

# What is the CAHPS Analysis Program?



- Free code written for use with SAS<sup>®</sup> statistical software, also known as the “CAHPS macro”
  - Requires base SAS and SAS/STAT modules
- It enables CAHPS users to analyze data from any CAHPS survey:
  - Health Plan
  - Clinician & Group
  - Hospital
  - Home and Community Based Services
  - Hospice
  - Cancer Care
  - Emergency Department
  - Etc.

# What does the macro do?

- The macro calculates the following results:
  - Top box scores
  - Mean scores
  - Full frequencies
  - Collapsed frequencies

## 2019 Adult Medicaid 5.0

Q14 How often was easy to get needed care, tests, or treatment

	Q14				Total
	NEVER	SOMETIMES	USUALLY	ALWAYS	
Frequency (n)	658	3,925	8,825	18,256	31,664
Percent	2%	12%	28%	58%	

Never + Sometimes	Usually	Always
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17%	27%	56%	National 2019 National Distribution (n=33,577)
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# What else does the macro do?

- ▶ Provides case-mix adjusted scores
  - CAHPS Databases adjust for age, education, general health status, and mental health status
- ▶ Indicates whether an entity's score is statistically different from the average
- ▶ Weights the data
- ▶ Weights the items in the composite measures
  - Equally weight the items
  - Weight based on the number of respondents to the items
- ▶ Plus other complex analyses (post-stratification weighting, imputation)

# Before You Get Started – Think About



1. At what level(s) do you want to report the results?
  - ▶ Region, state, sponsor, plan
2. Do you want to case-mix adjust your results?
3. Do you want to weight your results?
  - Weight item and composite measure results to the population
  - Weight items in composite measures based on the number of respondents
  - Other weighting options available

Note: Because the CAHPS Analysis Program was initially written for the CAHPS Health Plan Survey, the reporting unit variable name used in the Analysis Program must be “Plan.”

# When to Use the Macro?



If you want to validly compare entities to the average



If you want to calculate scores using a standardized method to allow for comparisons



You don't need to use the macro if you are only calculating unadjusted unweighted top box scores



You can't use the macro if you only have 1 entity or less than 2 responses within entities

The macro will alert you to any entities with fewer than 100 responses

# What's New in Version 5.0 of the Macro?



- Corrections and updates for weighting options for casemix and the overall mean
- Added procsurveyreg option
- Casemix output includes standard error along with coefficients and p-value
- Modified Test SAS data sets to represent Clinician & Group Survey 3.0
- Modified test programs that go with the Test SAS data set to clarify which programs to run first and to align with new data

# What's Included in the CAHPS Analysis Program

The CAHPS Analysis Program Zip file contains 7 files:

File	Description
<b>MACRO_CAHP50.SAS</b>	This is the core SAS macro program that performs the analyses.
<b>Test SAS Program Files</b>	
_1_TEST_FORMAT_CAHP50	Creates formats for the Test data
_2_TEST_PREPDATA_CAHP50	Recodes variables as needed to run the macro
_3A_TEST_CAHP50	Provides several examples of calling the macro
_3B_TEST_CAHP50_STRATIFIED	Provides an example for calling the macro – post-stratification weighting
<b>Test SAS Data Files</b>	
TEST_CAHP50_DATA	Raw test data
TEST_CAHP50_DATA_recoded	Test data after recoding

# What do I need to do?

## Sample Macro Statement

```
%cahps(  
  var = Q5,  
  vartype = 1,  
  name = Made appt urgent care,  
  adultkid = 3,  
  dataset = test,  
  outname = Appt  
);
```



# What do I need to do?

## Sample Macro Statement

```
%cahps(  
  var = Q5, /*Name of the variable to be  
            analyzed*/  
  vartype = 1, /*Set the type of variable:  
              1=dichotomous scale (1/0)*/  
  name = Made appt urgent care, /*Label for the outcome  
                                variable*/  
  adultkid = 3, /*Specify how to analyze  
                child and adult surveys:  
                3=analyze adult data only*/  
  dataset = test, /*Name of the input data*/  
  outname = Appt /*Name used for the output  
                 data set*/  
);
```

