



CAHPS® Dental Plan Survey

2024 Soonercare Adult Member Research

Prepared for: The Oklahoma Health Care Authority

(Through a contract with KFMC Health Improvement Partners)

June 2024

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Background and objectives

Background. The CAHPS® Dental Plan Survey was adopted as an official CAHPS product in 2006. It is currently being used to evaluate dental programs that cover over 2.8 million lives and will soon expand to over 3.5 million covered lives.

Press Ganey has conducted the CAHPS® Health Plan Survey since the program's inception in 1995. Press Ganey has also been a Medicare CAHPS® certified survey vendor and a Medicare Health Outcomes Survey supplier since the start of those programs, as well.

KFMC Health Improvement Partners contracted with Press Ganey to conduct the CAHPS Dental Plan survey, on behalf of the Oklahoma Health Care Authority.

Objectives. The CAHPS Dental Plan Survey is used by those interested in assessing, improving and reporting on the quality and value offered by dental plans.

Specific objectives include:

- Determination of member ratings of:
 - Their dental plan overall
 - Overall dental care provided
 - Their regular dentist overall
 - The ease of finding a dentist
- Assessment of member perceptions related to:
 - Care from dentists and staff
 - Access to dental care
 - Dental plan services

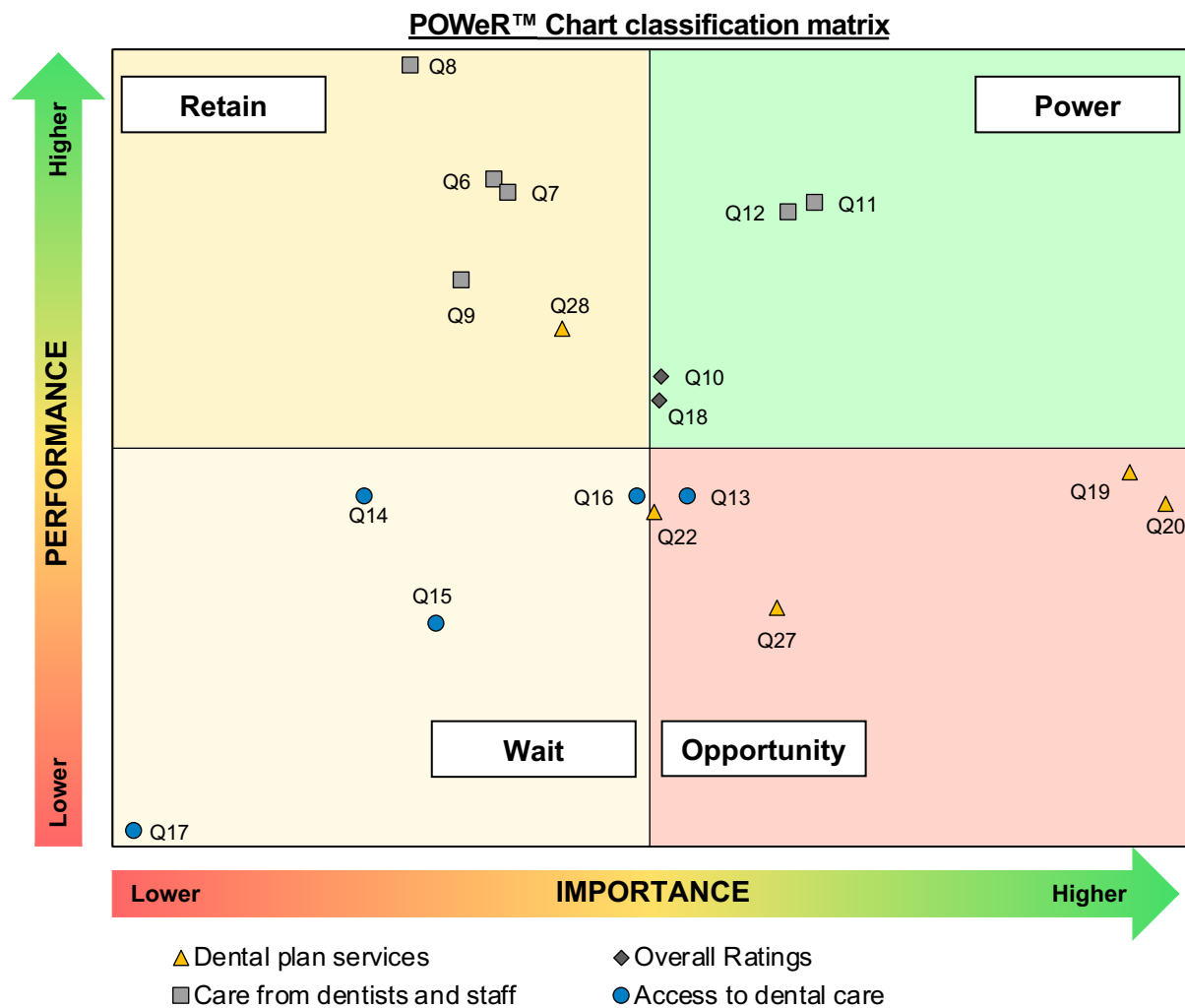
Standard measurement of all areas mentioned to facilitate meaningful comparisons among dental plans that wish to disclose their data to consumers.

CAHPS® is a registered trademark of the Agency for Healthcare Research and Quality (AHRQ).

Executive summary: POWeR™ Chart

Key driver analysis

The key drivers of the overall dental plan rating are presented in the POWeR™ Chart classification matrix below. The table assesses the key drivers, and each measure is ranked by importance within each quadrant. Focus resources on improving processes that underlie the most important items and look for a significant improvement in the overall dental plan rating (see Appendix C for more details).



Survey Measure		Score	Importance	Performance
Power				
Q11	Dentist/staff did everything to make you feel comfortable during dental work	91.9%	65	81
Q12	Dentist/staff explained what they were doing while treating you	90.5%	63	80
Q10	Rating of Regular Dentist ¹	78.9%	51	59
Q18	Rating of Dental Care ¹	81.9%	51	56
Opportunity				
Q20	Dental plan covered what you and your family needed done	80.6%	100	43
Q19	Dental plan covered all services you thought were covered	77.9%	95	47
Q27	Plan's customer service gave you information or help needed	59.1%	62	30
Q13	Regular dental appointments were as soon as wanted	84.7%	53	44
Q22	800 number, written materials and website provided needed information	80.6%	50	42
Wait				
Q16	Spent more than 15 minutes in waiting room (Sometimes or Never)	82.2%	49	44
Q15	Specialty dental appointments were as soon as wanted	67.1%	30	28
Q14	Emergency dental appointments were as soon as wanted	85.4%	23	44
Q17	If waited more than 15 minutes, were kept updated on reason and length of delay	43.1%	0	0
Retain				
Q28	Plan's customer service treated you with courtesy and respect	90.5%	42	65
Q7	Dentist listened carefully	91.9%	37	82
Q6	Dentist explained things in a way that was easy to understand	91.9%	36	84
Q9	Dentist spent enough time	88.8%	32	71
Q8	Dentist treated you with courtesy and respect	97.0%	28	100

¹ Overall ratings are top-3-box scores (% 8, 9 and 10).

Methodology



Questionnaire. A modified version of the CAHPS Dental Plan survey was used to standardize the measurement and reporting of dental health care quality. Press Ganey produced the questionnaire and cover letter using the health plan logo. The cover letters also provided the information needed to take the survey online, in English or in Spanish.

