

Understanding Composite Measures in the NAM CAHPS Survey

The 2014-2015 Nationwide Adult Medicaid Consumer Assessment of Healthcare Providers and Systems (NAM CAHPS) survey is the first of its kind intended to capture baseline nationwide and state-level estimates of adult Medicaid enrollees' experiences with the health care system. To summarize patient experience for CAHPS public reporting, the U.S. Agency for Healthcare Research and Quality (AHRQ) recommends the use of a standard set of composite measures. The purpose of this report is to present and explain the composite measures that were developed from the 2014-2015 NAM CAHPS survey.

Composite Measures are groupings of two or more items that measure the same dimensions of experience with care or health plan. Four composite measures were developed from the 2014-2015 NAM CAHPS survey.

- **Getting needed care composite** combines responses from two questions (Q36, Q17) regarding how easily respondents got various aspects of needed care.
- **Getting care quickly composite** combines responses from two questions (Q4, Q7) regarding how often respondents received various types of care in a timely manner.
- **How well doctors communicate composite** combines responses from four questions (Q28, Q29, Q30, Q31) regarding how often doctors communicated well with respondents.
- **Health plan information and customer service composite** combines responses from two questions (Q39, Q40) about health plan information and customer service from the respondent's health plan.¹

DEVELOPMENT OF COMPOSITE MEASURES

AHRQ recommends the use of a standard set of composite measures for CAHPS public reporting to succinctly summarize patient experience for a set of items. Composite measures are summary measures of two or more items that comprehensively capture the same domain of patient experience. Prior psychometric analyses with CAHPS measures have shown that composite measures reliably and validly capture patient experience.^{2,3,4,5} Composites were developed for the 2014-2015 NAM CAHPS survey using the specifications provided by AHRQ.⁶ Table 1 provides a summary of the four composite measures developed from the NAM CAHPS survey, along with their component items. All items contributing to a composite have the same set of valid responses.

Table 1. Composite Measures and Component Items per AHRQ's CAHPS Specifications.

Composite Measure	Item	Question	Response
Getting Needed Care	Q36	In the last 6 months, how often did you get an appointment to see a specialist as soon as you needed?	1 = Never 2 = Sometimes
	Q17	In the last 6 months, how often was it easy to get the care, tests, or treatment you needed?	3 = Usually 4 = Always
Getting Care Quickly	Q4	In the last 6 months, when you needed care right away, how often did you get care as soon as you needed?	1 = Never 2 = Sometimes
	Q7	In the last 6 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?	3 = Usually 4 = Always
How Well Doctors Communicate	Q28	In the last 6 months, how often did your personal doctor explain things in a way that was easy to understand?	1 = Never 2 = Sometimes 3 = Usually 4 = Always
	Q29	In the last 6 months, how often did your personal doctor listen carefully to you?	
	Q30	In the last 6 months, how often did your personal doctor show respect for what you had to say?	
	Q31	In the last 6 months, how often did your personal doctor spend enough time with you?	
Health Plan Information and Customer Service	Q39	In the last 6 months, how often did your health plan's customer service give you the information or help you needed?	1 = Never 2 = Sometimes
	Q40	In the last 6 months, how often did your health plan's customer service staff treat you with courtesy and respect?	3 = Usually 4 = Always

All analysis was carried out with SAS®9.1, using the CAHPS Analysis Program developed by AHRQ.⁷ The first step was to determine a suitable approach to weight the component items within a composite. Items within a composite can be weighted equally or unequally. Equal weighting regards all items in the composite as equally important, even though some items may be answered more frequently than others. Unequal weighting suitably discounts items with a lower volume of responses, yielding a composite that is more statistically precise.⁸ Sample sizes and response rates across reporting units (states) and the entire sample (nationwide) were assessed for each of the composite's items. Across all four composites, reporting units' sample sizes and response rates on component items allowed for a strategy of equal weighting for all items, as shown in Table 2. The appropriate option in the SAS macro (*even-wgt=1*) was used to equally weight the component items and obtain the composite measure.⁹

Table 2. NAM CAHPS Nationwide and State Response Rates and State Sample Sizes.