# Sample Macro Statement: Composite Measure with Case Mix

```
%cahps(  
  var = Q1 Q2, /*Name of variables in the composite  
               measure to be analyzed*/  
  vartype = 3, /*Set the type of variable: 3 = 4 point  
              scale*/  
  name = Sample Composite Measure, /*Label for the outcome variable*/  
  adultkid = 0, /*Specify how to analyze child and  
               adult surveys: 0= analyze all data;  
               can be used even if all data is adult*/  
  adjuster = MHS GHS, /*List of case-mix adjuster variables  
                      to include*/  
  dataset = test, /*Name of the input data*/  
  outname = SampleComposite /*Name used for the output data set*/  
);
```

# Analysis Guidance Documents

# Analysis Guidance Documents



## 1. Preparing Data from CAHPS Surveys for Analysis

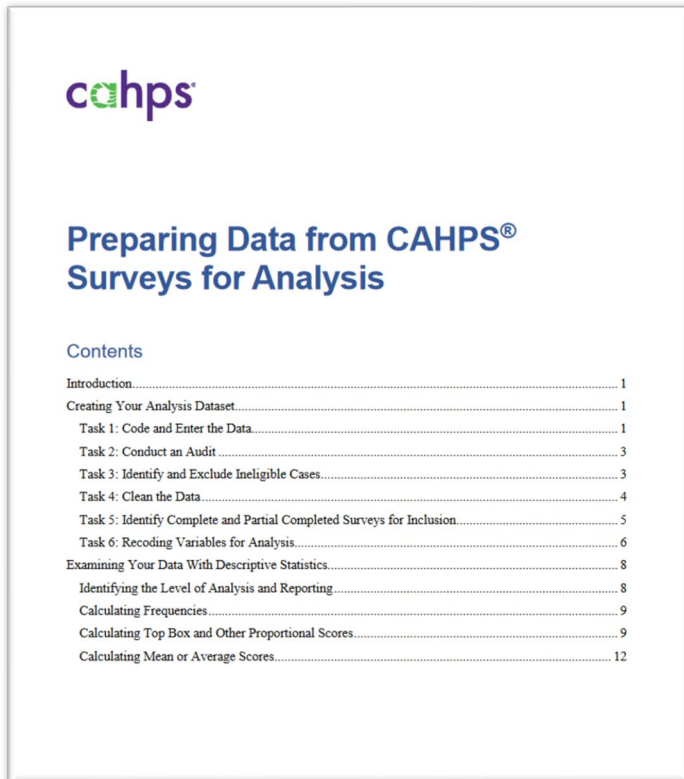
- For use no matter what statistical program you are using

## 2. Instructions for Analyzing Data from CAHPS Surveys in SAS<sup>®</sup>

- ▶ These documents and the CAHPS Analysis Program can be found on the CAHPS website

[www.ahrq.gov/cahps/surveys-guidance/helpful-resources/analysis/](http://www.ahrq.gov/cahps/surveys-guidance/helpful-resources/analysis/)

# Preparing Data for Analysis



**cahps**

**Preparing Data from CAHPS®  
Surveys for Analysis**

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- This document provides step-by-step instructions for:
  - Coding, entering, and checking CAHPS data
  - Identifying and excluding ineligible cases
  - Cleaning the data
  - Identifying and including complete and partial completed surveys
  - Recoding variables for analysis
- Provides instructions for calculating frequencies, top box and other percentages, and mean scores with or without SAS.

# Instructions for Analyzing CAHPS Data in SAS



## Instructions for Analyzing Data from CAHPS® Surveys in SAS®:

### Using the CAHPS Analysis Program Version 5.0

AHRQ Contract No.: HHSP2332015000261/HHSP2337004T

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AHRQ Publication No. 20-M019  
August 2020

- Provides detailed instructions for how to use the CAHPS Analysis Program and explains how the program works
- Table 6.1 and 6.2 provide all macro parameters grouped by what they do.
- Provides a listing of the output files produced and their contents