Data collection. The data collection technique was a two-wave mailing (with phone follow-up) to sampled members, with an option to complete the survey online.



Staffing of the toll-free help line. Press Ganey staffed a toll-free phone line for members to call if they had any questions.



Sample design.

- **Qualified respondents.** KFMC Health Improvement Partners provided Press Ganey with a file of eligible adult dental members for inclusion in the study, on behalf of the Oklahoma Health Care Authority.
- **Sample type.** A simple random sample of 2,000 members was drawn.
- **Sample size/sampling error.** A total of 205 members completed the survey with an overall sampling error of $\pm 6.8\%$ at 95% confidence, using the most pessimistic assumption regarding variance ($p=0.5$).
- **Response rate.** The return volume and response rate information is summarized in the table to the right:



Data processing and analysis. Press Ganey processed all completed surveys and analyzed the results. Percentages lower than 5% are not labeled in charts or graphs where space does not permit.

Composite global proportion and mean score references.

- Care from Dentist and Staff (Q6, Q7, Q8, Q9, Q11, Q12).
- Access to Dental Care (Q13, Q14, Q15, Q16, Q17).
- Dental Plan Costs and Services (Q19, Q20, Q22, Q24, Q27, Q28).
- The composite global proportion scores are derived by adding the scores for the questions within the composite and dividing the result by the number of questions in the composite.

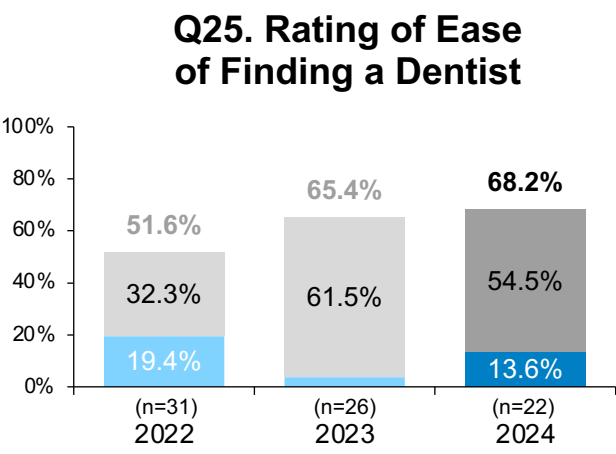
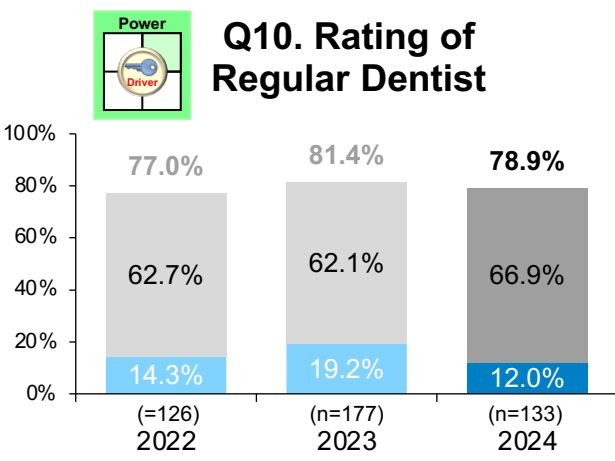
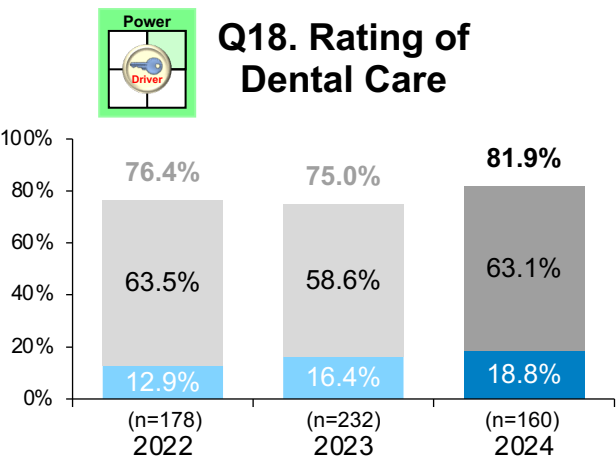
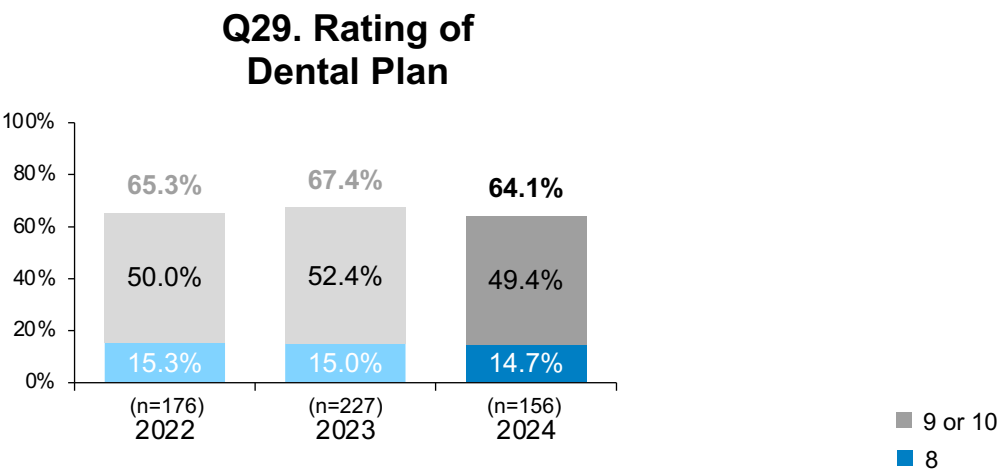
Item	Total
Total mailed	2,000
Undeliverable	156
Total completed surveys	205
Mail completes	145
Phone completes	39
Internet completes	21
Adjusted response rate	11.1%
Overall sampling error	$\pm 6.8\%$

Research findings



Overall ratings

- More than seven in 10 rated their regular dentist favorably (a rating of 8, 9 or 10), and more than six in 10 gave a favorable rating for their dental plan.
- More than two in three gave a favorable rating for the ease of finding a dentist.



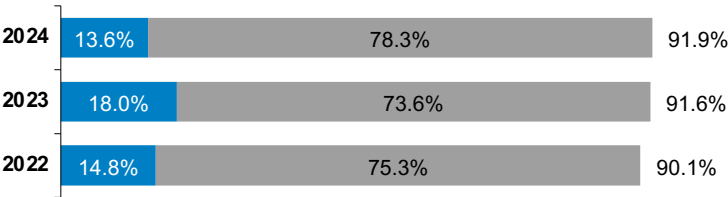
↑↓ Score is significantly higher or lower than the previous year's score.