Composite Measure	Item	NATIONWIDE			STATES	
		Mean	Response Rate	Range Mean	Range Response Rate	Range Sample Size
Getting Needed Care	Q36	3.24	46.6%	2.99-3.39	39%-54%	1,424-3,687
	Q17	3.28	97.2%	3.38-3.38	95.3%-98%	3,304-7,773
Getting Care Quickly	Q4	3.39	61.1%	3.22-3.48	50.2%-69.7%	1,394-4,022
	Q7	3.39	71.9%	3.16-3.49	64.3%-77.6%	2,304-5,765
How Well Doctors Communicate	Q28	3.62	68.9%	3.49-3.69	58%-75.1%	2,241-5,629
	Q29	3.63	68.7%	3.31-3.72	58%-74.9%	2,229-5,627
	Q30	3.68	68.8%	3.57-3.76	57.9%-75.1%	2,241-5,623
	Q31	3.54	68.8%	3.42-3.60	57.9%-75.1%	2,240-5,621
Health Plan Information and Customer Service	Q39	3.1	58.4%	2.92-3.23	43.8%-69.1%	1,705-4,706
	Q40	3.43	56.2%	3.29-3.53	42.1%-66.8%	1,643-4,548

CASE-MIX ADJUSTMENT OF COMPOSITE MEASURES

The CAHPS Analysis Program was also used to perform case-mix adjustment on the NAM CAHPS composite measures. Case-mix adjustment allows for appropriate comparison of measures across reporting units (states). It adjusts the rates for differences in specific beneficiary characteristics across reporting units, which may be related to systematic biases in the way beneficiaries respond to the NAM CAHPS survey questions. These beneficiary characteristics include their general health status (Q42), age (Q65), and education (Q67). Appropriate options in the CAHPS program were used to case-mix adjust the composite scores for using these three beneficiary variables.¹⁰ Finally, as with all other summary tables available through the [NAM CAHPS Data Resource Website](#) sample weights were applied to calculate nationwide and state-level summaries.^{11,12}

For more information on the use of sample weights, see [Deriving Weighted Estimates and Calculating Standard Errors for States and Subpopulations for the NAM CAHPS Survey](#).

REPORTING OF COMPOSITE MEASURES

The NAM CAHPS composite measures are reported with three categories: “Never + Sometimes”, “Usually”, and “Always.” The “Never” and “Sometimes” response categories are collapsed consistent with the reporting through the AHRQ CAHPS Database.¹³

About the NAM CAHPS Survey

In 2013, the Centers for Medicare & Medicaid Services’ (CMS) Center for Medicaid and CHIP Services (CMCS) contracted NORC at the University of Chicago (NORC) and its partner, Thoroughbred Research Group to collect the first-ever nationwide adult Medicaid (NAM) Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey. The goal of the 2014-2015 NAM CAHPS survey is to obtain nationwide and state-by-state estimates of adult Medicaid enrollees’ experience of care, including access and utilization of services, across different financing and delivery models (e.g., managed care and fee-for-service) and population groups (e.g., individuals who are dually eligible for Medicare and Medicaid and individuals with disabilities who are not dually eligible).

The sample for the 2014-2015 NAM CAHPS survey was designed to capture four key subgroups of adult Medicaid enrollees. The main criteria for stratifying the sampling frame were state (including the District of Columbia) and the following four mutually exclusive enrollee groups based on program eligibility:

- adults dually eligible for Medicaid and Medicare (Full Duals);
- adults (non-duals) with disabilities (Persons with Disabilities);
- adults (non-duals, non-disabled) enrolled in a managed care organization (Managed Care, or MC); and,
- adults (non-duals, non-disabled) who obtained care from a fee-for-service provider or were enrolled in a primary care case management plan (FFS-PCCM).

Forty-six states and the District of Columbia participated in the 2014-2015 NAM CAHPS survey. The target population for the survey was adults ages 18 and older as of December 31, 2013, who were enrolled in Medicaid during first quarter of federal fiscal year (FFY) 2014 (FFY 2014 Q1, October 2013 – December 2013), and who were not residing in an institutional setting, and were not part of a Family Planning Waiver. Data collection was conducted from December 14, 2014 through July 27, 2015, across four waves. The questionnaire was administered first through mail, and then with telephone follow-up where necessary, and was available in both English and Spanish. This effort resulted in 272,679 enrollees completing the survey, with an overall response rate of 23.6%.

Learn more about the NAM CAHPS survey and explore this data at nam-cahps.medicaid.gov.

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