

RESEARCH REPORT

# Exploring Oral Health and Care Access among Adults with Disabilities

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# Introduction

More than one in four adults in the United States (28.7%) has [at least one type of disability](#).

Adults with disabilities are more likely to have [more chronic health conditions](#) as well as worse oral health outcomes — such as [untreated dental decay](#), [missing teeth](#), and [delayed necessary care](#) — than adults without disabilities. Lower income and [Black and Hispanic race/ethnicity](#) are linked to greater oral health inequities for adults with disabilities. The goal of this study was to examine access to oral health care and oral health outcomes among adults reporting at least one disability.

The nationally representative 2024 State of Oral Health Equity in America (SOHEA) survey was created by CareQuest Institute for Oral Health and administered by NORC at the University of Chicago. Randomly selected adults on the AmeriSpeak panel were asked to report if they had a disability related to their vision or hearing and if they had a disability that caused significant difficulties with their ability to think, move, or live independently. Those adults who reported having one or more disabilities were also asked about their ability to access dental care. Findings of this report show that many adults living with disabilities face considerable challenges to accessing necessary oral health care.

**Adults with disabilities are more likely to have more chronic health conditions as well as worse oral health outcomes — such as untreated dental decay, missing teeth, and delayed necessary care — than adults without disabilities.**



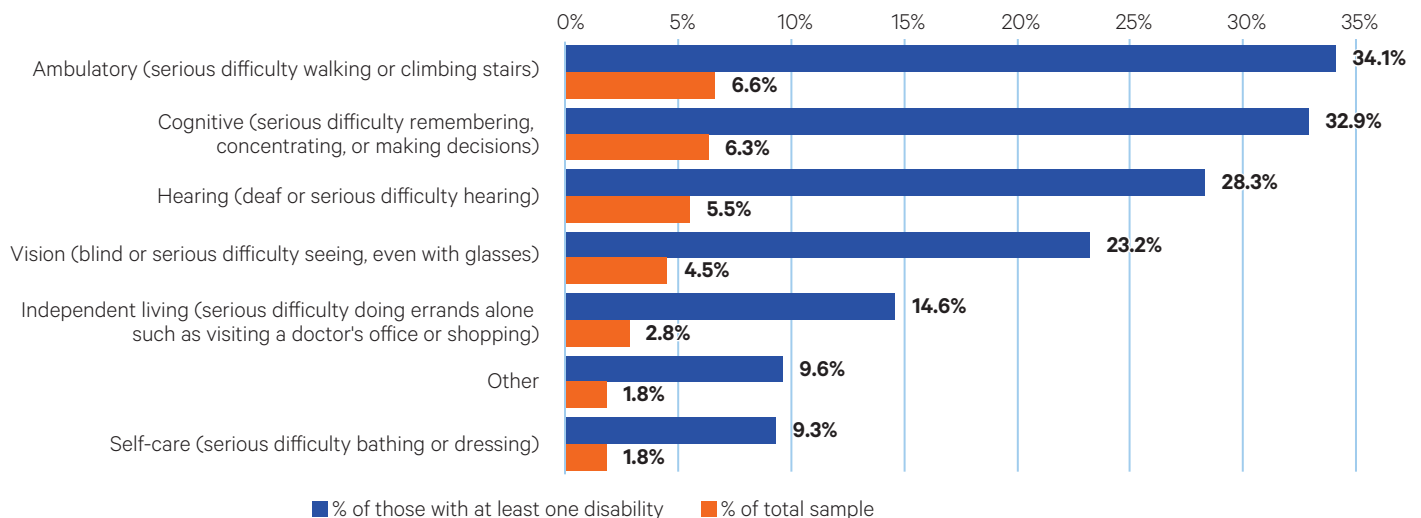


# Number and Type of Disabilities Reported

Overall, 19.3% (n = 1,794 of 9,307) of adults surveyed said they have some kind of disability. Of those who reported having at least one disability, the most common was a disability involving ambulation (i.e., serious difficulty walking or climbing stairs; 34.1%), followed by a disability related to cognitive/thinking ability (32.9%),

hearing disability (28.3%), vision impairment (23.2%), challenges in living independently (14.6%), other disability (9.6%), and disabilities related to engaging in self-care, such as bathing or dressing (9.3%). It should be noted that respondents could report having more than one disability (Figure 1).

**Figure 1: Types of Disabilities Reported**

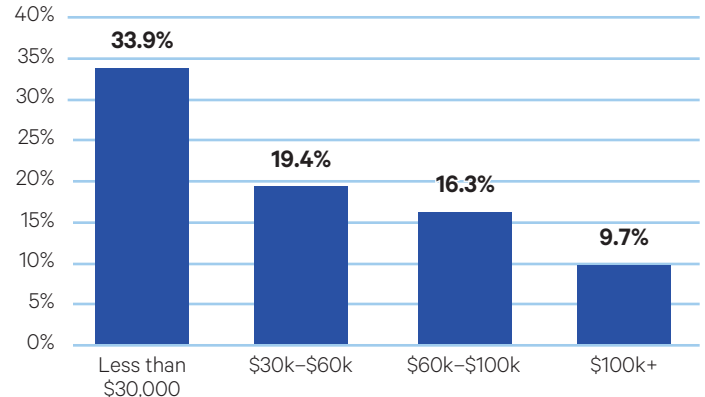
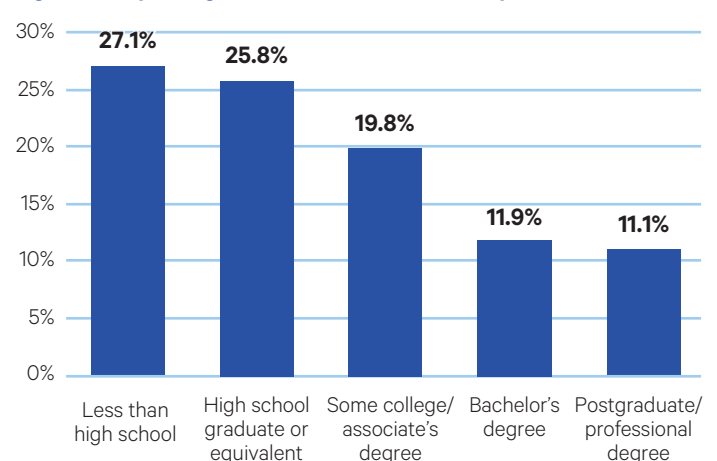