Composite global proportions and mean scores

Global Proportions

Usually Always

Care from dentists and staff

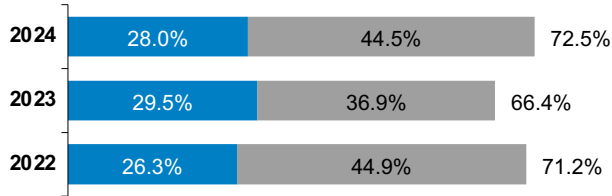


Mean Scores



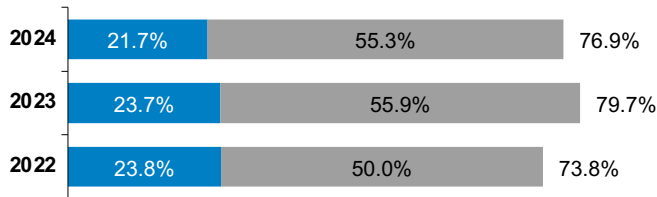
Usually/Somewhat yes Always/Definitely yes

Access to dental care



Usually/Somewhat yes Always/Definitely yes

Dental plan services



The scale for the composite mean scores is based on the question scale. In this case, the Getting Treatment Quickly, How Well Clinicians Communicate and the Perceived Improvement composites are 1.0000 – 3.0000 scales. See below:

- Always = 3.0000
- Usually = 2.0000
- Sometimes/Never = 1.0000

The ten-point scale is assigned a value of

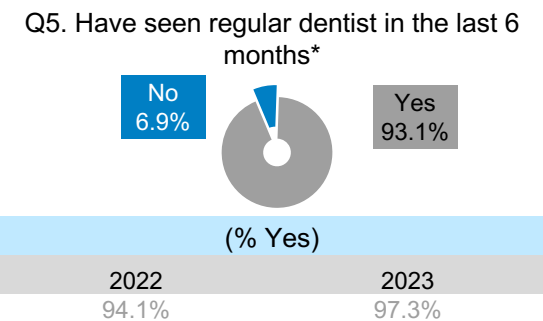
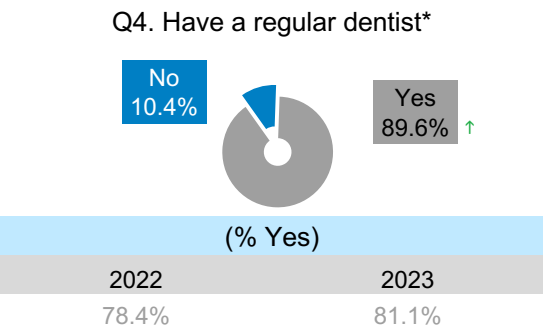
- 0 = 0, 1 = 1, 2 = 2, 3 = 3, and so on, through the value of 10 = 10.

↑↓ Score is significantly higher or lower than the previous year's score.

Global Proportion refers to the total percentage of respondents that gave a top-two scale score. The scale for the composite mean scores is based on the question scale, composites are 1.0000 – 3.0000 scales.

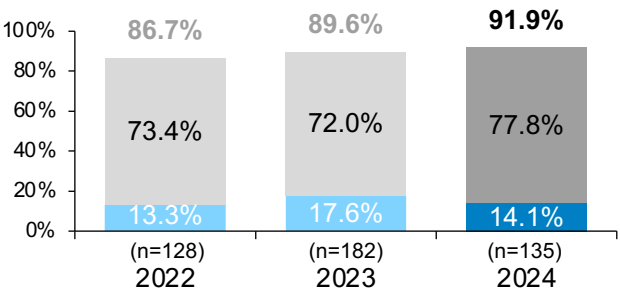
Care from dentists and staff

- More than nine in 10 indicated that the dentist always or usually explained things in a way that was easy to understand, listened carefully and treated them with courtesy and respect.
- More than eight in 10 indicated that the dentist spent enough time with them.

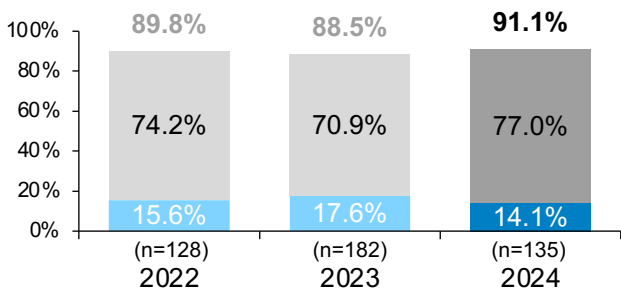


*Indicates that the measure is not included in the composite score.

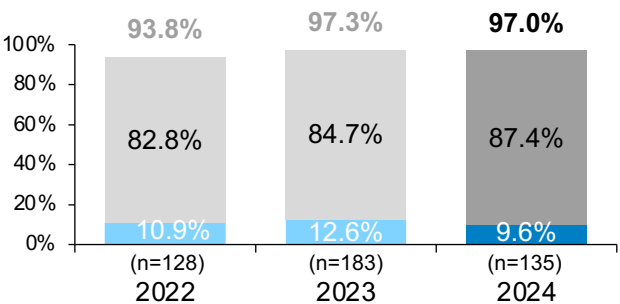
Q6. Dentist explained things in a way that was easy to understand



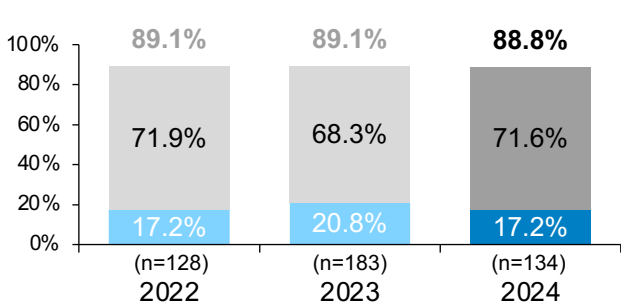
Q7. Dentist listened carefully



Q8. Dentist treated you with courtesy and respect



Q9. Dentist spent enough time



■ Always
■ Usually

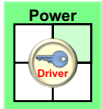
Care from dentists and staff composite			
	2022	2023	2024
Global proportion	90.1%	91.6%	91.9%
Mean score	2.6532	2.6513	2.7017

Please refer to page 7 for statistical references and footnotes.

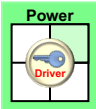
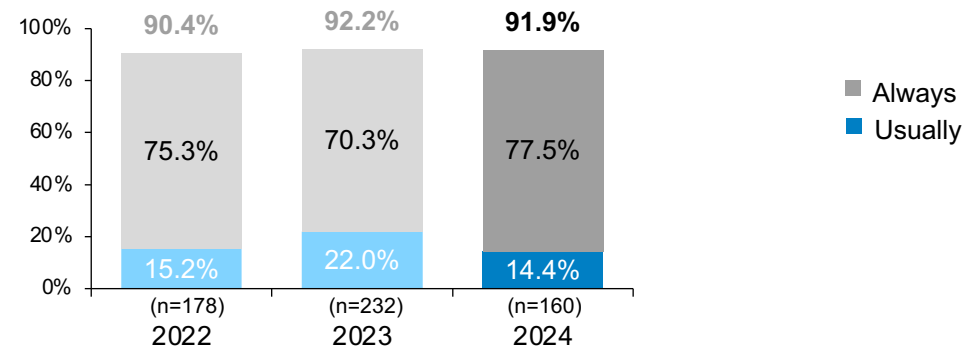
↑↓ Score is significantly higher or lower than the previous year's score.

Care from dentists and staff

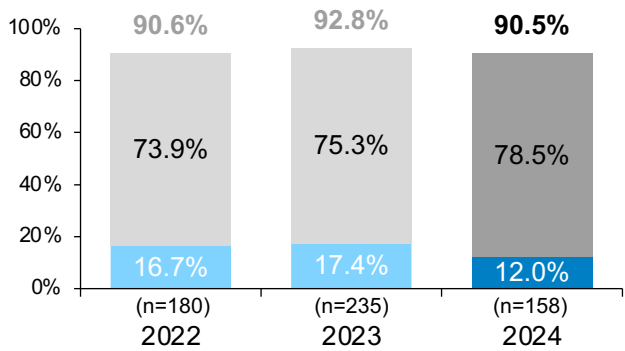
- More than nine in 10 indicated that the dentist and dental staff did everything they could to help them feel comfortable and explained what they were doing during treatment.



