## Calculation of HEDIS/CAHPS Survey Results

Specific Guidelines for Calculation of HEDIS/CAHPS Survey Results

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| Calculation of results | To be used for HEDIS reporting and NCQA Accreditation, HEDIS/CAHPS survey results must be calculated by NCQA. NCQA centrally calculates all HEDIS/CAHPS survey results using data submitted by certified survey vendors. This approach is designed to ensure the comparability of results across health plans. |
| Question number references | Unless otherwise stated, the calculations in this section refer to question numbers in the CAHPS Health Plan Survey 5.0H, Adult Version, for the commercial product line. To calculate results for other versions of the survey, refer to Table S-11 and substitute the corresponding questions appropriately. |
| Complete and valid surveys | A questionnaire must have the final disposition code of “Complete and Valid Survey” for inclusion in survey results calculations. |
| Appropriate responses | Each specific question must be appropriately answered for inclusion in HEDIS/ CAHPS survey results calculations. An **appropriately answered question** is one that complies with survey and skip-pattern instructions. |
| Inappropriate responses | Inappropriately answered questions are excluded from results calculation. Examples of inappropriately answered questions are:   * *Unanswered questions.* The member skips a question that should have been answered. * *Questions where the member selected more than one response choice* (except for questions that permit more than one response). The member selects both “Yes” and “No” to Q3. * *Questions the member should have skipped based on the response to a gate item.* A **gate item** is a question that instructs members to skip subsequent questions based on a particular response. If a member answers “No” to Q3 and provides an answer to Q4, the response to Q4 is not included in HEDIS/CAHPS survey result calculations (members who respond “No” to Q3 are instructed to *skip* Q4). * *Questions in a skip pattern when the member does not answer the gate item or provides an invalid answer to a gate item.* If a member does not answer Q3 (leaves Q3 blank) and provides an answer to Q4, the response to Q4 is not included in HEDIS/CAHPS survey result calculations. |
| Small denominator threshold | Health plans must achieve a denominator of at least 100 responses to obtain a reportable result. If the denominator for a particular survey result calculation is less than 100, NCQA assigns a measure result of *NA*.   * The denominator for a rating question is equal to the total number of responses to that question. * The denominator for a composite is the average number of responses across all questions in the composite. (Only questions that are included in the calculation of HEDIS survey results are used to determine the denominator size.) * The denominators for question summary rates are identified in Table S-10.   **Note:** For the Advising Smokers and Tobacco Users to Quit rate for the Medicare product line, health plans must achieve a denominator of at least 30 responses to obtain a reportable result. |

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| Rolling average (composites) | For the CAHPS Health Plan Survey 5.0H, Adult Version, results for the *Plan Information on Costs* composite are calculated using rolling average methodology. The rolling average for a composite result (e.g., composite mean, composite mean variance, composite global proportion, composite global proportion variance) is calculated using member-level responses from the measurement year (Year 2) and the year prior to the measurement year (Year 1). Results are calculated and assigned contingent on denominator size as follows:   * *A health plan with two consecutive years of reported data.* The denominator is the average number of responses across all questions used to calculate the composite results. * If the rolling average denominator is less than 100, NCQA assigns a measure result of *NA.* * If the rolling average denominator is 100 or more, NCQA calculates a result. * *A health plan that did not report results in the prior year but reports results in the current year.* The denominator is calculated using data from the current year. * If the denominator is less than 100, NCQA assigns a measure result of *NA.* * If the denominator is 100 or more, NCQA calculates a rate; therefore, health plans that did not report results the prior year can elect to oversample during the current year in order to obtain a reportable rate for a rolling average measure. * *A health plan that does not report results for the current year.* NCQA assigns a measure result of *NR.* |
| Rolling average (question summary rates) | The question summary rates for questions in the Plan Information on Costs composite are also calculated using rolling average methodology. A rolling average numerator is calculated by summing the Year 1 and Year 2 numerators; a rolling average denominator is calculated by summing the Year 1 and Year 2 denominators.   * If the denominator is less than 100, NCQA assigns a measure result of *NA.* * If the denominator is 100 or more, NCQA calculates a rate (provided the health plan has two consecutive years of reported data *or* reported data during the current year). * If the health plan did not report results for the current year NCQA assigns a measure result of *NR.* |
| Changes in submission entity | Calculating rolling averages requires significant programming complexity, which means that under rare circumstances, it is impractical to calculate results for a rolling average composite or question summary rates. If a health plan changes how it reports HEDIS/CAHPS results from one year to the next, the change may affect its ability to report rolling average composite results.  For example, if a health plan reported HMO and POS products separately in the prior year and reports HMO/POS combined in the current year, the prior year’s data are not used in the rolling average composite or question summary rate calculations. Because of the complexity associated with combining Year 1 member-level data and the infrequency with which this situation occurs, it is impractical to set up HEDIS/ CAHPS programs to calculate results under these circumstances. If a health plan reported HMO/POS combined in the prior year and reports HMO and POS separately in the current year, the reporting entity is considered changed and prior year data are not used for rolling average calculations. |

Rating Results

Ratings use a 0–10 scale to assess overall experience with four concepts:

1. Rating of All Health Care.
2. Rating of Personal Doctor.
3. Rating of Specialist Seen Most Often.
4. Rating of Health Plan.

Rating means and variances are calculated for these four rating questions. The *Health Promotion and Education* and *Coordination of Care* questions use the same calculations and are included in this section.

Table S-6 displays questions, response choices and corresponding values used to calculate rating means.