**Table 1: Percentage of Adults Reporting 1+ Disabilities by Gender, Age, Race/Ethnicity, Income, and Education**

Variable	Category	Percentage
Disability (one or more)	Yes	19.3
	No	80.7
Gender	Female	19.1
	Male	19.4
Age	18–29	18.3
	30–44	14.1
	45–59	17.5
	60+	25.4
Race/ethnicity	Asian	10.5
	Black	23.6
	Hispanic	18.1
	Other	20.9
	White	19.4
Income	Less than \$30,000	33.9
	\$30,000–under \$60,000	19.4
	\$60,000–under \$100,000	16.3
	\$100,000 or more	9.7
Education	Less than high school	27.1
	High school graduate or equivalent	25.8
	Some college/associate's degree	19.8
	Bachelor's degree	11.9
	Postgraduate/professional degree	11.1

Approximately one out of five adults identifying as female report having at least one disability (19.1%), comparable to the number of male adults reporting a disability (19.4%). The percentage of adults who report having one or more disabilities remains relatively stable from those aged 18–29 years (18.3%) to adults aged 45–59 years (17.5%) and increases to more than one in five adults aged 60 or above (25.4%). About one in four adults identifying their race/ethnicity as Black report having one or more disabilities (23.6%), followed by adults identifying their race/ethnicity as “other” (20.9%), white (19.4%), Hispanic (18.1%), and Asian (10.5%; Table 1).

The percentage of adults reporting one or more disabilities decreases as annual income increases, as 33.9% of adults earning less than \$30,000 per year report having a disability, compared with only 9.7% of adults earning \$100,000 or more annually (Figure 2). Similarly, the percentage of adults reporting at least one disability decreases as educational level achieved increases, with 27.1% of adults with less than a high school education reporting a disability, compared to 11.1% of adults with a postgraduate or professional degree (Figure 3).

**Figure 2: Reporting One or More Disabilities by Income****Figure 3: Reporting One or More Disabilities by Education**

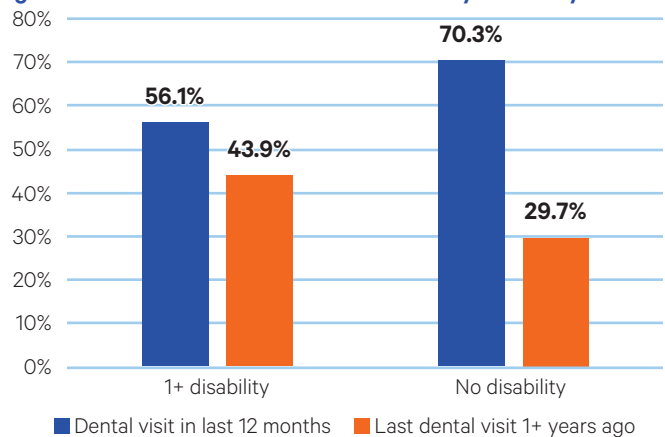
# Access to Oral Health Care

Of those adults who said they have a disability, 56.1% say they had a dental visit in the past 12 months, compared to 70.3% of adults who did not report having a disability (Figure 4). More than 15% of adults with a disability (15.6%) say their disability makes it difficult for them to access needed oral health care. While this survey did not ask about specific access barriers, other research [identifies such barriers](#), including communication difficulties between oral health professionals and their patients, lack of provider training in treating patients with disabilities, and a shortage of dental offices that are structurally designed to accommodate individuals with disabilities (e.g., those who use wheelchairs for mobility).

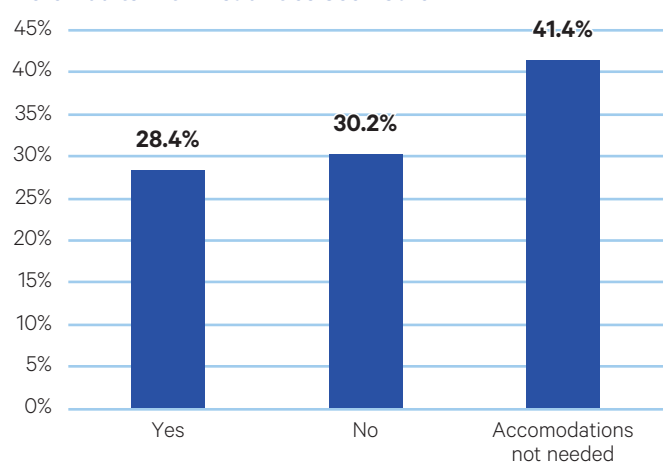
Nearly a third of adults reporting a disability (30.2%) say that the dental office where they receive care does not provide them with special help and/or accommodations for their dental visit, while 41.4% of adults with a disability said they do not require such accommodations (Figure 5). While 66.2% of adults with a disability report having dental insurance, this percentage increases to 75.7% of adults without a disability.

One quarter of adults with a disability (25%) said they delayed care, missed an appointment, or were unable to obtain needed health care, including oral health care. Nearly two-thirds of those who delayed care (62.2%) said they delayed or missed this care because their vehicle or someone who drives them was not available to take them to their appointment (Figure 6).