Q11. Dentist/staff did everything to make you feel comfortable during dental work



Q12. Dentist/staff explained what they were doing while treating you



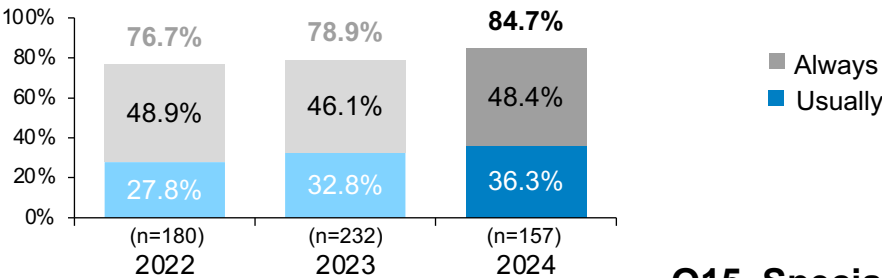
↑↓ Score is significantly higher or lower than the previous year's score.

Access to dental care

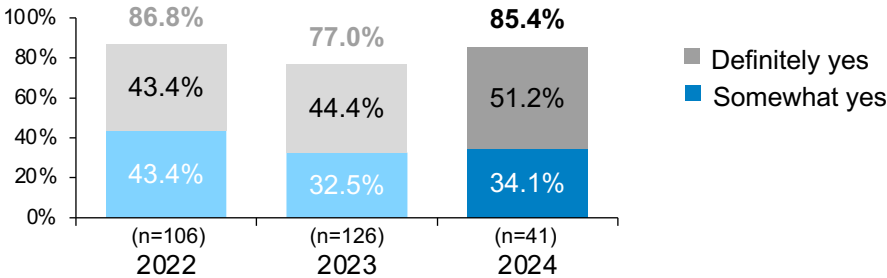
- More than eight in 10 got regular and emergency appointments as soon as they wanted.
- Two-thirds indicated that they were able to get an appointment with a dental specialist as soon as they wanted.



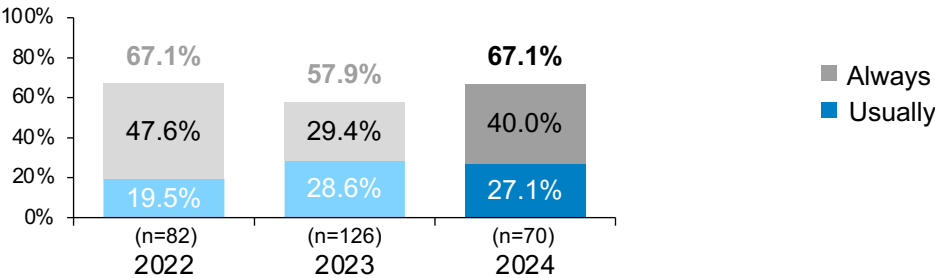
Q13. Regular dental appointments were as soon as wanted



Q14. Emergency dental appointments were as soon as wanted



Q15. Specialty dental appointments were as soon as wanted



Access to dental care composite			
	2022	2023	2024
Global proportion	71.2%	66.4%	72.5%
Mean score	2.1614	2.0333	2.1695

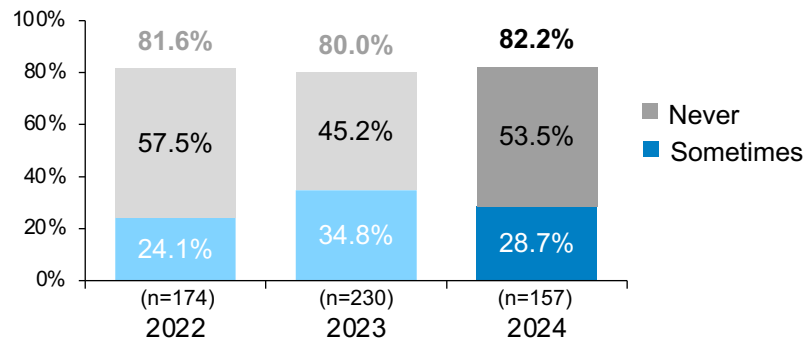
Please refer to page 7 for statistical references and footnotes.

↑↓ Score is significantly higher or lower than the previous year's score.

Access to dental care

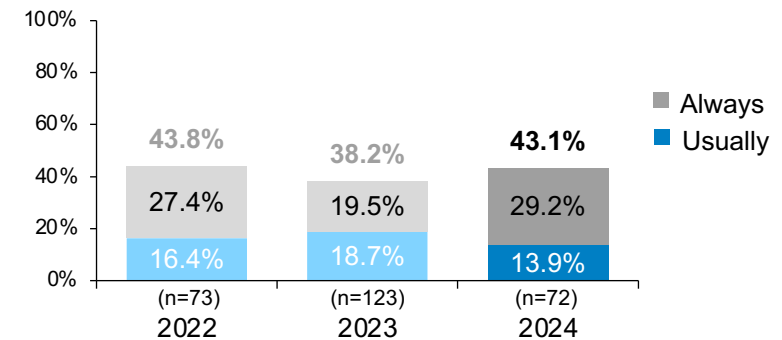
- More than eight in 10 indicated that they did not have to spend more than 15 minutes in the waiting room before they saw someone for their appointment.
- Among those who experienced a wait that exceeded 15 minutes, less than half were informed about the delay.

Q16. Spent more than 15 minutes in waiting room for appointment



If always, usually or sometimes...

Q17. If so, were kept updated on reason and length of delay



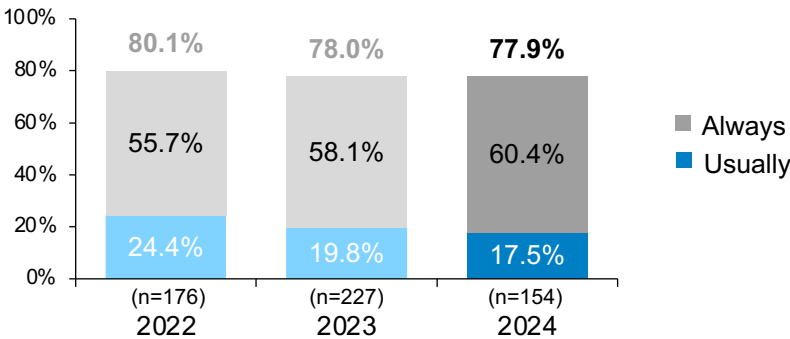
↑↓ Score is significantly higher or lower than the previous year's score.

Dental plan services

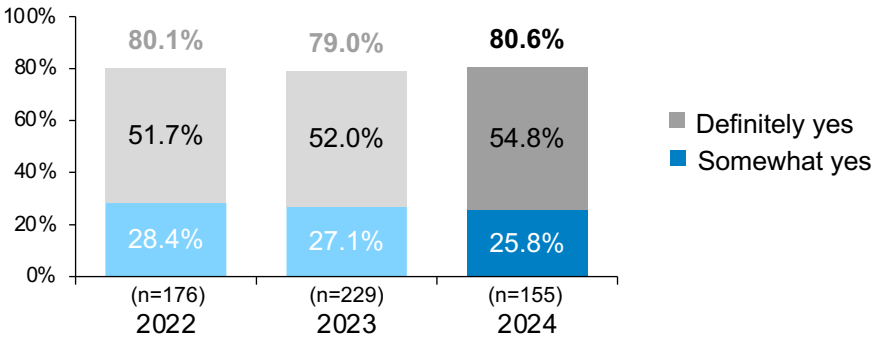
- More than three in four indicated that the plan typically covered services as expected and that the plan covered what was needed.