### Table S-6: Rating Mean Score Values

|  |  |  |  |
| --- | --- | --- | --- |
|  | Rating of All Health Care | Response Choices | Score Values |
| **Q13** | Using any number from 0 to 10, where 0 is the worst health care possible and 10 is the best health care possible, what number would you use to rate all your health care in the last 12 months? | 0 Worst health care possible  1  2  3  4  5  6  7  8  9  10 Best health care possible | 1  1  1  1  1  1  1  2  2  3  3 |
|  | Rating of Personal Doctor | Response Choices | Score Values |
| **Q23** | Using any number from 0 to 10, where 0 is the worst personal doctor possible and 10 is the best personal doctor possible, what number would you use to rate your personal doctor? | 0 Worst personal doctor possible  1  2  3  4  5  6  7  8  9  10 Best personal doctor possible | 1 1  1  1  1  1  1  2  2  3  3 |

### Table S-6: Rating Mean Score Values *(continued)*

|  |  |  |  |
| --- | --- | --- | --- |
|  | Rating of Specialist Seen Most Often | Response Choices | Score Values |
| **Q27** | We want to know your rating of the specialist you saw most often in the last 12 months. Using any number from 0 to 10, where 0 is the worst specialist possible and 10 is the best specialist possible, what number would you use to rate that specialist? | 0 Worst specialist possible  1  2  3  4  5  6  7  8  9  10 Best specialist possible | 1  1  1  1  1  1  1  2  2  3  3 |
|  | Rating of Health Plan | Response Choices | Score Values |
| **Q42** | Using any number from 0 to 10, where 0 is the worst health plan possible and 10 is the best health plan possible, what number would you use to rate your health plan? | 0 Worst health plan possible  1  2  3  4  5  6  7  8  9  10 Best health plan possible | 1  1  1  1  1  1  1  2  2  3  3 |
|  | Health Promotion and Education | Response Choices | Score Values |
| **Q8** | In the last 12 months, did you and a doctor or other health provider talk about specific things you could do to prevent illness? | Yes  No | 3  1 |
|  | Coordination of Care | Response Choices | Score Values |
| **Q22** | In the last 12 months, how often did your personal doctor seem informed and up-to-date about the care you got from these doctors or other health providers? | Never  Sometimes  Usually  Always | 1  1  2  3 |

Rating Mean and Variance

Rating means and variances are calculated for each rating question after recoding individual member responses to a score value of 1, 2 or 3. NCQA uses rating means to compare health plans to each other or to compare health plans to aggregate data (statewide or national mean scores). Rating means are also the basis for NCQA Accreditation scoring. To calculate the rating means and variances perform the following steps for each rating question:

|  |  |
| --- | --- |
| *Step 1* | Use Table S-6 to convert the member responses to the 1–3 score value. |
| *Step 2* | Calculate the mean of all responses. This is the Rating Mean. |
| *Step 3* | Calculate the unbiased variance. This is the Rating Mean Variance. |
|  | The formula is the standard unbiased variance formula, where *x* is the score value (1, 2 or 3) and *n* is the number of members who provided a valid response: |

Numeric Example: *Rating Mean and Variance*

Rating of All Health Care is calculated from responses to Q13 of the adult survey for the commercial product line. Suppose we have a health plan with 10 members and the following responses.

|  |  |
| --- | --- |
| **Member** | **Q13** |
| 1  2  3  4  5  6  7  8  9  10 | 8  8  7  10  9  3  7  8  —  10 |

|  |  |
| --- | --- |
| *Step 1* | Convert the responses to score values. |

|  |  |  |
| --- | --- | --- |
| **Member** | **Q13** | **Score Value** |
| 1  2  3  4  5  6  7  8  9  10 | 8  8  7  10  9  3  7  8  —  10 | 2  2  2  3  3  1  2  2  —  3 |

|  |  |
| --- | --- |
| *Step 2* | Calculate the mean of all member responses.  Rating Mean = (2 + 2 + 2 + 3 + 3 + 1 + 2 + 2 + 3) / 9 = **2.2222**  **Note:** Member 9 did not answer the question. Missing responses are not included in the rating mean calculation. |
| *Step 3* | Calculate the unbiased variance.  Rating Mean Variance = [(2 – 2.22)2 + (2 – 2.22)2 + (2 – 2.22)2 + (3 – 2.22)2 + (3 – 2.22)2 +  (1 – 2.22)2 + (2 – 2.22)2 + (2 – 2.22)2 + (3 – 2.22)2] / (9 – 1) = **0.4444** |

Rating Question Summary Rate and Rating Question Summary Rate Variance

Two question summary rates and two question summary rate variances are calculated for each rating question.

1. Question Summary Rate (8+9+10) and Question Summary Rate Variance (8+9+10) are calculated using Score Values (8+9+10).
2. Question Summary Rate (9+10) and Question Summary Rate Variance (9+10) are calculated using Score Values (9+10).

|  |  |
| --- | --- |
| *Step 1* | Use Table S-7 to convert the member responses from the 0–10 scale into the 0–1 score value. |
| *Step 2* | Calculate the mean of all responses. This is the Rating Question Summary Rate. |
| *Step 3* | Calculate the unbiased variance. This is the Rating Question Summary Rate Variance.  The formula is the standard unbiased variance formula, where *x* is the score value (0 or 1) and *n* is the number of responses: |

### Table S-7: Rating Question Summary Rate Score Values

|  |  |  |
| --- | --- | --- |
| Response Choices | Score Values (8+9+10) | Score Values (9+10) |
| 0 | 0 | 0 |
| 1 | 0 | 0 |
| 2 | 0 | 0 |
| 3 | 0 | 0 |
| 4 | 0 | 0 |
| 5 | 0 | 0 |
| 6 | 0 | 0 |
| 7 | 0 | 0 |
| 8 | 1 | 0 |
| 9 | 1 | 1 |
| 10 | 1 | 1 |