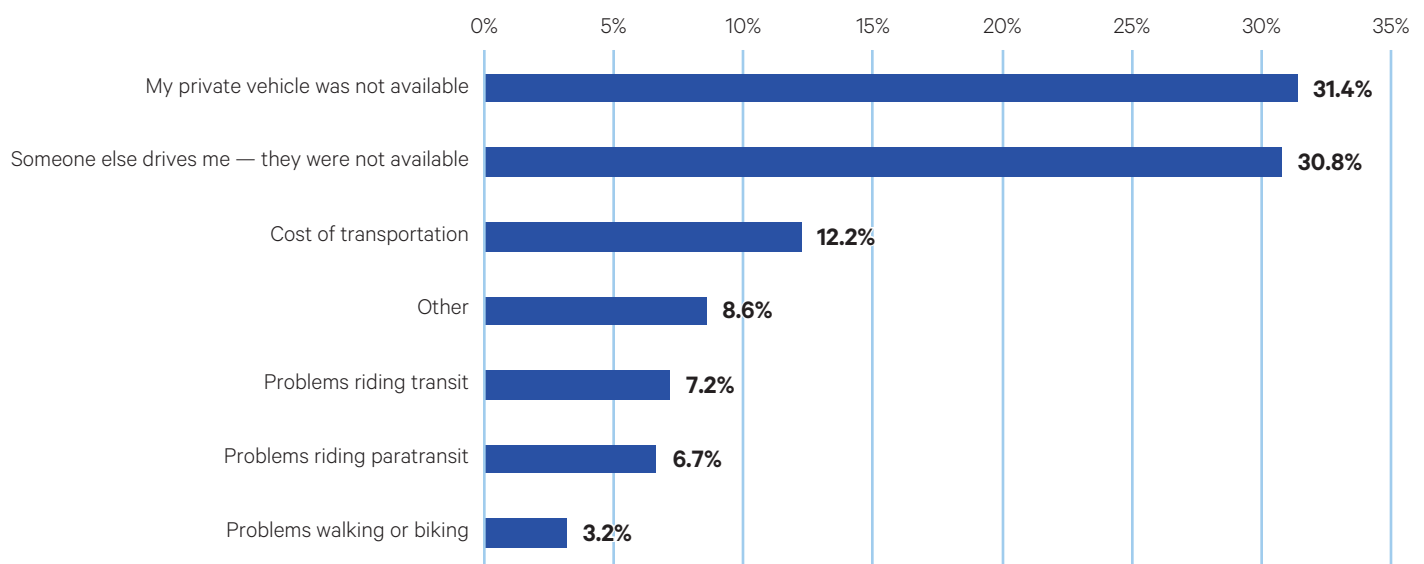
**Figure 4: Dental Visit Within the Last Year by Disability Status**



**Figure 5: Availability of Accommodations in Dental Settings Where Adults with Disabilities Seek Care**



**Figure 6: Reasons for Delayed Care, Missed Appointment, or Inability to Obtain Needed Health Care**



# Factors Related to Oral Health Outcomes in Adults with Disabilities

## Self-Rated Oral Health

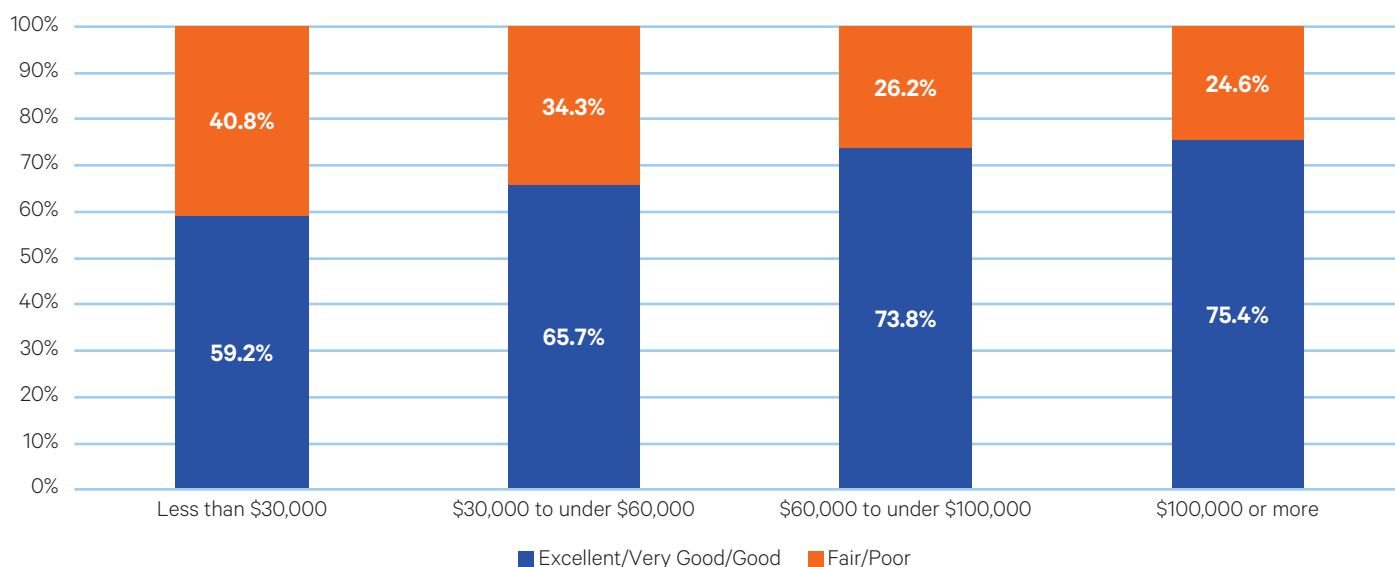
About seven out of 10 adults with disabilities in the age groups of 18–29 (70.1%) and 60+ years (70.3%) rate their oral health as excellent, very good, or good (i.e., report positive oral health). Meanwhile, only 63.9% of adults aged 30–44 and 56.6% of those aged 45–59 rated their oral health positively. As adults' income increases, so does the percentage of those reporting positive oral health. While 59.2% of adults with a disability earning less than \$30,000 annually rate their oral health as excellent/very good/good, this percentage increases to 75.4% for adults earning \$100,000 or more per year (Figure 7). Similarly, as respondents' education levels increase, so does the percentage of those rating their oral health positively, with 62.3% of those with a disability and with less than a high school education describing their oral health as excellent, very good, or good, compared to 76.8% of adults with a disability who have a postgraduate or professional degree.