Q19. Dental plan covered all services you thought were covered



Q20. Dental plan covered what you and your family needed done



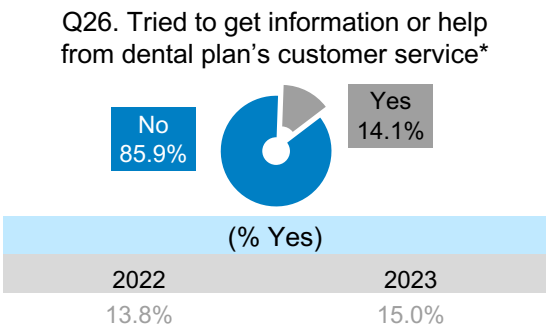
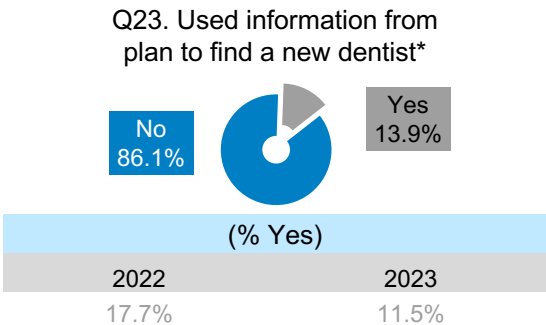
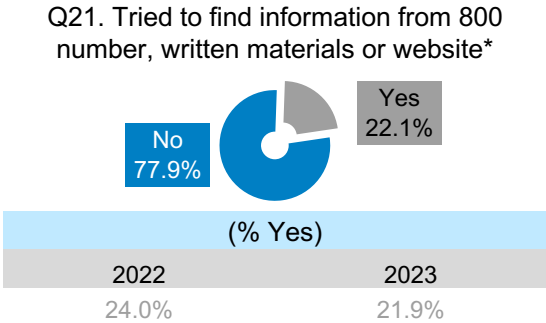
Dental plan services composite			
	2022	2023	2024
Global proportion	73.8%	79.7%	76.9%
Mean score	2.2377	2.3560	2.3218

Please refer to page 7 for statistical references and footnotes.

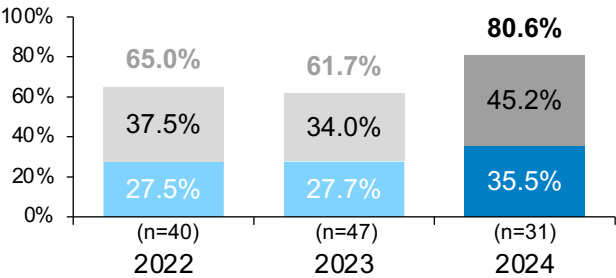
↑↓ Score is significantly higher or lower than the previous year's score.

Dental plan services

- Among those who looked for plan information, more than seven in 10 indicated that the information helped them find a dentist they were happy with.
- Among those who have called customer service, most indicated that the representative gave them the information they needed and treated them courtesy and respect.

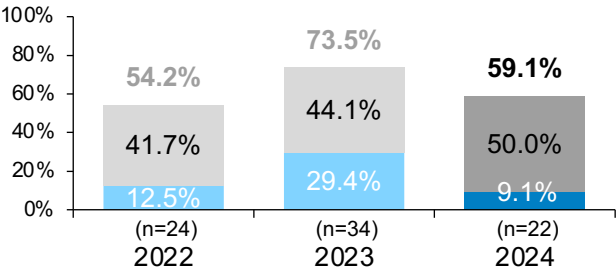


Q22. 800 number, written materials and website provided needed information

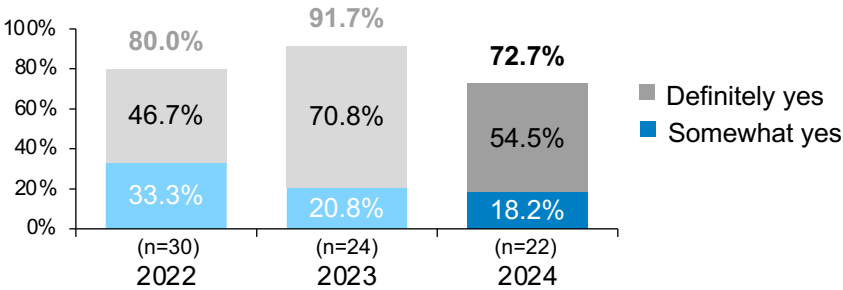


Always
Usually

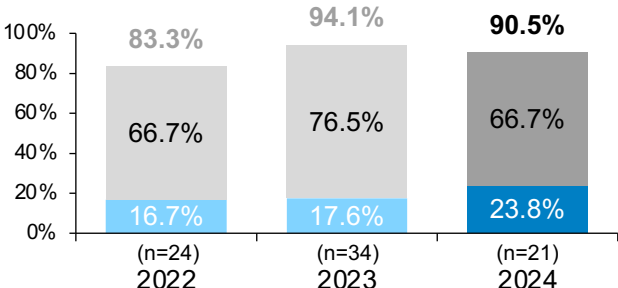
Q27. Plan's customer service gave you information or help needed



Q24. Plan information helped find a dentist you were happy with



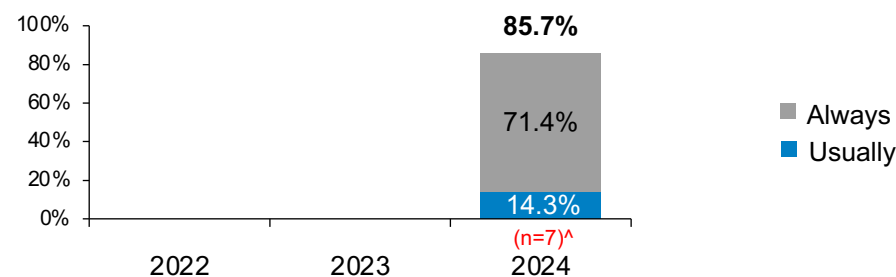
Q28. Plan's customer service treated you with courtesy and respect



Transportation assistance

- Six out of seven indicated that the help with transportation met their needs.

Q27a. Help with transportation met your needs[†]
(% Usually or Always)



A caret (^) indicates a small base (under 20).
Interpret results with caution.

Appendix A: Member profile

Member profile

	2022	2023	2024
Member health			
Overall condition of teeth and gums (Q30)			
Excellent/very good	30.4%	29.1%	36.3%
Good	31.0%	31.7%	35.0%
Fair/poor	38.6%	39.1%	28.8% ↓
Member Demographics			
Age (Q31)			
18-24	23.9%	18.8%	19.9%
25-34	10.0%	9.8%	18.0% ↑
35-44	13.3%	17.5%	14.3%
45-54	18.3%	23.9%	15.5%
55-64	26.1%	22.2%	18.6%
65 or older	8.3%	7.7%	13.7%
Gender (Q32)			
Female	70.0%	65.9%	65.4%
Male	30.0%	34.1%	34.6%
Ethnicity (Q34)			
Hispanic or Latino	18.4%	12.1%	8.3%
Non-Hispanic or Latino	81.6%	87.9%	91.7%
Race (Q35)			
White	75.9%	69.3%	72.3%
Black or African-American	12.6%	15.4%	21.3%
American Indian or Alaska Native	15.5%	14.9%	14.2%
Asian	2.3%	3.1%	4.5%
Native Hawaiian/Pacific Islander	0.0%	1.3%	0.0%
Other	8.0%	8.8%	5.8%
Education (Q33)			
Some college or less	95.5%	91.9%	90.0%
College graduate or more	4.5%	8.1%	10.0%

↑↓ Score is significantly higher or lower than the previous year's score.