Numeric Example: *Rating Question Summary Rate (8+9+10) and Rating Question Summary Rate Variance (8+9+10)*

Rating of All Health Careis calculated from responses to Q13 of the adult survey for the commercial product line. Suppose we have a health plan with 10 members and the following responses:

|  |  |
| --- | --- |
| **Member** | **Q13** |
| 1  2  3  4  5  6  7  8  9  10 | 8  8  7  10  9  3  7  8  —  10 |

|  |  |
| --- | --- |
| *Step 1* | Convert the responses to score values. |

|  |  |  |
| --- | --- | --- |
| **Member** | **Q13** | **Score Value** |
| 1  2  3  4  5  6  7  8  9  10 | 8  8  7  10  9  3  7  8  —  10 | 1  1  0  1  1  0  0  1  —  1 |

|  |  |
| --- | --- |
| *Step 2* | Calculate the mean of all member responses.  Rating Question Summary Rate (8+9+10) = (1+1+0+1+1+0+0+1+1) / 9 = .6667 = **66.67%**  **Note:** Member 9 did not answer the question. Missing responses are not included in the calculation. |
| *Step 3* | Calculate the unbiased variance.  Rating Question Summary Rate Variance (8+9+10) = (1 – 0.6667)2 + (1 – 0.6667)2 +  (0 – 0.6667)2 + (1 – 0.6667)2 + (1 – 0.6667)2 + (0 – 0.6667)2 + (0 – 0.6667)2 + (1 – 0.6667)2  + (1 – 0.6667)2] / (9 – 1) = **0.25** |

Composite Results

Composite scores are used both to facilitate aggregation of information from multiple specific questions and to enhance the communication of this important information to consumers. Question topics and response choices enable use of the information at the question-specific level and at the composite level. HEDIS/ CAHPS composite means and global proportions are used to compare health plans to each other or to compare health plans to aggregate data (statewide or national mean scores). Composite means are also the basis for NCQA Accreditation scoring. Each composite contains questions with the same response choices. Table S-8 displays the composite questions, response choices and the corresponding score values used to calculate results.

### Table S-8: Composite Mean Score Values

|  |  |  |  |
| --- | --- | --- | --- |
|  | Getting Needed Care | Response Choices | Score Values |
| **Q14** | In the last 12 months, how often was it easy to get the care, tests, or treatment you needed? | Never  Sometimes  Usually  Always | 1  1  2  3 |
| **Q25** | In the last 12 months, how often did you get an appointment to see a specialist as soon as you needed? | Never  Sometimes  Usually  Always | 1  1  2  3 |
|  | Getting Care Quickly | Response Choices | Score Values |
| **Q4** | In the last 12 months, when you needed care right away, how often did you get care as soon as you needed? | Never  Sometimes  Usually  Always | 1  1  2  3 |
| **Q6** | In the last 12 months, how often did you get an appointment for a check-up or routine careat a doctor’s office or clinic as soon as you needed? | Never  Sometimes  Usually  Always | 1  1  2  3 |
|  | How Well Doctors Communicate | Response Choices | Score Values |
| **Q17** | In the last 12 months, how often did your personal doctor explain things in a way that was easy to understand? | Never  Sometimes  Usually  Always | 1  1  2  3 |
| **Q18** | In the last 12 months, how often did your personal doctor listen carefully to you? | Never  Sometimes  Usually  Always | 1  1  2  3 |
| **Q19** | In the last 12 months, how often did your personal doctor show respect for what you had to say? | Never  Sometimes  Usually  Always | 1  1  2  3 |
| **Q20** | In the last 12 months, how often did your personal doctor spend enough time with you? | Never  Sometimes  Usually  Always | 1  1  2  3 |

### Table S-8: Composite Mean Score Values *(continued)*

|  |  |  |  |
| --- | --- | --- | --- |
|  | Customer Service | Response Choices | Score Values |
| **Q35** | In the last 12 months, how often did your health plan’s customer service give you the information or help you needed? | Never  Sometimes  Usually  Always | 1  1  2  3 |
| **Q36** | In the last 12 months, how often did your health plan’s customer service staff treat you with courtesy and respect? | Never  Sometimes  Usually  Always | 1  1  2  3 |
|  | Claims Processing | Response Choices | Score Values |
| **Q40** | In the last 12 months, how often did your health plan handle your claims quickly? | Never  Sometimes  Usually  Always  Don’t Know | 1  1  2  3  Exclude |
| **Q41** | In the last 12 months, how often did your health plan handle your claims correctly? | Never  Sometimes  Usually  Always  Don’t Know | 1  1  2  3  Exclude |

**Note:** Members who select “Don’t Know” to Claims Processing questions are excluded from the Claims Processing composite calculation and are not included in the denominator calculation.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Shared Decision Making | Response Choices | Score Values |
| **Q10** | When you talked about starting or stopping a prescription medicine, how much did a doctor or other health provider talk about the reasons you might want to take a medicine? | Not at all  A little  Some  A lot | 1  1  2  3 |
| **Q11** | When you talked about starting or stopping a prescription medicine, how much did a doctor or other health provider talk about the reasons you might not want to take a medicine? | Not at all  A little  Some  A lot | 1  1  2  3 |
| **Q12** | When you talked about starting or stopping a prescription medicine, did a doctor or other health provider ask you what you thought was best for you? | Yes  No | 3  1 |
|  | Plan Information on Costs | Response Choices | Score Values |
| **Q31** | In the last 12 months, how often were you able to find out from your health plan how much you would have to pay for a health care service or equipment? | Never  Sometimes  Usually  Always | 1  1  2  3 |
| **Q33** | In the last 12 months, how often were you able to find out from your health plan how much you would have to pay for specific prescription medicines? | Never  Sometimes  Usually  Always | 1  1  2  3 |