When adjusting for sociodemographic factors including age, gender, race/ethnicity, income, education, metropolitan residence, and having dental insurance, adults with at least one

disability have significantly higher odds of reporting fair/poor oral health compared to adults without a disability (Appendix A). Additional findings related to self-rated oral health include:

- Those with disabilities who identify as female are significantly less likely to rate their overall oral health as fair or poor compared to adults with disabilities identifying as male.
- Adults reporting disabilities who identify their race/ethnicity as Asian are significantly more likely to rate their oral health negatively than those who identify as white.
- Adults with disabilities who earn \$30,000 or more are significantly less likely to describe their oral health as fair or poor than those making less than \$30,000 a year.
- Those with a bachelor's degree or higher are significantly less likely to rate their oral health negatively than adults with less than a high school education.
- Adults who have at least one disability and also have dental insurance are less likely to describe their oral health as fair/poor compared to adults with a disability who do not have insurance.

**Figure 7: Self-Rated Oral Health by Income among Adults with Disabilities**



## Last Dental Visit

Among adults with at least one disability, the percentage who report having had a dental visit within the last two years increases from 65.4% of adults aged 18–29 to 79.1% of adults aged 60 or above. In terms of income, 62.7% of adults with a disability earning \$30,000 or less per year had a recent dental visit, compared to 89.8% of adults earning \$100,000 or more annually. While 59.1% of adults with less than a high school education had a recent dental visit, this percentage increases to 88.7% for adults with a disability who have a postgraduate or professional degree (Figure 8).

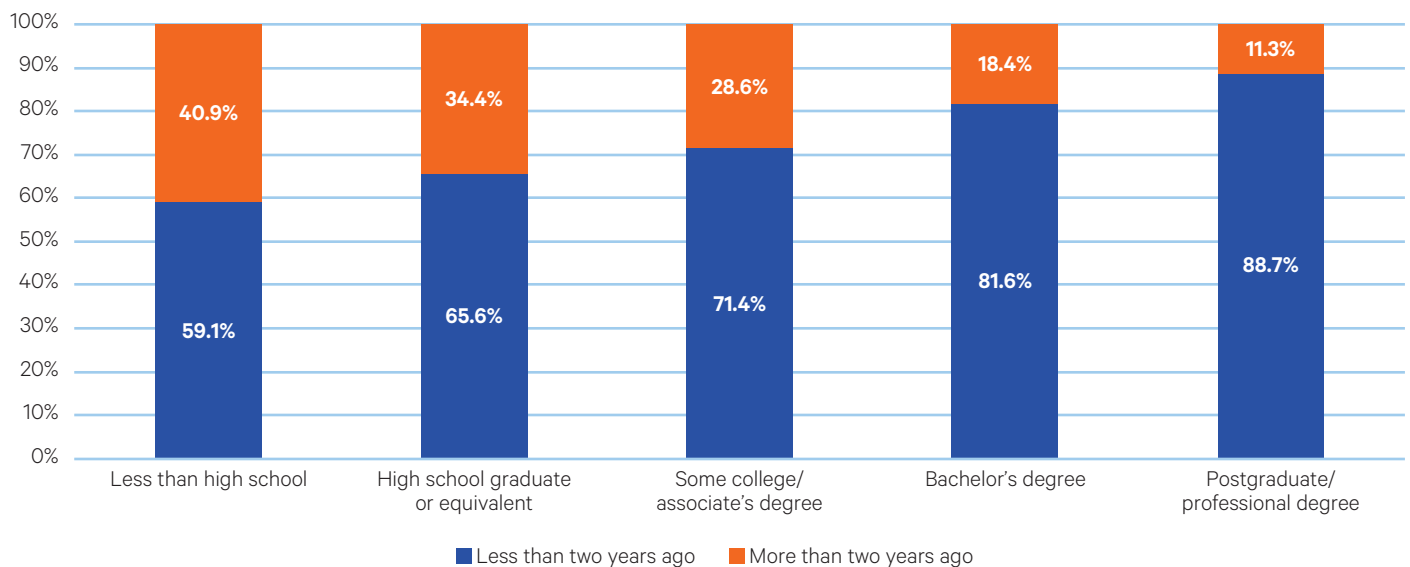
When adjusting for demographic variables, adults with at least one disability have significantly higher odds of not having had a dental visit in the prior two years, compared to adults without a disability (Appendix B). Additional findings related to recency of dental visits include:

- Adults with disabilities who are aged 60 and above are significantly more likely to have had a dental visit in

the last two years compared to those aged 18–29, and females are significantly more likely than males to have had a recent dental visit.

- Those living with disabilities who earn \$60,000 or more annually are significantly more likely to have seen a dentist recently, compared to respondents who earn less than \$30,000 a year.
- Adults with at least a bachelor's degree are more likely than those with less than a high school education to have had a dental visit in the prior two years.
- Those living in metropolitan areas are more likely than those living in non-metropolitan areas to have seen a dentist in the last two years.
- Counter-intuitively, adults with disabilities who do not have dental insurance are significantly more likely to have had a dental visit within the past two years, compared to respondents who have dental insurance.

