therapies, but the lowest rates of use are found among the Mexican American and Black populations (Gonzalez et al., 2010). Minority children are one-third to one-half less likely to receive mental health care as White children, despite a similar overall prevalence of disease (Holm-Hansen, 2006). Moreover, of those who do receive care, minority patients are less likely than White patients to receive complete services, and are more likely to receive treatment that is inappropriate, fragmented or inadequate (Algeria et al., 2008; Cummings et al., 2019).

13. Prenatal Depression Screening and Follow-Up (PND-E)

**Description:** The percentage of deliveries in which members were screened for clinical depression while pregnant and, if screened positive, received follow-up care.

**Product Lines:** Commercial, Medicaid

**Domain:** Behavioral Health

**Programs Used In:** HEDIS QMRS

**ECDS Reporting Status:** Originally developed for ECDS reporting; will be publicly reported beginning MY 2022.

**Evidence on Disparities:** Even when depression care is provided for pregnant women, variation in depression care management has been documented, particularly among minority women. For instance, 3.1% of visits for non-Hispanic White women during pregnancy included a code for antidepressant use, while just 1.0% of all visits for non-White women included antidepressant codes (Yamamoto, 2015). In one study, African American and Latina women were less likely than White women to receive follow-up treatment or continued care for perinatal depression (Kozhimannil, 2011). Additionally, research highlights that the risk of untreated perinatal depression is higher among low-income ethnic minority mothers due to various cultural barriers, such as opting for self-help practices (e.g., “talking it out” with family and community members) in lieu of formal mental health care (Abrams, 2009).

14. Postpartum Depression Screening and Follow-Up (PDS-E)

**Description:** The percentage of deliveries in which members were screened for clinical depression during the postpartum period, and if screened positive, received follow-up care.

- **Depression Screening.** The percentage of deliveries in which members were screened for clinical depression using a standardized instrument during the postpartum period.

- **Follow-Up on Positive Screen.** The percentage of deliveries in which members received follow-up care within 30 days of a positive depression screen finding.

**Product Lines:** Commercial, Medicaid

**Domain:** Behavioral Health
Programs Used In: HEDIS QMRS

**ECDS Reporting Status:** Originally developed only for ECDS reporting; will be publicly reported beginning MY 2022.

**Evidence on Disparities:** A study assessing postpartum depression screening rates found that African American, Asian and otherwise non-White (Native American, Native Hawaiian, multiracial) women were less likely to be screened than White women. The study notes that 5.5% of White women did not return for a postpartum visit, compared to 22.7% of Native American women, 11.5% of Black women and 8.8% of multiracial women (Sidebottom et al., 2021). In one study of racial and ethnic differences in mental health care utilization associated with postpartum depression, 9% of White women initiated mental health care within 6 months of delivery, while 5% of Latina women and 4% of Black women did. Additionally, in women who initiated antidepressant treatment postpartum, Black and Latina women were less likely to refill a prescription than their White counterparts (Kozhimannil, 2011).

**References**


33. Race and Ethnicity Stratification

The following measures instruct the organization to categorize Medicare, Medicaid and commercial members by race and ethnicity stratification (RES):

- Colorectal Cancer Screening.
- Controlling High Blood Pressure.
- Hemoglobin A1c Control for Patients With Diabetes.
- Prenatal and Postpartum Care.
- Child and Adolescent Well-Care Visits.

**Reporting categories**

NCQA requires reporting race and ethnicity as defined by the Office of Management and Budget (OMB) Standards for Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity.¹ ² ³

Race and ethnicity values must be rolled up into the OMB categories specified in this guideline. If more detailed race or ethnicity information is collected, these data must be aggregated and reported in the OMB categories provided. For health plans using the CMS classification scheme for race and ethnicity, refer to Table RES-A-1/2/3 for a crosswalk to HEDIS reporting.