**Note:** Results for Plan Information on Costs are calculated using rolling average methodology.

Composite Mean

|  |  |
| --- | --- |
| *Step 1* | Use Table S-8 to convert response choices to score values for each question in the composite. |
| *Step 2* | For each question calculate the mean , where *i* refers to question i. |
| *Step 3* | Calculate the mean of the question means. This is the Composite Mean. |

**Note:** Each question in a composite is weighted equally, regardless of how many members respond.

Numeric Example: *Composite Mean*

The composite Getting Care Quickly is a combination of two CAHPS 5.0H questions (Q4 and Q6), each with response choices: Never (N); Sometimes (S); Usually (U); Always (A). Suppose we have a health plan with 10 members and the following responses.

|  |  |  |
| --- | --- | --- |
| **Member** | **Q4** | **Q6** |
| 1  2  3  4  5  6  7  8  9  10 | N  S  S  U  A  N  S  S  U  A | A  U  S  S  U  U  S  —  U  A |

|  |  |
| --- | --- |
| *Step 1* | Convert the responses to score values. |

|  |  |  |
| --- | --- | --- |
| **Member** | **Q4** | **Q6** |
| 1  2  3  4  5  6  7  8  9  10 | 1  1  1  2  3  1  1  1  2  3 | 3  2  1  1  2  2  1  —  2  3 |

|  |  |
| --- | --- |
| *Step 2* | Calculate the mean for each question.  Q4 = 16/10 = 1.6 Q6 = 17/9 = 1.8888  **Note:** For Q6 there are only nine responses. Missing data are not assigned a value of 0. |
| *Step 3* | Calculate the mean of the means.  Composite Mean = (1.6 + 1.8888) / 2 = **1.7444** |

Composite Mean Variance

|  |  |
| --- | --- |
| *Step 1* | Use Table S-8 to convert response choices to score values for each question in the composite. |
| *Step 2* | Calculate the mean of each question. |
| *Step 3* | Subtract the question mean (step 2) from each value. |
| *Step 4* | Divide each value in step 3 by the total number of questions in the composite. |
| *Step 5* | Divide each value in step 4 by the total number of members responding to the question. |
| *Step 6* | For each respondent, sum the step 5 values across the set of questions. |
| *Step 7* | Square the step 6 values. |
| *Step 8* | Sum the step 7 values across all respondents from the plan. |
| *Step 9* | Multiply the step 8 values by the number of respondents (members who answered at least one question in the composite) in the composite and divide this number by the number of respondents minus 1. This is the Composite Mean Variance.  The formula for this equation is:    Let:  *i* = 1, …, *m* questions in a composite.  *j* = 1, …, *ni* members responding to question *i.*  *xij* = score of member *j* on question i (either 1, 2 or 3).  = average score for question *i.*  *N* = number of members responding to at least one question in the composite. |

**Note:** Each question in a composite is weighted equally, regardless of how many members respond.

Numeric Example: *Composite Mean Variance*

The composite Getting Care Quickly is a combination of two CAHPS 5.0H questions (Q4 and Q6), each with response choices: Never (N); Sometimes (S); Usually (U); Always (A). Suppose we have a health plan with 10 members and the following responses.

|  |  |  |
| --- | --- | --- |
| **Member** | **Q4** | **Q6** |
| 1  2  3  4  5  6  7  8  9  10 | N  S  S  U  A  N  S  S  U  A | A  U  S  S  U  U  S  —  U  A |

|  |  |
| --- | --- |
| *Step 1* | Convert the responses to score values. |

|  |  |  |
| --- | --- | --- |
| **Member** | **Q4** | **Q6** |
| 1  2  3  4  5  6  7  8  9  10 | 1  1  1  2  3  1  1  1  2  3 | 3  2  1  1  2  2  1  —  2  3 |

|  |  |
| --- | --- |
| *Step 2* | Calculate the mean for each question.  Q4 = 16/10 = 1.6 Q6 = 17/9 = 1.8888 |

**Note:** For Q6 there are only nine responses. Missing data are not assigned a value of 0.

|  |  |
| --- | --- |
| *Step 3* | Subtract the question mean from each value. |

|  |  |  |
| --- | --- | --- |
| **Member** | **Q4** | **Q6** |
| 1  2  3  4  5  6  7  8  9  10 | 1-1.6 = -0.6  -0.6  -0.6  0.4  1.4  -0.6  -0.6  -0.6  0.4  1.4 | 1.1111  0.1111  -0.8888  -0.8888  0.1111  0.1111  -0.8888  —  0.1111  1.1111 |

|  |  |
| --- | --- |
| *Step 4* | Divide each value in step 3 by the total number of questions in the composite. In this example, there are two questions in the composite. |

|  |  |  |
| --- | --- | --- |
| **Member** | **Q4** | **Q6** |
| 1  2  3  4  5  6  7  8  9  10 | -0.6/2 = -0.3  -0.3  -0.3  0.2  0.7  -0.3  -0.3  -0.3  0.2  0.7 | 0.5555  0.0555  -0.4444  -0.4444  0.0555  0.0555  -0.4444  —  0.0555  0.5555 |

|  |  |
| --- | --- |
| *Step 5* | Divide each value in step 4 by the total number of members responding to each question. In this example, for Q4 the total number is 10 and for Q6 the total number is 9. |