**Figure 8: Last Dental Visit by Education among Adults with Disabilities**



## Access to a Usual Source of Dental Care (Dental Home)

The percentage of adults with disabilities who have a dental home — that is, a usual source of dental care — increases with age. For example, while 53.1% of adults aged 18–29 report having a dental home, this percentage increases to 82.1% for adults aged 60 or above (Figure 9). Similarly, the percentage of adults who have both a disability and a dental home increases with income and education. Nearly 60% (58.8%) of adults earning less than \$30,000 per year have a dental home, compared to 86.7% of adults earning \$100,000 or more per year. Similarly, while 57.6% of adults with less than a high school education have a dental home, this percentage increases to

91% for adults with a postgraduate or professional degree. While just over half (55.9%) of adults with a disability who do not have dental insurance have a dental home, more than three-quarters (77.2%) of adults with dental insurance have a dental home.

When adjusting for demographic variables, adults with at least one disability have significantly lower odds of having a dental home than adults without a disability (Appendix C). Additional findings related to dental home access include:

- Adults with at least one disability who are 45 or older are significantly more likely to report having a dental home



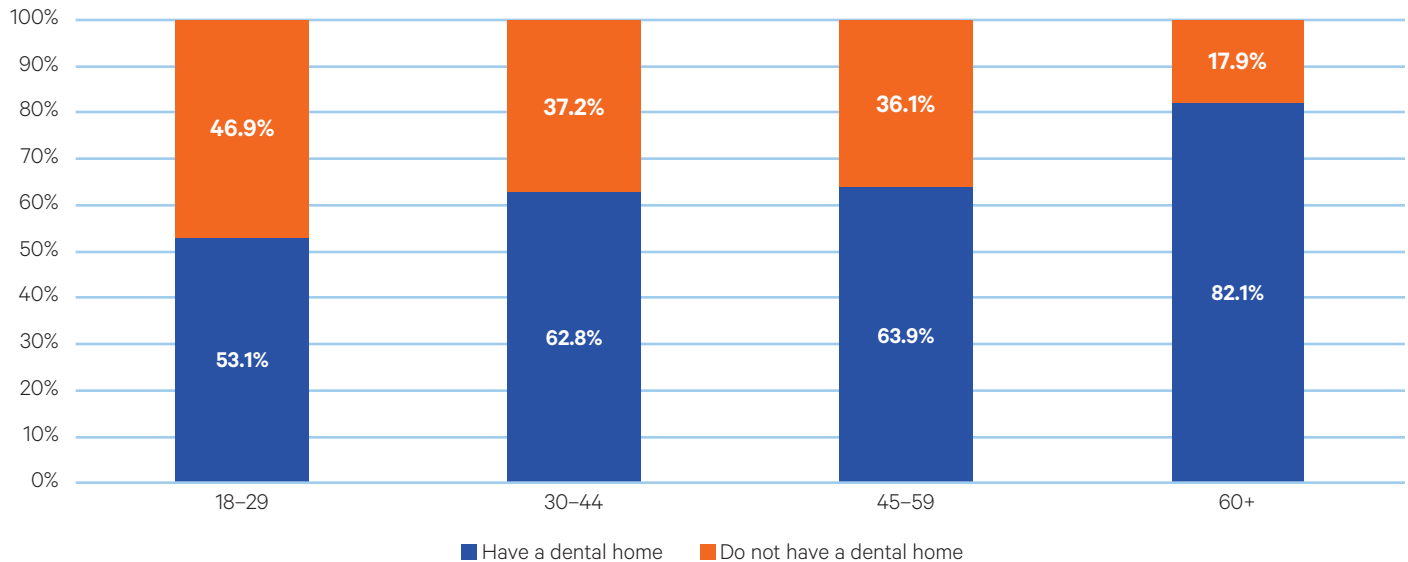
than those who are 18–29 years old.

- Those with disabilities who identify as female are significantly more likely to have a dental home than adults identifying as male.
- Adults reporting disabilities who identify their race/ethnicity as Hispanic are significantly less likely to have a dental home than those who identified as white.
- People with disabilities who report making \$30,000

or more annually are significantly more likely to have a dental home than those making less than \$30,000 a year.

- Adults with at least a high school education are more likely than those with less than a high school education to have a dental home.
- Among adults with disabilities, those who have dental insurance are significantly more likely to have a dental home than those without dental insurance.

**Figure 9: Access to a Dental Home by Age among Adults with Disabilities**



### Visiting an Emergency Department (ED) for Dental Care

While 10.2% of adults with a disability between the ages of 18 and 29 have visited an emergency department (ED) for dental care, only 2.2% of adults aged 60 or above have made such a visit. Adults with a disability identifying as Asian report visiting an ED for dental care at a higher percentage (18.9%) than adults with a disability identifying their race/ethnicity as Black (16.4%), other (14.8%), Hispanic (9.2%), or white (3.9%; Figure 10). The percentage of adults with a disability who visited an ED for dental care is inversely related to both income and education. While 8.8% of adults earning \$30,000 or less per year visited an ED for dental care, only 1.6% of adults earning \$100,000 or more did so. Similarly, more than seven times as many adults with less than a high school education visited an ED for dental care (16.6%) than did adults with a postgraduate or professional degree (2.8%).