Appendix B: Overall ratings and composite score summary tables

Overall ratings and composites - global proportions

	2022	2023	2024
Rating of Dental Plan (Q29) (% 8, 9 or 10)	65.3%	67.4%	64.1%
Rating of Dental Care (Q18) (% 8, 9 or 10)	76.4%	75.0%	81.9%
Rating of Regular Dentist (Q10) (% 8, 9 or 10)	77.0%	81.4%	78.9%
Rating of Ease of Finding a Dentist (Q25) (% 8, 9 or 10)	51.6%	65.4%	68.2%
Care from dentist and staff (% Always or Usually)	90.1%	91.6%	91.9%
Q6. Dentist explained things in a way that was easy to understand	86.7%	89.6%	91.9%
Q7. Dentist listened carefully	89.8%	88.5%	91.1%
Q8. Dentist treated you with courtesy and respect	93.8%	97.3%	97.0%
Q9. Dentist spent enough time	89.1%	89.1%	88.8%
Q11. Dentist/staff did everything to make you feel comfortable during dental work	90.4%	92.2%	91.9%
Q12. Dentist/staff explained what they were doing while treating you	90.6%	92.8%	90.5%
Access to dental care (% Always or Usually)	71.2%	66.4%	72.5%
Q13. Regular dental appointments were as soon as wanted	76.7%	78.9%	84.7%
Q14. Emergency dental appointments were as soon as wanted (% Definitely yes or Somewhat yes)	86.8%	77.0%	85.4%
Q15. Specialty dental appointments were as soon as wanted	67.1%	57.9%	67.1%
Q16. Spent more than 15 minutes in waiting room for appointment (% Sometimes or Never)	81.6%	80.0%	82.2%
Q17. If waited more than 15 minutes, were kept updated on reason and length of delay	43.8%	38.2%	43.1%
Dental plan services (% Always or Usually)	73.8%	79.7%	76.9%
Q19. Dental plan covered all services you thought were covered	80.1%	78.0%	77.9%
Q20. Dental plan covered what you and your family needed done (% Definitely yes or Somewhat yes)	80.1%	79.0%	80.6%
Q22. 800 number, written materials and website provided needed information	65.0%	61.7%	80.6%
Q24. Plan information helped find a dentist you were happy with (% Definitely yes or Somewhat yes)	80.0%	91.7%	72.7%
Q27. Plan's customer service gave you information or help needed	54.2%	73.5%	59.1%
Q27a. Help with transportation met your needs [†]	-	-	85.7%
Q28. Plan's customer service treated you with courtesy and respect	83.3%	94.1%	90.5%

[†] Indicates a new question in 2024.

↑↓ Score is significantly higher or lower than the previous year's score.

Overall ratings and composites – Mean scores

	2022	2023	2024
Overall mean ratings: 0 to 10 scale			
Rating of Dental Plan (Q29)	8.03	7.86	7.79
Rating of Dental Care (Q18)	8.46	8.23	8.59
Rating of Regular Dentist (Q10)	8.45	8.57	8.65
Rating of Ease of Finding a Dentist (Q25)	6.87	7.96	7.77
Composite scores: Three-point mean scores			
Care from dentists and staff	2.6532	2.6513	2.7017
Access to dental care	2.1614	2.0333	2.1695
Dental plan services	2.2377	2.3560	2.3218

The scale for the composite mean scores is based on the question scale. In this case, the Getting Treatment Quickly, How Well Clinicians Communicate and the Perceived Improvement composites are 1.0000 – 3.0000 scales. This scale also applies to the composites in the Dental reports. See below:

- Always = 3.0000
- Usually = 2.0000
- Sometimes/Never = 1.0000

The ten-point scale is assigned a value of

- 0 = 0, 1 = 1, 2 = 2, 3 = 3, and so on, through the value of 10 = 10.

↑↓ Score is significantly higher or lower than the previous year's score.

Overall ratings and composites – Demographic analysis

2024 Demographic Analysis	Age				Gender		Education		Medicaid LOB	
	18-34	35-44	45-54	55+	Male	Female	Some College or Less	College Graduate or More	Expansion	Unassigned
	(L) 61	(M) 23	(N) 25	(O) 52	(P) 56	(Q) 106	(R) 144	(S) 184	(W) 58	(X) 147
Total respondents										
Rating of Dental Plan (Q29) (% 8, 9 or 10)	61.0%	63.6%	56.0%	71.4%	65.5%	63.4%	64.5%	56.3%	69.8%	61.9%
Rating of Dental Care (Q18) (% 8, 9 or 10)	82.0%	82.6%	72.0%	86.0%	83.9%	80.8%	81.0%	87.5%	84.4%	80.9%
Rating of Regular Dentist (Q10) (% 8, 9 or 10)	81.8%	69.6%	73.3%	82.1%	75.6%	80.7%	78.0%	85.7%	86.8%	75.8%
Rating of Ease of Finding a Dentist (Q25) (% 8, 9 or 10)	57.1%	100%	80.0%	62.5%	75.0%	64.3%	63.2%	100%	100%	50.0%
Care from dentists and staff (% Always or Usually)	93.8%	91.3%	89.8%	91.2%	91.6%	92.0%	91.6%	93.3%	91.6%	92.0%
Q6. Dentist explained things in a way that was easy to understand	92.7%	91.3%	93.3%	90.2%	89.4%	93.2%	91.7%	92.9%	92.1%	91.8%
Q7. Dentist listened carefully	94.5%	87.0%	93.3%	87.8%	89.4%	92.0%	90.8%	92.9%	92.1%	90.7%
Q8. Dentist treated you with courtesy and respect	98.2%	91.3%	100%	97.6%	97.9%	96.6%	96.7%	100%	97.4%	96.9%
Q9. Dentist spent enough time	89.1%	82.6%	100%	87.5%	87.2%	89.7%	88.2%	92.9%	92.1%	87.5%
Q11. Dentist/staff did everything to make you feel comfortable during dental work	96.7%	95.7%	72.0%	94.1%	94.6%	90.4%	91.5%	93.8%	89.1%	93.0%
Q12. Dentist/staff explained what they were doing while treating you	91.7%	100%	80.0%	89.8%	90.9%	90.3%	90.7%	87.5%	87.0%	92.0%
Access to dental care (% Always or Usually)	70.7%	65.1%	73.1%	81.3%	67.4%	74.5%	71.4%	81.6%	74.3%	71.4%
Q13. Regular dental appointments were as soon as wanted	86.4%	82.6%	68.0%	91.8%	83.6%	85.3%	84.2%	87.5%	80.0%	86.6%
Q14. Emergency dental appointments were as soon as wanted (% Definitely or Somewhat yes)	91.3%	62.5%	85.7%	100%	84.6%	85.7%	84.2%	100%	83.3%	86.2%
Q15. Specialty dental appointments were as soon as wanted	58.6%	61.5%	70.0%	82.4%	47.4%	74.5%	66.7%	71.4%	69.6%	66.0%
Q16. Spent more than 15 minutes in waiting room for appointment (% Sometimes or Never)	75.0%	77.3%	91.7%	88.0%	81.5%	82.5%	80.7%	93.8%	80.4%	82.9%
Q17. If waited more than 15 minutes, were kept updated on reason and length of delay	41.9%	41.7%	50.0%	44.4%	40.0%	44.7%	41.3%	55.6%	58.3%	35.4%
Dental plan services (% Always or Usually)	79.0%	87.0%	74.3%	72.0%	73.4%	78.9%	77.1%	75.7%	79.7%	75.8%
Q19. Dental plan covered all services you thought were covered	80.3%	77.3%	66.7%	80.4%	81.1%	76.2%	78.7%	68.8%	77.3%	78.2%
Q20. Dental plan covered what you and your family needed done (% Definitely or Somewhat yes)	90.0%	78.3%	70.8%	74.5%	81.5%	80.2%	81.8%	68.8%	80.0%	80.9%
Q22. 800 number, written materials and website provided needed information	80.0%	100%	75.0%	72.7%	77.8%	81.8%	84.0%	66.7%	66.7%	93.8%
Q24. Plan information helped find a dentist you were happy with (% Definitely or Somewhat yes)	57.1%	100%	100%	62.5%	62.5%	78.6%	68.4%	100%	87.5%	64.3%
Q27. Plan's customer service gave you information or help needed	66.7%	66.7%	33.3%	66.7%	50.0%	64.3%	60.0%	50.0%	77.8%	46.2%
Q27a. Help with transportation met your needs†	100%	100%	100%	75.0%	100%	66.7%	85.7%	NA	66.7%	100%
Q28. Plan's customer service treated you with courtesy and respect	100%	100%	100%	75.0%	87.5%	92.3%	89.5%	100%	88.9%	91.7%