|  |  |  |
| --- | --- | --- |
| **Member** | **Q4** | **Q6** |
| 1  2  3  4  5  6  7  8  9  10 | -0.3/10 = -0.03  -0.03  -0.03  0.02  0.07  -0.03  -0.03  -0.03  0.02  0.07 | 0.0617  0.0061  -0.0493  -0.0493  0.0061  0.0061  -0.0493  —  0.0061  0.0617 |

|  |  |
| --- | --- |
| *Step 6* | Sum the step 5 values across the set of questions. |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Member** | **Q4** |  | **Q6** |  | **Sum** |
| 1  2  3  4  5  6  7  8  9  10 | -0.03  -0.03  -0.03  0.02  0.07  -0.03  -0.03  -0.03  0.02  0.07 | +  +  +  +  +  +  +  +  +  + | 0.0617  0.0061  -0.0493  -0.0493  0.0061  0.0061  -0.0493  —  0.0061  0.0617 | =  =  =  =  =  =  =  =  =  = | 0.03172839  -0.02382716  -0.07938271  -0.02938271  0.07617284  -0.02382716  -0.07938271  -0.03000000  0.02617284  0.13172839 |

|  |  |
| --- | --- |
| *Step 7* | Square the step 6 values. |

|  |  |
| --- | --- |
| **Member** |  |
| 1  2  3  4  5  6  7  8  9  10 | 0.03172839 \* 0.03172839 = 0.0010066  0.0005677  0.0063016  0.0008633  0.0058023  0.0005677  0.0063016  0.0009000  0.0006850  0.0173523 |

|  |  |
| --- | --- |
| *Step 8* | Sum the step 7 values across all respondents from the plan.  Sum = 0.0403484 |
| *Step 9* | Multiply the step 8 values by the number of respondents in the composite and divide this number by the number of respondents minus 1. In this example, the number of respondents is 10; therefore, the denominator is 9 (10 – 1).  Composite Mean Variance = 0.0403484\*10/9 = **0.0448315** |

Composite Global Proportion

|  |  |
| --- | --- |
| *Step 1* | For each question, count the number of members who selected each response choice.  For composites with response choices of “Never,” “Sometimes,” “Usually,” and “Always,” response choices of “Never” and “Sometimes” are combined. |
| *Step 2* | For each question, determine the proportion selecting each response choice.  For the Shared Decision Making composite, pair the “Yes” responses to Q12 with “A lot” responses from Q10/Q11 and pair “No” responses to Q12 with “Not at all” Responses from Q10/Q11. |

|  |  |
| --- | --- |
| *Step 3* | Calculate the average proportion responding to each choice across all the questions in the composite; these are the Composite Global Proportions.  For composites with response choices of “Never,” “Sometimes,” “Usually” and “Always” an additional global proportion is calculated by summing the “Always” and “Usually” proportions. |

**Note:** Each question in a composite is weighted equally, regardless of how many members respond.

Numeric Examples: *Composite Global Proportion*

*Example 1:* Getting Care Quickly

The composite Getting Care Quickly is a combination of two CAHPS 5.0H questions (Q4 and Q6), each with response choices: Never (N); Sometimes (S); Usually (U); Always (A). Suppose we have a health plan with 10 members and the following responses.

|  |  |  |
| --- | --- | --- |
| **Member** | **Q4** | **Q6** |
| 1  2  3  4  5  6  7  8  9  10 | N  S  S  U  A  N  S  S  U  A | A  U  S  S  U  U  S  —  U  A |

|  |  |
| --- | --- |
| *Step 1* | Count the number of respondents who selected each response choice. |

|  |  |  |
| --- | --- | --- |
|  | **Q4** | **Q6** |
| Never or Sometimes  Usually  Always | 6  2  2 | 3  4  2 |

|  |  |
| --- | --- |
| *Step 2* | Calculate the proportion of members who selected each response choice.  **Note:** For Q6 there are only 9 responses. Missing data are not assigned a value of 0. |

|  |  |  |
| --- | --- | --- |
|  | **Q4** | **Q6** |
| Never or Sometimes  Usually  Always | 0.60  0.20  0.20 | 0.33  0.44  0.22 |

|  |  |
| --- | --- |
| *Step 3* | Calculate the average proportion responding to each category. |

|  |  |
| --- | --- |
| Never or Sometimes  Usually  Always  Always + Usually | (0.60 + 0.33)/2 = 0.4650 = 46.50%  (0.20 + 0.44)/2 = 0.3200 = 32.00%  (0.20 + 0.22)/2 = 0.2100 = 21.00%  32.00% + 21.00% = 53.00% |

On average, **46.5 percent** of respondents said “Never” or “Sometimes,” **32 percent** said “Usually,”   
**21 percent** said “Always,” and **53 percent** said “Usually” or “Always” to questions regarding *Getting Care Quickly.*

*Example 2:* Shared Decision Making

The Shared Decision Making composite is a combination of three questions (Q10, Q11 and Q12). Q10 and Q11 each have four response choices: Not at all; A little; Some; A lot. Q12 has two response choices: Yes; No. Suppose we have data from 10 members with the following responses.