Report member race and ethnicity separately. If a combined race/ethnicity category question is used to collect data, data must be disaggregated and race and ethnicity categories must be reported separately. When using the combined race/ethnicity data format for collection, refer to Table RES-B-1/2/3 for a crosswalk of reporting categories.

**Determining race reporting category**

For each product line, report members in only one of the nine race stratifications listed below and the total.

- **White:** Identification with one or more nationalities or ethnic groups originating in Europe, the Middle East or North Africa. Examples of these groups include, but are not limited to, German, Irish, English, Italian, Lebanese, Egyptian, Polish, French, Iranian, Slavic, Cajun and Chaldean.

- **Black or African American:** Identification with one or more nationalities or ethnic groups originating in any of the black racial groups of Africa. Examples of these groups include, but are not limited to, African American, Jamaican, Haitian, Nigerian, Ethiopian and Somali. The category also includes groups such as Ghanaian, South African, Barbadian, Kenyan, Liberian and Bahamian.

- **American Indian and Alaska Native:** Identification with any of the original peoples of North and South America (including Central America) and who maintain tribal affiliation or community attachment. It includes people who identify as “American Indian” or “Alaska Native” and includes groups such as Navajo Nation, Blackfeet Tribe, Mayan, Aztec, Native Village of Barrow Inupiat Traditional Government and Nome Eskimo Community.

- **Asian:** Identification with one or more nationalities or ethnic groups originating in the Far East, Southeast Asia or the Indian subcontinent. Examples of these groups include, but are not limited to, Chinese, Filipino, Asian Indian, Vietnamese, Korean and

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Japanese. The category also includes groups such as Pakistani, Cambodian, Hmong, Thai, Bengali or Mien.

*Native Hawaiian and Other Pacific Islander*: Identification with one or more nationalities or ethnic groups originating in Hawaii, Guam, Samoa, or other Pacific Islands. Examples of these groups include, but are not limited to, Native Hawaiian, Samoan, Chamorro, Tongan, Fijian and Marshallese. The category also includes groups such as Palauan, Tahitian, Chuukese, Pohnpeian, Saipanese or Yapese.

*Some Other Race*: People whose race information has been collected but does not fit into any of the other seven race categories. This category includes people who may be Mulatto, Creole and Mestizo or another race not specified in the Census “Race” categories.

*Two or More Races*: People with any combination of races, including “Some Other Race.”

*Asked but No Answer*: People who the organization asked to identify race but who declined to provide a response.

*Unknown*: People for whom the organization did not obtain race information and for whom the organization did not receive a declined response (i.e., “Asked but No Answer”).

*Total*: Total of all categories above.

**Note:** The “Asked but No Answer” category is not reported using indirect data.

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**Determining ethnicity reporting category**

For each product line, report members in only one of the four ethnicity stratifications listed below and the total.

*Hispanic/Latino*: Identification with one or more nationalities or ethnic groups originating in Mexico, Puerto Rico, Cuba, Central and South America and other Spanish cultures. Examples of these groups include, but are not limited to, Mexican or Mexican American, Puerto Rican, Cuban, Salvadoran, Dominican and Colombian. “Hispanic, Latino or Spanish origin” also includes groups such as Guatemalan, Honduran, Spaniard, Ecuadorian, Peruvian or Venezuelan.

*Not Hispanic/Latino*: People not of Hispanic, Latino or Spanish culture or origin.

*Asked but No Answer*: People who the organization asked to identify ethnicity but who declined to provide a response.

*Unknown*: People for whom the organization did not obtain ethnicity information and for whom the organization did not receive a declined response (i.e., “Asked but No Answer”).

*Total*: Total of all categories above.

**Note:** The “Asked but No Answer” category is not reported using indirect data.

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**Data source**

Approved data sources include data collected directly from members or obtained through indirect methods. NCQA strongly encourages plans to report directly collected data when available, and emphasizes the importance of improving completeness of directly collected member race and ethnicity data. For each measure with RES, plans will report each race and ethnicity value by data source. Report both the number of members in the eligible population and the number of members in the numerator from direct and indirect data sources. IDSS will calculate the total number of members in the eligible population and numerator (combining both direct and indirect data sources).
**Direct data** Data collected directly from members method reflects members’ self-identification and is the preferred data source.