† Indicates a new question in 2024.
A capital letter and green font indicates that result is significantly higher than the corresponding column.
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Appendix C: SatisAction™ key driver statistical model

POWeR™ Chart shown in the executive summary on page 3.

Background

Overview. The key driver statistical model is a powerful, proprietary statistical methodology used to identify the key drivers of the overall rating and provide actionable direction for satisfaction improvement programs. This methodology is the result of a number of years of development and testing using health care satisfaction data. We have been successfully using this approach since 1997.

The model provides the following:

- Identification of the elements that are important in driving the overall dental plan rating.
- Measurement of the relative importance of each of these elements.
- Measurement of how well members think the plan performed on those important elements.
- Presentation of the importance/performance results in a matrix that provides clear direction for member satisfaction improvement efforts by the plan.

Methodology

Importance analysis. The importance analysis involves a multi-step process:

- Factor analysis is used to summarize the predictor set into a more manageable number of composite variables.
- Regression Model I is used to make preliminary estimates and identify leverage points and outliers.
- Leverage points and outliers are eliminated.
- Regression Model II is run on the remaining data to derive final estimates of the importance of the various satisfaction elements.

Factor analysis. Factor analysis is used to reduce the number of items in the predictor set to a smaller set of underlying constructs, or factors. It is necessary to go through this process because of the high degree of collinearity in the original data. This is a problem for the regression analysis to follow because regression assumes non-collinearity between predictor variables.

Regression analysis. Regression analysis is then used to predict overall plan ratings on the factors created in the previous step. As noted above, regression analysis is run in two steps. The first step is used to derive preliminary estimates of the importance of the various satisfaction elements and to identify outliers and leverage points. Those outliers and leverage points are eliminated before running the second regression model which produces final estimates of the importance of each satisfaction element.

Derived importance. The relative importance of each survey item is derived from the combined results of the factor and regression analyses. The correlations of each question with each factor are squared and then multiplied by the standardized (beta) regression coefficients associated with each of those factors. This sum is then rescaled so that the largest value (most important item) is rescaled to 100 points, the smallest value is rescaled to 0 points and the median value is rescaled to 50 points.

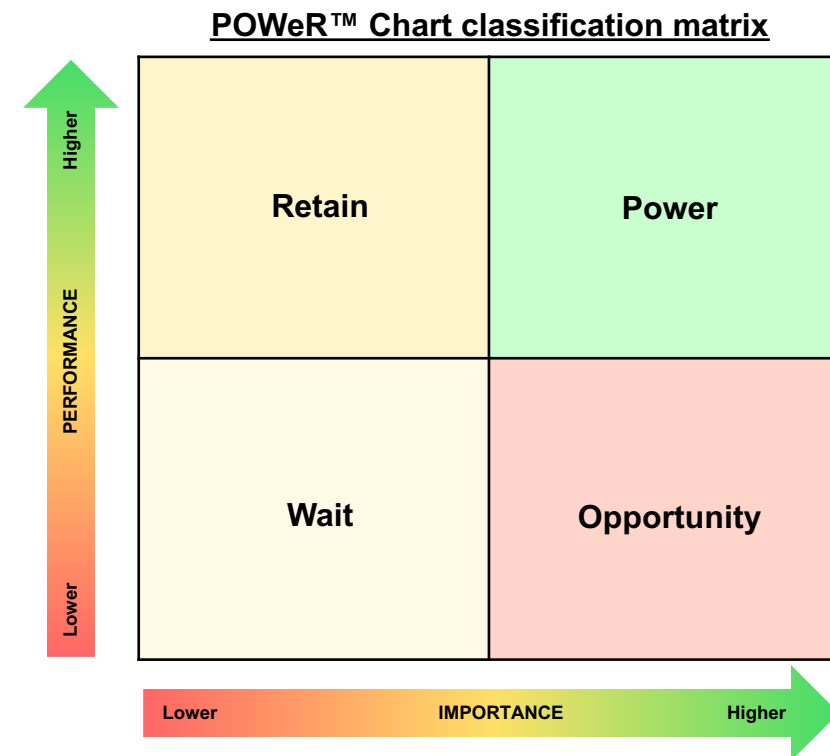
Performance analysis.

Relative performance is also calculated for each survey variable. Ratings are rescaled on a 100-point basis (like importance values) so that the highest rating is set to 100 points, the lowest rating is set to 0 points and the median rating is set to 50 points.

Methodology

Classification matrix. Results of the key driver modeling are presented in a classification matrix. The importance and performance results for each item in the model are plotted in a matrix like the one shown below. This matrix provides a quick summary of what is most important to your members and how your plan is doing on those items. The matrix is divided into four quadrants. The quadrants are defined by the point where the medians of the importance and performance scales intersect. The four quadrants can be interpreted as follows:

- *Power.* These items have a relatively large impact on the overall rating of the dental plan and your performance levels on these items are high. Promote and leverage strengths in this quadrant.
- *Opportunity.* Items in this quadrant also have a relatively large impact on the overall rating of the dental plan but your performance is below average. Focus resources on improving processes that underlie these items and look for a significant improvement in the overall dental plan rating.
- *Wait.* Though these items still impact the overall rating of the dental plan, they are somewhat less important than those that fall on the right-hand side of the chart. Relatively speaking, your performance is low on these items. Dealing with these items can wait until more important items have been dealt with.
- *Retain.* Items in this quadrant also have a relatively small impact on the overall rating of the dental plan but your performance is above average. Simply maintain performance on these items.