|  |  |  |  |
| --- | --- | --- | --- |
| **Member** | **Q10** | **Q11** | **Q12** |
| 1  2  3  4  5  6  7  8  9  10 | Not at all  A little  A little  Some  A lot  Not at all  A little  A little  Some  A lot | A lot  Some  A little  A little  Some  Some  A little  —  Some  A lot | Yes  Yes  No  No  Yes  No  Yes  No  Yes  Yes |

|  |  |
| --- | --- |
| *Step 1* | Count the number of respondents who selected each of the following response choices. |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Q10** | **Q11** | **Q12** |
| Not at all *or* No  A little  Some  A lot *or* Yes | 2  4  2  2 | 0  3  4  2 | 4  0  0  6 |

|  |  |
| --- | --- |
| *Step 2* | Calculate the proportion of members who selected each response choice.  **Note:**  For Q11, there are only nine responses; missing data are not included in the calculation.  For Q12, there will always be no (0) respondents in the “A little” and “Some” categories. |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Q10** | **Q11** | **Q12** |
| Not at all *or* No  A little  Some  A lot *or* Yes | 0.20  0.40  0.20  0.20 | 0.00  0.33  0.44  0.22 | 0.40  0.00  0.00  0.60 |

|  |  |
| --- | --- |
| *Step 3* | Calculate the average proportion responding to each category. |

|  |  |
| --- | --- |
| Not at all *or* No  A little  Some  A lot *or* Yes | (0.20 + 0.00 + 0.40)/3 = 0.2000 = **20.00%**  (0.40 + 0.33 + 0.00)/3 = 0.2433 = **24.33%**  (0.20 + 0.44 + 0.00)/3 = 0.2133 = **21.33%**  (0.20 + 0.22 + 0.60)/3 = 0.3400 = **34.00%** |

Composite Global Proportion Variance

For composites with response choices of “Never,” “Sometimes,” “Usually,” and “Always,” two global proportion variances are calculated: one for the global proportion “Always” using Score Values (Always) and one for the global proportion “Always + Usually” using Score Values (Always + Usually).

|  |  |
| --- | --- |
| *Step 1* | Use Table S-9 to convert response choices to score values for each question in the composite. |
| *Step 2* | Calculate the mean of each question. |
| *Step 3* | Subtract the question mean (step 2) from each value. |
| *Step 4* | Divide each value in step 3 by the total number of questions in the composite. |
| *Step 5* | Divide each value in step 4 by the total number of members responding to the question. |
| *Step 6* | For each respondent, sum the step 5 values across the set of questions. |
| *Step 7* | Square the step 6 values. |
| *Step 8* | Sum the step 7 values across all respondents from the plan. |
| *Step 9* | Multiply the step 8 values by the number of respondents (members who answered at least one question in the composite) in the composite and divide this number by the number of respondents minus 1. This is the Composite Global Proportion Variance.  The formula for this equation is:    Let:  *i* = 1, …, *m* questions in a composite.  *j* = 1, …, *ni* members responding to question *i.*  *xij* = score of member *j* on question *i* (either 0 or 1).  = average score for question *i.*  *N* = number of members responding to at least one question in the composite. |

**Note:** Each question is weighted equally regardless of the number of members responding to each.

### Table S-9: Composite Global Proportion Variance Score Values

|  |  |  |
| --- | --- | --- |
| Response Choices | Score Values  (Always + Usually) | Score Values  (Always) |
| Never | 0 | 0 |
| Sometimes | 0 | 0 |
| Usually | 1 | 0 |
| Always | 1 | 1 |
| Response Choices | Score Values  (A lot/Yes) | |
| Not at all/No | 0 | |
| A little | 0 | |
| Some | 0 | |
| A lot/Yes | 1 | |

Numeric Example: *Composite Global Proportion Variance (Usually + Always)*

The composite Getting Care Quickly is a combination of two CAHPS 5.0H questions (Q4 and Q6), each with response choices: Never (N); Sometimes (S); Usually (U); Always (A). Suppose we have a health plan with 10 members and the following responses.

|  |  |  |
| --- | --- | --- |
| **Member** | **Q4** | **Q6** |
| 1  2  3  4  5  6  7  8  9  10 | N  S  S  U  A  N  S  S  U  A | A  U  S  S  U  U  S  —  U  A |

|  |  |
| --- | --- |
| *Step 1* | Convert the responses to score values. |

|  |  |  |
| --- | --- | --- |
| **Member** | **Q4** | **Q6** |
| 1  2  3  4  5  6  7  8  9  10 | 0  0  0  1  1  0  0  0  1  1 | 1  1  0  0  1  1  0  —  1  1 |

|  |  |
| --- | --- |
| *Step 2* | Calculate the mean for each question.  Q4 = 4/10 = 0.4 Q6 = 6/9 = .6666  **Note:** For Q6 there are only nine responses. Missing data are not assigned a value of 0. |
| *Step 3* | Subtract the question mean from each value. |

|  |  |  |
| --- | --- | --- |
| **Member** | **Q4** | **Q6** |
| 1  2  3  4  5  6  7  8  9  10 | 0 – 0.4 = -0.4  -0.4  -0.4  0.6  0.6  -0.4  -0.4  -0.4  0.6  0.6 | 0.3333  0.3333  -0.6666  -0.6666  0.3333  0.3333  -0.6666  —  0.3333  0.3333 |

|  |  |
| --- | --- |
| *Step 4* | Divide each value in step 3 by the total number of questions in the composite. In this example, the number of questions in the composite is 2. |

|  |  |  |
| --- | --- | --- |
| **Member** | **Q4** | **Q6** |
| 1  2  3  4  5  6  7  8  9  10 | -0.04/2 = -0.2  -0.2  -0.2  0.3  0.3  -0.2  -0.2  -0.2  0.3  0.3 | 0.1666  0.1666  -0.3333  -0.3333  0.1666  0.1666  -0.3333  —  0.1666  0.1666 |

|  |  |
| --- | --- |
| *Step 5* | Divide each value in step 4 by the total number of members responding to each question. In this example, for Q4 the total number is 10 and for Q6 the total number is 9. |