Directly collected data includes any source for which the member self-identified race or ethnicity. This includes data collected directly from members by the health plan, as well as third-party data collected directly from members by another entity (e.g., the state or CMS). Direct sources may include, but are not limited to:

- Surveys.
- Health risk assessments.
- Disease management registries.
- Case management systems.
- EHRs.
- CMS/state databases.
  - Enrollment information furnished by enrolling entities (e.g., state Medicaid agencies, employers).

**Indirect data** Plans may choose to report race and ethnicity data supplemented by indirect methods. Indirect assignment of race and ethnicity values include using an alternative data source, such as nationally representative data obtained from databases like the American Community survey, to assign a race or ethnicity value to a member based on their primary location of residence. Some commonly used indirect methods combine geographic data with additional imputation methods such as surname analysis.

NCQA reiterates that directly collected race and ethnicity is highly preferred to indirectly assigned race and ethnicity. NCQA emphasizes the following for plans that choose to use indirect methods to report the RES:

- When applying indirect methods that involve assignment of race or ethnicity based on geographic data and member’s location of residence, the smallest geographic unit possible is preferred. For example, geographic assignment at the census block level is likely to be more accurate than assignment using census tract or ZIP code-level data.

- Indirect data sources and methods should be evaluated for reliability and validity, and selection of a source and method should be prioritized based on demonstrated validity and reliability for the population to which it will be applied (e.g., age group, geography, product line).

- Indirect methods of race and ethnicity assignment are to be used for population-level reporting and analysis, but are not appropriate for member-level intervention.
**Sampling**

For measures collected using the Hybrid Method with RES, follow the guidelines for sampling outlined in Guidelines for Calculation and Sampling *Guidelines for the Hybrid Method*. RES are applied to the eligible population and denominator after hybrid sampling.

**Reporting**

Reporting of RES follows the parameters for denominator size outlined in *General Guideline 10: Reporting*.

**Table RES-A-1/2/3: CMS Categories Crosswalked to HEDIS/OMB Race and Ethnicity**

<table>
<thead>
<tr>
<th>CMS Category</th>
<th>HEDIS/OMB Race</th>
<th>HEDIS/OMB Ethnicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>White</td>
<td>Unknown</td>
</tr>
<tr>
<td>Black</td>
<td>Black</td>
<td>Unknown</td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td>American Indian/Alaska Native</td>
<td>Unknown</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>Asian</td>
<td>Unknown</td>
</tr>
<tr>
<td>Hispanic</td>
<td>Unknown</td>
<td>Hispanic/Latino</td>
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<tr>
<td>Other</td>
<td>Some Other Race</td>
<td>Unknown</td>
</tr>
<tr>
<td>Unknown</td>
<td>Unknown</td>
<td>Unknown</td>
</tr>
<tr>
<td>(No equivalent category)</td>
<td>Native Hawaiian and Other Pacific Islander</td>
<td>Unknown</td>
</tr>
<tr>
<td>(No equivalent category)</td>
<td>Two or more races</td>
<td>Unknown</td>
</tr>
</tbody>
</table>