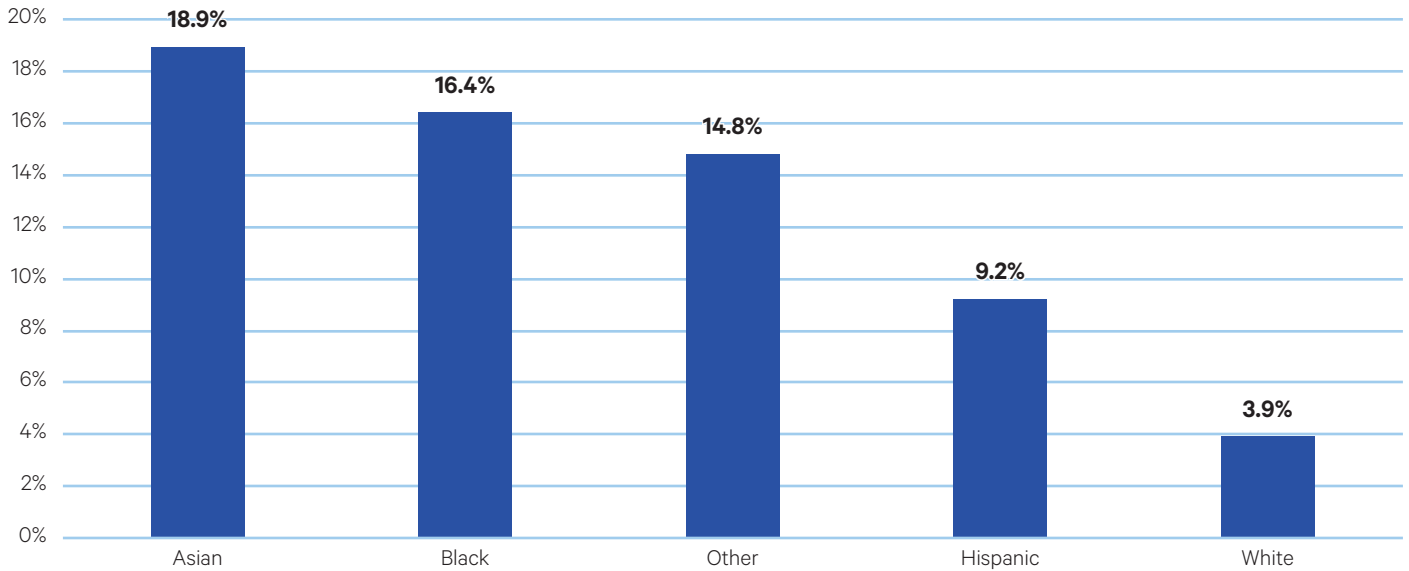
When adjusting for demographic variables, adults with at least one disability have significantly higher odds of having visited an ED for dental care than adults without a disability (Appendix D). Additional results regarding ED visits for dental care include:

- Adults with disabilities who are aged 30 or older are

significantly less likely to report having visited an ED for dental care than those who are 18–29 years old.

- Adults with disabilities who identify as female are significantly less likely to have sought dental care in an ED than those identifying as male.
- Adults with disabilities who identify their race/ethnicity as Asian, Black, or “other” are significantly more likely to have visited a hospital ED for dental care than white respondents.
- Adults with disabilities who report making \$60,000 or more annually are significantly less likely to have sought dental care through an ED than those making less than \$30,000 a year.
- Those with disabilities who have at least some amount of college education are significantly less likely to have visited an ED for dental care than those with less than a high school education.

**Figure 10: Emergency Department Dental Visits by Race and Ethnicity**



## Conclusions

Findings from this report show that for adults reporting at least one disability, factors including income, education, and access to dental insurance are often linked to oral health outcomes such as self-rated oral health, recency of last dental visit, access to a dental home, and ED visits for dental care. These socioeconomic factors are also linked with oral health outcomes for adults in [surveys of the general population](#) — that is, adults with and without disabilities. However, adults with disabilities face [additional barriers to receiving appropriate dental care](#), including oral health providers' lack of training in treating individuals with disabilities, dental offices that are not accessible for individuals who may require accommodations, and difficulties with communication between providers and their patients with disabilities. It is therefore critical to address social drivers of health — such as transportation options and accessible dental offices — that [disproportionately affect individuals with disabilities](#). Recommendations to [improve access to oral health care](#) for individuals with disabilities include enhancing Medicare and Medicaid coverage for adult dental care, providing additional training for providers in the treatment of individuals with disabilities, and integrating medical and dental care with specialty oral health care. Improving access to oral health care for individuals with disabilities is critical to reducing inequities and improving quality of life.

**Recommendations to improve access to oral health care for individuals with disabilities include enhancing Medicare and Medicaid coverage for adult dental care, providing additional training for providers in the treatment of individuals with disabilities, and integrating medical and dental care with specialty oral health care.**

# Methodology

The State of Oral Health Equity in America survey is a nationally representative survey of adults’ attitudes, experiences, and behaviors related to oral health. The study was designed by CareQuest Institute for Oral Health. Results were collected by NORC at the University of Chicago from March through May 2024 from adults 18 and older on the AmeriSpeak panel. AmeriSpeak is a probability-based panel designed to be representative of the United States (US) household population. Randomly selected US households were sampled using area probability and address-based sampling, with a known, non-zero probability of selection from the NORC National Sample Frame. Sampled households were contacted by US mail, telephone, and field interviewers. An additional general population sample was selected on a state-level basis to increase the number of complete interviews for individual state oversamples. A sampling unit of 22,448 was used, with a final sample size of 9,307 and a final weighted cumulative response rate of 7.3%. All data presented account for appropriate sample weights. The margin of error for the survey is 1.44%. All results presented are statistically significant at the  $p < 0.001$  level or less unless otherwise noted.

Adults were considered to have a disability if they answered “yes” to one or more questions regarding having serious difficulty with hearing, vision,

cognitive ability, ambulation (walking or climbing stairs), performing self-care activities, or living independently. As nearly all (96.2%) respondents completed the survey online, it is not clear how representative these results are of individuals who, because of a disability or other reason, choose not to or are unable to complete an online survey.