|  |  |  |
| --- | --- | --- |
| **Member** | **Q4** | **Q6** |
| 1  2  3  4  5  6  7  8  9  10 | -0.2/10 = -0.02  -0.02  -0.02  0.03  0.03  -0.02  -0.02  -0.02  0.03  0.03 | 0.0185  0.0185  -0.0370  -0.0370  0.0185  0.0185  -0.0370  —  0.0185  0.0185 |

|  |  |
| --- | --- |
| *Step 6* | Sum the step 5 values across the set of questions. |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Member** | **Q4** |  | **Q6** |  | **Sum** |
| 1  2  3  4  5  6  7  8  9  10 | -0.02  -0.02  -0.02  0.03  0.03  -0.02  -0.02  -0.02  0.03  0.03 | +  +  +  +  +  +  +  +  +  + | 0.0185  0.0185  -0.0370  -0.0370  0.0185  0.0185  -0.0370  —  0.0185  0.0185 | =  =  =  =  =  =  =  =  =  = | -0.0014  -0.0014  -0.0570  0.0070  0.0485  -0.0014  -0.0570  -0.02  0.0485  0.0485 |

|  |  |
| --- | --- |
| *Step 7* | Square the step 6 values. |

|  |  |
| --- | --- |
| **Member** |  |
| 1  2  3  4  5  6  7  8  9  10 | -0.0014\*-0.0014 = 0.0000021  0.0000021  0.0032532  0.0000495  0.0023540  0.0000021  0.0032532  0.0004000  0.0023540  0.0023540 |

|  |  |
| --- | --- |
| *Step 8* | Sum the step 7 values across all respondents from the plan.  Sum = 0.0140246 |
| *Step 9* | Multiply the step 8 values by the number of respondents in the composite and divide this number by the number of respondents minus 1. In this example the number of respondents is 10; therefore, the denominator is 9 (10 – 1).  Global Proportion Variance “Always + Usually” = 0.0140246\*10/9 = **0.0155829** |

Question Summary Rates

The question summary rate indicates the proportion of members that selected a particular response choice. Table S-10 provides numerators and denominators used to calculate the question summary rates. A question summary rate is calculated for each numerator listed in the table.

To calculate the question summary rates for a specific question:

|  |  |
| --- | --- |
| *Step 1* | Determine the number of members who selected the numerator response choice(s). |
| *Step 2* | Determine the number of members who selected the denominator response choices. |
| *Step 3* | Divide the numerator by the denominator and multiply by 100. This is the Question Summary Rate. |

Two Question Summary Rate Variances are calculated for the *Coordination of Care* question using score values from Table S-9 and the Rating Question Summary Rate Variance formula.

* Question Summary Rate Variance (Always).
* Question Summary Rate Variance (Always + Usually).

One Question Summary Rate Variance is calculated for the *Health Promotion and Education* question (for the Yes response choice) using score values from Table S-9 and the Rating Question Summary Rate Variance formula.

### Table S-10: Question Summary Rates

|  |  |  |  |
| --- | --- | --- | --- |
|  | Health Promotion and Education | Numerators | Denominator |
| **Q8** | In the last 12 months, did you and a doctor or other health provider talk about specific things you could do to prevent illness? | Yes No | Yes + No |
|  | Coordination of Care | Numerators | Denominator |
| **Q22** | In the last 12 months, how often did your personal doctor seem informed and up-to-date about the care you got from these doctors or other health providers? | Always + Usually  Always  Usually  Never + Sometimes | Always + Usually + Sometimes + Never |
|  | Question Summary Rates | Numerators | Denominator |
| **Q4** | In the last 12 months, when you needed care right away, how often did you get care as soon as you needed? | Always + Usually  Always | Always + Usually + Sometimes + Never |
| **Q6** | In the last 12 months, how often did you get an appointment for a check-up or routine care at a doctor’s office or clinic as soon as you needed? | Always + Usually  Always | Always + Usually + Sometimes + Never |
| **Q10** | When you talked about starting or stopping a prescription medicine, how much did a doctor or other health provider talk about the reasons you might want to take a medicine? | A lot  Some | A lot + Some + A little + Not at all |
| **Q11** | When you talked about starting or stopping a prescription medicine, how much did a doctor or other health provider talk about the reasons you might not want to take a medicine? | A lot  Some | A lot + Some + A little + Not at all |
| **Q12** | When you talked about starting or stopping a prescription medicine, did a doctor or other health provider ask you what you thought was best for you? | Yes | Yes + No |
| **Q14** | In the last 12 months, how often was it easy to get the care, tests, or treatment you needed? | Always + Usually  Always | Always + Usually + Sometimes + Never |
| **Q17** | In the last 12 months, how often did your personal doctor explain things in a way that was easy to understand? | Always + Usually  Always | Always + Usually + Sometimes + Never |