**Table RES-B-1/2/3: Combined Categories Crosswalked to HEDIS/OMB Race and Ethnicity**

<table>
<thead>
<tr>
<th>Race/Ethnicity Combined Category</th>
<th>HEDIS/OMB Race</th>
<th>HEDIS/OMB Ethnicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>White</td>
<td>Not Hispanic/Latino</td>
</tr>
<tr>
<td>Black</td>
<td>Black</td>
<td>Not Hispanic/Latino</td>
</tr>
<tr>
<td>American Indian/Alaska Native</td>
<td>American Indian/Alaska Native</td>
<td>Not Hispanic/Latino</td>
</tr>
<tr>
<td>Asian</td>
<td>Asian</td>
<td>Not Hispanic/Latino</td>
</tr>
<tr>
<td>Native Hawaiian and Other Pacific Islander</td>
<td>Native Hawaiian and Other Pacific Islander</td>
<td>Not Hispanic/Latino</td>
</tr>
<tr>
<td>Hispanic/Latino/White</td>
<td>White</td>
<td>Hispanic/Latino</td>
</tr>
<tr>
<td>Hispanic/Latino/Black</td>
<td>Black</td>
<td>Hispanic/Latino</td>
</tr>
<tr>
<td>Other</td>
<td>Some Other Race</td>
<td>Unknown</td>
</tr>
<tr>
<td>Multiple races marked</td>
<td>Two or more races</td>
<td>Unknown</td>
</tr>
<tr>
<td>Unknown</td>
<td>Unknown</td>
<td>Unknown</td>
</tr>
</tbody>
</table>
Note

Race is a social construct, not a biological one; stratifying HEDIS measures by race and ethnicity is intended to further understanding of racial and ethnic disparities in care and to hold health plans accountable to address such disparities, with the goal of achieving equitable health care and outcomes. Data are not to be used to further bias in health care or suggest that race and ethnicity are biological determinants of health.

When multiple sources of data are used for race and ethnicity, there may be disagreements in the data collected. When this happens, data sources should be prioritized based on evaluation of anticipated accuracy. This includes use of specific categories over nonspecific categories, most frequent or consistently reported category and selection of data with clear provenance (source, method of collection) over data without clear provenance.

Race and ethnicity data may come from different categories of data source (direct, indirect). In such cases, use the data source that applies to the data element (race, ethnicity). If the same data element is received from two different data sources, prioritize data sources based on the note above.
NCQA announces the following changes for HEDIS. NCQA does not seek public comment for these changes.

Release of Volume 2: Technical Specifications

The HEDIS Measurement Year 2022 Volume 2 Technical Update memo will be released on March 31.
NCQA will release the HEDIS Measurement Year 2023 Volume 2: Technical Specifications for Health Plans on August 1.

Measure Changes for HEDIS MY 2022

Colorectal Cancer Screening (COL and COL-E)
- Revised the age range to 45–75 years of age from 50–75 years.
- Added age stratification (45–49 years; 50–75 years).
- Added the Medicaid product line (Medicaid plans report using the Administrative Method only).
These changes will be released as part of the MY 2022 Volume 2 Technical Update.

**Rationale:** Changes align the measure with updated guideline recommendations for screening from the U.S. Preventive Services Task Force and other national organizations.

Deprescribing of Benzodiazepines in Older Adults (DBO)
- DBO will not be collected for MY 2022 reporting.

**Rationale:** NCQA proposes to update the measure logic to account for members achieving 100% discontinuation without an intermediate taper of ≥20% in the numerator. Because the proposed measure updates will likely result in significant impact on measure performance, DBO will not be collected for MY 2022 reporting.

The measure specifications, value sets and medication lists will be removed from HEDIS MY 2022 Volume 2 Technical Specifications for Health Plans in the MY 2022 Technical Update. If approved, DBO will be a first-year measure in MY 2023.

Measure Changes for HEDIS MY 2023

Optional exclusions are now required exclusions.
**Rationale:** For consistency across measure programs and with digital measures, all optional exclusions will become required exclusions beginning in MY 2023.

Enrollment by Product Line (ENP)
- Reported by all submissions.

**Rationale:** With the retirement of Enrollment by State (EBS) and Total Membership (TLM), NCQA will now use the Enrollment by Product Line (ENP) to assess enrollment and conduct validations in IDSS. ENP is required to be reported with all HEDIS submissions beginning in MY 2023.

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1HEDIS® is a registered trademark of the National Committee for Quality Assurance (NCQA).