Chi-square analyses were conducted to test statistical significance between groups on the variables of interest. Logistic regression analyses examined statistically significant predictors ( $p < 0.05$ ) of the variables of interest, including in each model age (reference = 18–29 years old), gender (reference = male), race/ethnicity (reference = white), annual income (reference = less than \$30,000 annually), education level (reference = less than high school), metropolitan location of residence (reference = non-metropolitan), and dental insurance status (reference = no). As this survey was administered after the expiration of the COVID-19 public health emergency (PHE) declaration in May 2023, these results do reflect any loss of dental benefits through Medicaid or other sources due to the PHE expiration. While the cross-sectional nature of these data does not allow for causal conclusions to be drawn, future research should focus on examining underlying factors (e.g., insurance coverage, demographic factors, and other socioeconomic factors) that may help further explain these findings.

# Appendices

Appendix A. Logistic regression analyses predicting self-reports of oral health as fair or poor among adults with at least one disability

Variable	Category	OR	95% CI	P value
Disability	No	ref	ref	ref
	Yes	1.45	1.29–1.64	<0.001
Age	18–29	ref	ref	ref
	30–44	1.03	0.88–1.21	0.7
	45–59	1.17	1.00–1.37	0.057
	60+	0.81	0.69–0.94	0.007
Gender	Male	ref	ref	ref
	Female	0.81	0.69–0.94	<0.001
Race/ethnicity	White	ref	ref	ref
	Asian	1.84	1.47–2.30	<0.001
	Black	1.02	0.85–1.40	0.5
	Hispanic	0.87	0.75–1.00	0.05
	Other	1.10	0.85–1.40	0.5
Income	Less than \$30,000	ref	ref	ref
	\$30,000–under \$60,000	0.85	0.75–0.98	0.20
	\$60,000–under \$100,000	0.54	0.47–0.63	<0.001
	\$100,000 or more	0.42	0.36–0.50	<0.001
Education	Less than high school	ref	ref	ref
	High school graduate or equivalent	1.09	0.91–1.32	0.3
	Some college/associate’s degree	0.93	0.77–1.12	0.4
	Bachelor’s degree	0.56	0.45–0.70	<0.001
	Postgraduate/professional degree	0.44	0.34–0.56	<0.001
Metro residence	Non-metro area	ref	ref	ref
	Metro area	1.03	0.89–1.19	0.7
Dental insurance	Yes	ref	ref	ref
	No	0.56	0.50–0.62	<0.001

OR = odds ratio; 95% CI = 95% confidence interval; ref = variable reference level; bold = significant at  $p < 0.05$  or less

**Appendix B. Logistic regression analyses predicting not having had a dental visit in the prior two years among adults with at least one disability**

Variable	Category	OR	95% CI	P value
Disability	No	<i>ref</i>	<i>ref</i>	<i>ref</i>
	<b>Yes</b>	<b>1.33</b>	<b>1.16–1.51</b>	<b>&lt;0.001</b>
Age	18–29	<i>ref</i>	<i>ref</i>	<i>ref</i>
	30–44	1.07	0.91–1.26	0.4
	45–59	1.01	0.85–1.19	>0.9
	<b>60+</b>	<b>0.51</b>	<b>0.43–0.60</b>	<b>&lt;0.001</b>
Gender	Male	<i>ref</i>	<i>ref</i>	<i>ref</i>
	<b>Female</b>	<b>0.73</b>	<b>0.65–0.81</b>	<b>&lt;0.001</b>
Race/ethnicity	White	<i>ref</i>	<i>ref</i>	<i>ref</i>
	Asian	0.90	0.67–1.19	0.5
	Black	0.95	0.80–1.13	0.6
	Hispanic	1.10	0.95–1.28	0.2
	Other	1.16	0.90–1.49	0.3
Income	Less than \$30,000	<i>ref</i>	<i>ref</i>	<i>ref</i>
	\$30,000–under \$60,000	0.97	0.84–1.11	0.6
	<b>\$60,000–under \$100,000</b>	<b>0.60</b>	<b>0.51–0.70</b>	<b>&lt;0.001</b>
	<b>\$100,000 or more</b>	<b>0.38</b>	<b>0.35–0.46</b>	<b>&lt;0.001</b>
Education	Less than high school	<i>ref</i>	<i>ref</i>	<i>ref</i>
	High school graduate or equivalent	1.09	0.90–1.33	0.4
	Some college/associate’s degree	0.90	0.74–1.10	0.3
	<b>Bachelor’s degree</b>	<b>0.62</b>	<b>0.49–0.78</b>	<b>&lt;0.001</b>
	<b>Postgraduate/professional degree</b>	<b>0.45</b>	<b>0.34–0.59</b>	<b>&lt;0.001</b>
Metro residence	Non-metro area	<i>ref</i>	<i>ref</i>	<i>ref</i>
	<b>Metro area</b>	<b>0.76</b>	<b>0.66–0.88</b>	<b>&lt;0.001</b>
Dental insurance	Yes	<i>ref</i>	<i>ref</i>	<i>ref</i>
	<b>No</b>	<b>0.34</b>	<b>0.30–0.38</b>	<b>&lt;0.001</b>

OR = odds ratio; 95% CI = 95% confidence interval; *ref* = variable reference level; **bold = significant at  $p < 0.05$  or less**

**Appendix C. Logistic regression analyses predicting not having a dental home (usual source of dental care) among adults with at least one disability**