### Table S-10: Question Summary Rates *(continued)*

|  |  |  |  |
| --- | --- | --- | --- |
|  | CAHPS 5.0H Survey Questions | Numerators | Denominator |
| **Q18** | In the last 12 months, how often did your personal doctor listen carefully to you? | Always + Usually  Always | Always + Usually + Sometimes + Never |
| **Q19** | In the last 12 months, how often did your personal doctor show respect for what you had to say? | Always + Usually  Always | Always + Usually + Sometimes + Never |
| **Q20** | In the last 12 months, how often did your personal doctor spend enough time with you? | Always + Usually  Always | Always + Usually + Sometimes + Never |
| **Q25** | In the last 12 months, how often did you get an appointment to see a specialist as soon as you needed? | Always + Usually  Always | Always + Usually + Sometimes + Never |
| **Q29** | In the last 12 months, how often did the written materials or the Internet provide the information you needed about how your health plan works? | Always + Usually  Always | Always + Usually + Sometimes + Never |
| **Q31** | In the last 12 months, how often were you able to find out from your health plan how much you would have to pay for a health care service or equipment?  ***Note:*** *Results for this question are calculated using rolling average methodology.* | Always + Usually  Always | Always + Usually + Sometimes + Never |
| **Q33** | In the last 12 months, how often were you able to find out from your health plan how much you would have to pay for specific prescription medicines?  ***Note:*** *Results for this question are calculated using rolling average methodology.* | Always + Usually  Always | Always + Usually + Sometimes + Never |
| **Q35** | In the last 12 months, how often did your health plan’s customer service give you the information or help you needed? | Always + Usually  Always | Always + Usually + Sometimes + Never |
| **Q36** | In the last 12 months, how often did your health plan’s customer service staff treat you with courtesy and respect? | Always + Usually  Always | Always + Usually + Sometimes + Never |
| **Q38** | In the last 12 months, how often were the forms from your health plan easy to fill out?  ***Note:*** *The rate for this question is calculated using the response to this question* ***and*** *responses to Q37.* | Q37: No + Q38: (Always + Usually)  Q37: No + Q38: Always | Q37: No + Q38: (Always + Usually + Sometimes + Never) |
| **Q40** | In the last 12 months, how often did your health plan handle your claims quickly? | Always + Usually  Always | Always + Usually + Sometimes + Never |
| **Q41** | In the last 12 months, how often did your health plan handle your claims correctly? | Always + Usually  Always | Always + Usually + Sometimes + Never |
| **Q43** | In general, how would you rate your overall health? | Excellent + Very good | Excellent + Very good + Good + Fair + Poor |
| **Q44** | In general, how would you rate your overall mental or emotional health? | Excellent + Very good | Excellent + Very good + Good + Fair + Poor |

HEDIS/CAHPS Survey Question Crosswalk

HEDIS/CAHPS survey question numbers depend on the version of the survey instrument used. Refer to Table S-11 for corresponding question numbers for the different versions of the HEDIS/CAHPS surveys.

### Table S-11: Crosswalk of CAHPS 5.0H Survey Questions

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Result | Adult  Commercial | Adult Medicaid | Child  With CCC | Child  Without CCC |
| Rating of All Health Care | 13 | 13 | 14 | 13 |
| Rating of Personal Doctor | 23 | 23 | 41 | 26 |
| Rating of Specialist Seen Most Often | 27 | 27 | 48 | 30 |
| Rating of Health Plan | 42 | 35 | 54 | 36 |
| Getting Needed Care | 14 | 14 | 15 | 14 |
| Getting Needed Care | 25 | 25 | 46 | 28 |
| Getting Care Quickly | 4 | 4 | 4 | 4 |
| Getting Care Quickly | 6 | 6 | 6 | 6 |
| How Well Doctors Communicate | 17 | 17 | 32 | 17 |
| How Well Doctors Communicate | 18 | 18 | 33 | 18 |
| How Well Doctors Communicate | 19 | 19 | 34 | 19 |
| How Well Doctors Communicate | 20 | 20 | 37 | 22 |
| Customer Service | 35 | 31 | 50 | 32 |
| Customer Service | 36 | 32 | 51 | 33 |
| Claims Processing | 40 | NA | NA | NA |
| Claims Processing | 41 | NA | NA | NA |
| Shared Decision Making | 10 | 10 | 11 | 10 |
| Shared Decision Making | 11 | 11 | 12 | 11 |
| Shared Decision Making | 12 | 12 | 13 | 12 |
| Plan Information on Costs | 31 | NA | NA | NA |
| Plan Information on Costs | 33 | NA | NA | NA |
| Health Promotion and Education | 8 | 8 | 8 | 8 |
| Coordination of Care | 22 | 22 | 40 | 25 |
| Rating of Overall Health | 43 | 36 | 58 | 37 |
| Rating of Overall Mental/Emotional Health | 44 | 37 | 59 | 38 |
| Written Materials or Internet Provided Needed Information | 29 | 29 | NA | NA |
| Plan Gave Forms to Fill Out | 37 | 33 | 52 | 34 |
| Forms Were Easy to Fill Out | 38 | 34 | 53 | 35 |

Confidence Intervals

NCQA does not calculate confidence intervals for HEDIS/CAHPS survey results. The following instructions are provided for health plans and survey vendors who wish to calculate confidence intervals on their own.

|  |  |
| --- | --- |
| Confidence interval for the rating mean and rating question summary rate | The standard error of the rating mean or rating question summary rate should be used to calculate confidence intervals. For example, to calculate an approximate 95% confidence interval, use the formulas:  95% CI = (*Rating Mean*)  95% CI = (*Rating Question Summary Rate*)  where *n* is the number of members responding to the rating question, *RMV* is the rating mean variance and *RQSRV* is the rating question summary rate variance. |
| Confidence interval for the composite mean and composite global proportion | Two means are calculated to calculate the composite mean:   1. A mean is calculated for each question in the composite. 2. The mean of these means is calculated (this is the composite mean).   The composite mean variance incorporates the number of respondents, *n,* into the formula.  Where the rating mean variance and rating question summary rate variance are the variances of the distributions of individual responses, the composite mean variance is the variance of the health plan’s composite mean itself. Thus, confidence interval calculations should use the square root of the composite mean variance, not the square root of the composite mean variance over *n*. For example, to calculate an approximate 95% confidence interval, use the formula:  95% CI = (*Composite Mean*)  where *CMV* is the composite mean variance.  The same principal applies to the global proportion variance. To calculate an approximate 95% confidence interval, use the formula:  95% CI = *(Composite Global Proportion*)  where *CGPV* is the composite global proportion variance. |