Variables in the model

Variables from the CAHPS Dental Survey that are important in determining member satisfaction are summarized below. This table also identifies the dependent variable (Q29 -- overall rating of the dental plan) and the independent or predictor variables.

The independent or predictor variables are:

- Q6 How often did your regular dentist explain things in a way that was easy to understand?
- Q7 How often did your regular dentist listen carefully to you?
- Q8 How often did your regular dentist treat you with courtesy and respect?
- Q9 How often did your regular dentist spend enough time with you?
- Q10 What number would you use to rate your regular dentist?
- Q11 How often did the dentists or dental staff do everything they could to help you feel as comfortable as possible during your dental work?
- Q12 How often did the dentists or dental staff explain what they were doing while treating you?
- Q13 How often were regular dental appointments as soon as wanted?
- Q14 Did you get to see an emergency dentist as soon as wanted?
- Q15 How often did you get a specialty dental appointment as soon as wanted?
- Q16 How often did you have to spend more than 15 minutes in the waiting room before you saw someone for your appointment?
- Q17 How often did someone tell you why there was a delay or how long the delay would be?
- Q18 What number would you use to rate all of the dental care you personally received in the last 6 months?
- Q19 How often did your dental plan cover all of the services you thought were covered?
- Q20 Did your dental plan cover what you and your family needed to get done?
- Q22 How often did the 800 number, written materials, or website provide the information you wanted?
- Q27 How often did your dental plan's customer service give you the information or help you needed?
- Q28 How often did your dental plan's customer service staff treat you with courtesy and respect?

The dependent variable is:

- Q29 What number would you use to rate your dental plan?

Factor analysis results

Factor analysis. Factor analysis reduced the 18 highly-correlated model variables to five orthogonal (uncorrelated) factors that explain 71.8% of the variation in the original variables. This is necessary due to the strong relationships or correlation between certain variables. The table below shows the factor correlations or loadings. For readability, only those variables with correlations greater than 0.250 are displayed.

Factor Correlations with Survey Variables

Question		Survey Items	Factors				
			1	2	3	4	5
Q6	How often did your regular dentist explain things in a way that was easy to understand?		0.8811				
Q7	How often did your regular dentist listen carefully to you?		0.8544				
Q9	How often did your regular dentist spend enough time with you?		0.7933	0.2525			
Q8	How often did your regular dentist treat you with courtesy and respect?		0.7845				
Q10	What number would you use to rate your regular dentist?		0.7096	0.3910			0.3077
Q18	What number would you use to rate all of the dental care you personally received in the last 6 months?		0.6090	0.3181	0.4531		
Q14	Did you get to see an emergency dentist as soon as wanted?			0.8584			
Q15	How often did you get a specialty dental appointment as soon as wanted?		0.2881	0.7229		0.3185	
Q17	How often did someone tell you why there was a delay or how long the delay would be?		0.3654	0.5386			
Q11	How often did the dentists or dental staff do everything they could to help you feel as comfortable as possible during your dental work?		0.3799		0.8307		
Q12	How often did the dentists or dental staff explain what they were doing while treating you?		0.3087		0.8081		
Q13	How often were regular dental appointments as soon as wanted?			0.4940	0.5868		
Q22	How often did the 800 number, written materials, or website provide the information you wanted?					0.7969	
Q27	How often did your dental plan's customer service give you the information or help you needed?					0.7771	0.3694
Q28	How often did your dental plan's customer service staff treat you with courtesy and respect?				-0.4370	0.5564	
Q16	How often did you have to spend more than 15 minutes in the waiting room before you saw someone for your appointment?		0.2836	0.4185		-0.4253	0.3537
Q20	Did your dental plan cover what you and your family needed to get done?						0.8528
Q19	How often did your dental plan cover all of the services you thought were covered?					0.2670	0.7959

Regression analysis results

Regression analysis. The five factors identified in the previous step were used as predictors in a regression model with Q29, the overall dental plan rating, as the dependent variable. Regression was first run to test the model and identify any observations that have a high degree of leverage on the regression coefficients (disproportionately high degree of influence relative to others) as well as observations that can be considered outliers because of inconsistent responses.

The high leverage cases and outliers were removed, and the regression model was rerun. The regression coefficients for each factor provide the second set of inputs necessary to determine the key drivers of the overall dental plan rating. These coefficients provide estimates of the relative importance of each factor in determining the overall dental plan rating. The table below shows the raw regression coefficients, beta coefficients (standardized regression coefficients) and the statistical significance of those coefficients. This model explains 71.6% of the variation in the dependent variable ($R^2 = 0.716$).

Regression Coefficients

Variable	Unstandardized Coefficients	Standardized (Beta) Coefficients	Significance Level
Constant	7.8996	0.0000	0.0000
Factor 1 -- Q6, Q7, Q9, Q8, Q10, Q18	0.3662	0.1554	0.0009
Factor 2 -- Q14, Q15, Q17	0.2922	0.1308	0.0047
Factor 3 -- Q11, Q12, Q13	0.7585	0.3388	0.0000
Factor 4 -- Q22, Q27, Q28, Q16	0.5137	0.2385	0.0000
Factor 5 -- Q20, Q19	1.5638	0.6604	0.0000

Results

Derived importance. The importance of each survey item is derived from the combined results of the factor and regression analyses. The correlations of each question with each factor were squared and then multiplied by the standardized (beta) regression coefficients associated with each of those factors. This sum was then rescaled so that the largest value (most important item) is rescaled to 100 points, the smallest value is rescaled to 0 points and the median value is rescaled to 50 points.

Plan performance. Relative performance is calculated for each survey variable. Ratings are rescaled on a 100-point basis (like importance values) so that the highest rating is set to 100 points, the lowest rating is set to 0 points and the median rating is set to 50 points.

Question	Survey Items	Importance	Performance	Top 2/Top 3 Scores
Q20	Did your dental plan cover what you and your family needed to get done?	100	43	80.6%
Q19	How often did your dental plan cover all of the services you thought were covered?	95	47	77.9%
Q11	How often did the dentists or dental staff do everything they could to help you feel as comfortable as possible during your dental work?	65	81	91.9%
Q12	How often did the dentists or dental staff explain what they were doing while treating you?	63	80	90.5%
Q27	How often dental plan's customer service give you the information or help you needed?	62	30	59.1%
Q13	How often were regular dental appointments as soon as wanted?	53	44	84.7%
Q10	What number would you use to rate your regular dentist?	51	59	78.9%
Q18	What number would you use to rate all of the dental care you personally received in the last 6 months?	51	56	81.9%
Q22	How often did the 800 number, written materials, or website provide the information you wanted?	50	42	80.6%
Q16	How often did you have to spend more than 15 minutes in the waiting room before you saw someone for your appointment?	49	44	82.2%
Q28	How often did your dental plan's customer service staff treat you with courtesy and respect?	42	65	90.5%
Q7	How often did your regular dentist listen carefully to you?	37	82	91.9%
Q6	How often did your regular dentist explain things in a way that was easy to understand?	36	84	91.9%
Q9	How often did your regular dentist spend enough time with you?	32	71	88.8%
Q15	How often did you get a specialty dental appointment as soon as wanted?	30	28	67.1%
Q8	How often did your regular dentist treat you with courtesy and respect?	28	100	97.0%
Q14	Did you get to see an emergency dentist as soon as wanted?	23	44	85.4%
Q17	How often did someone tell you why there was a delay or how long the delay would be?	0	0	43.1%