Variable	Category	OR	95% CI	P value
Disability	No	<i>ref</i>	<i>ref</i>	<i>ref</i>
	<b>Yes</b>	<b>1.44</b>	<b>1.25–1.64</b>	<b>&lt;0.001</b>
Age	18–29	<i>ref</i>	<i>ref</i>	<i>ref</i>
	30–44	0.93	0.79–1.10	0.4
	<b>45–59</b>	<b>0.83</b>	<b>0.70–0.99</b>	<b>0.039</b>
	<b>60+</b>	<b>0.39</b>	<b>0.33–0.46</b>	<b>&lt;0.001</b>
Gender	Male	<i>ref</i>	<i>ref</i>	<i>ref</i>
	<b>Female</b>	<b>0.72</b>	<b>0.65–0.81</b>	<b>&lt;0.001</b>
Race/ethnicity	White	<i>ref</i>	<i>ref</i>	<i>ref</i>
	Asian	1.06	0.80–1.39	0.7
	Black	1.03	0.86–1.24	0.7
	<b>Hispanic</b>	<b>1.35</b>	<b>1.17–1.57</b>	<b>&lt;0.001</b>
	Other	1.05	0.80–1.38	0.7
Income	Less than \$30,000	<i>ref</i>	<i>ref</i>	<i>ref</i>
	<b>\$30,000–under \$60,000</b>	<b>0.78</b>	<b>0.67–0.90</b>	<b>&lt;0.001</b>
	<b>\$60,000–under \$100,000</b>	<b>0.54</b>	<b>0.80–0.94</b>	<b>&lt;0.001</b>
	<b>\$100,000 or more</b>	<b>0.35</b>	<b>0.29–0.42</b>	<b>&lt;0.001</b>
Education	Less than high school	<i>ref</i>	<i>ref</i>	<i>ref</i>
	<b>High school graduate or equivalent</b>	<b>0.74</b>	<b>0.60–0.91</b>	<b>0.004</b>
	<b>Some college/associate’s degree</b>	<b>0.69</b>	<b>0.56–0.84</b>	<b>&lt;0.001</b>
	<b>Bachelor’s degree</b>	<b>0.57</b>	<b>0.45–0.71</b>	<b>&lt;0.001</b>
	<b>Postgraduate/professional degree</b>	<b>0.41</b>	<b>0.31–0.54</b>	<b>&lt;0.001</b>
Metro residence	Non-metro area	<i>ref</i>	<i>ref</i>	<i>ref</i>
	Metro area	0.95	0.81–1.11	0.5
Dental insurance	Yes	<i>ref</i>	<i>ref</i>	<i>ref</i>
	<b>No</b>	<b>0.32</b>	<b>0.29–0.37</b>	<b>&lt;0.001</b>

OR = odds ratio; 95% CI = 95% confidence interval; *ref* = variable reference level; **bold = significant at  $p < 0.05$  or less**



**Appendix D. Logistic regression analyses predicting visiting an emergency department for dental care within the past year among adults with at least one disability**

Variable	Category	OR	95% CI	P value
Disability	No	<i>ref</i>	<i>ref</i>	<i>ref</i>
	<b>Yes</b>	<b>2.48</b>	<b>1.93–3.17</b>	<b>&lt;0.001</b>
Age	18–29	<i>ref</i>	<i>ref</i>	<i>ref</i>
	<b>30–44</b>	<b>1.48</b>	<b>1.11–1.98</b>	<b>0.007</b>
	<b>45–59</b>	<b>0.39</b>	<b>0.26–0.58</b>	<b>&lt;0.001</b>
	<b>60+</b>	<b>0.28</b>	<b>0.18–0.41</b>	<b>&lt;0.001</b>
Gender	Male	<i>ref</i>	<i>ref</i>	<i>ref</i>
	<b>Female</b>	<b>0.79</b>	<b>0.63–1.00</b>	<b>0.050</b>
Race/ ethnicity	White	<i>ref</i>	<i>ref</i>	<i>ref</i>
	<b>Asian</b>	<b>2.72</b>	<b>1.63–4.34</b>	<b>&lt;0.001</b>
	<b>Black</b>	<b>3.05</b>	<b>2.26–4.09</b>	<b>&lt;0.001</b>
	Hispanic	1.29	0.93–1.79	0.13
	Other	2.08	1.28–3.26	0.002
Income	Less than \$30,000	<i>ref</i>	<i>ref</i>	<i>ref</i>
	\$30,000–under \$60,000	0.84	0.59–1.14	0.2
	<b>\$60,000–under \$100,000</b>	<b>0.58</b>	<b>0.41–0.81</b>	<b>0.002</b>
	<b>\$100,000 or more</b>	<b>0.24</b>	<b>0.14–0.38</b>	<b>&lt;0.001</b>
Education	Less than high school	<i>ref</i>	<i>ref</i>	<i>ref</i>
	High school graduate or equivalent	0.82	0.59–1.14	0.2
	<b>Some college/associate's degree</b>	<b>0.47</b>	<b>0.32–0.68</b>	<b>&lt;0.001</b>
	<b>Bachelor's degree</b>	<b>0.46</b>	<b>0.29–0.73</b>	<b>&lt;0.001</b>
	<b>Postgraduate/professional degree</b>	<b>0.34</b>	<b>0.18–0.62</b>	<b>&lt;0.001</b>
Metro residence	Non-metro area	<i>ref</i>	<i>ref</i>	<i>ref</i>
	Metro area	1.08	0.77–1.53	0.7
Dental insurance	Yes	<i>ref</i>	<i>ref</i>	<i>ref</i>
	<b>No</b>	<b>0.97</b>	<b>0.75–1.25</b>	<b>0.8</b>

OR = odds ratio; 95% CI = 95% confidence interval; *ref* = variable reference level; **bold = significant at  $p < 0.05$  or less**

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## CareQuest Institute for Oral Health

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