

CHAPTER 32

Oral Health (OH)

Lead Agencies

Centers for Disease Control and Prevention Health Resources and Services Administration Indian Health Service National Institutes of Health

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Goal: Prevent and control oral and craniofacial diseases, conditions, and injuries, and improve access to preventive services and dental care.

This chapter includes objectives that monitor the oral health of children, adolescents, and adults, access to preventive services, oral health interventions, monitoring and surveillance systems for oral health, and the public health infrastructure to support oral health programs. The Reader's Guide provides a step-by-step explanation of the content of this chapter, including criteria for highlighting objectives in the Selected Findings.¹

Status of Objectives



Figure 32-1. Midcourse Status of the Oral Health Objectives

All 33 objectives in the Oral Health Topic Area were measurable² (Figure 32–1, Table 32–1). The midcourse status of these objectives was as follows (Table 32–2):

- 16 objectives had met or exceeded their 2020 targets,³
- 3 objectives were improving,⁴
- 5 objectives had demonstrated little or no detectable change,⁵
- 1 objective was getting worse,⁶ and
- 8 objectives had baseline data only.⁷

Selected Findings

Oral Health of Children and Adolescents

 From 1999–2004 to 2011–2012, the proportion of children aged 3–5 years with dental caries experience in their primary teeth (OH-1.1) decreased from 33.3% to 27.9%, exceeding the 2020 target (Table 32–2).

- » In 2011–2012, there were statistically significant disparities by race and ethnicity and family income in the proportion of children aged 3–5 years with dental caries experience in their primary teeth (OH-1.1, Table 32–3). The disparity by sex was not statistically significant.
- There was little or no detectable change in the proportion of children aged 6–9 years with dental caries experience in their primary or permanent teeth (OH-1.2) from 1999–2004 (54.4%) to 2011–2012 (57.7%) (Table 32–2).
 - In 2011–2012, there was a statistically significant disparity by race and ethnicity in the proportion of children aged 6–9 years with dental caries experience in their primary or permanent teeth (OH-1.2, Table 32–3). The disparities by sex and family income were not statistically significant.

- There was little or no detectable change in the proportion of adolescents aged 13–15 with dental caries experience in their permanent teeth (OH-1.3) from 1999–2004 (53.7%) to 2011–2012 (53.4%) (Table 32–2).
 - In 2011–2012, there was a statistically significant disparity by family income in the proportion of adolescents aged 13–15 with dental caries experience in their permanent teeth (OH-1.3, Table 32–3). The disparities by sex and race and ethnicity were not statistically significant.
- From 1999–2004 to 2011–2012, the proportion of children aged 3–5 years with untreated dental decay in their primary teeth (OH-2.1) decreased from 23.8% to 11.7%, exceeding the 2020 target (Table 32–2).
 - » In 2011–2012, there were statistically significant disparities by race and ethnicity and family income in the proportion of children aged 3–5 years with untreated dental decay in their primary teeth (OH-2.1, Table 32–3). The disparity by sex was not statistically significant.
- From 1999–2004 to 2011–2012, the proportion of children aged 6–9 years with untreated dental decay in their primary or permanent teeth (OH-2.2) decreased from 28.8% to 21.5%, exceeding the 2020 target (Table 32–2).
 - In 2011–2012, there was a statistically significant disparity by race and ethnicity in the proportion of children aged 6–9 years with untreated dental decay in their primary or permanent teeth (OH-2.2, Table 32–3). The disparities by sex and family income were not statistically significant.
- From 1999–2004 to 2011–2012, the proportion of adolescents aged 13–15 with untreated dental decay in their permanent teeth (OH-2.3) decreased from 17.0% to 11.4%, exceeding the 2020 target (Table 32–2).
 - » In 2011–2012, there was a statistically significant disparity by sex in the proportion of adolescents aged 13–15 with untreated dental decay in their permanent teeth (OH-2.3, Table 32–3). The disparities by race and ethnicity and family income were not statistically significant.

Oral Health of Adults

 From 1999–2004 to 2011–2012, the proportion of adults aged 35–44 with untreated dental decay (OH-3.1) decreased from 27.8% to 24.9%, exceeding the 2020 target (Table 32–2).

- In 2011–2012, there were statistically significant disparities by race and ethnicity, education, family income, and disability status in the proportion of adults aged 35–44 with untreated dental decay (OH-3.1, Table 32–3). The disparity by sex was not statistically significant.
- From 1999–2004 to 2011–2012, the proportion of adults aged 65–74 with untreated coronal caries (OH-3.2) decreased from 17.1% to 14.8%, exceeding the 2020 target (Table 32–2).
 - In 2011–2012, there was a statistically significant disparity by race and ethnicity in the proportion of adults aged 65–74 with untreated coronal caries (OH-3.2, Table 32–3). The disparities by sex, education, and disability status were not statistically significant.
- Data beyond the baseline were not available for the proportion of adults aged 75 and over with untreated root surface caries (OH-3.3: 37.9% in 1999–2004), so progress toward the 2020 target could not be assessed (Table 32–2).
 - In 1999–2004, there were statistically significant disparities by sex and race and ethnicity in the proportion of adults aged 75 and over with untreated root surface caries (OH-3.3, Table 32–3). The disparities by education, family income, and disability status were not statistically significant.
- The proportion of adults aged 45–64 with permanent tooth loss due to dental caries or periodontal disease (OH-4.1) decreased from 76.4% in 1999–2004 to 69.8% in 2011–2012, moving toward the 2020 target (Table 32–2).
 - » In 2011–2012, there were statistically significant disparities by race and ethnicity, education, family income, and disability status in the proportion of adults aged 45–64 with permanent tooth loss due to dental caries or periodontal disease (OH-4.1, Table 32–3). The disparity by sex was not statistically significant.
- Between 1999–2004 and 2011–2012, the proportion of adults aged 65–74 with complete tooth loss (OH-4.2) decreased from 24.0% to 12.9%, exceeding the 2020 target (Table 32–2).
 - » In 2011–2012, there were statistically significant disparities by education and disability status in the proportion of adults aged 65–74 with complete tooth loss (OH-4.2, Table 32–3). The disparity by sex was not statistically significant.

- There was little or no detectable change in the proportion of adults aged 45–74 with moderate or severe periodontitis (OH-5) from 2009–2010 (47.5%) to 2011–2012 (47.3%) (Table 32–2).
 - » In 2011–2012, there were statistically significant disparities by sex, race and ethnicity, education, family income, and disability status in the proportion of adults aged 45–74 with moderate or severe periodontitis (OH-5, Table 32–3).
- There was little or no detectable change in the proportion of oral and pharyngeal cancers detected at the earliest stage (OH-6) from 2007 (32.5%) to 2011 (30.9%) (Table 32–2).
 - » The disparities by sex and race and ethnicity in the proportion of oral and pharyngeal cancers detected at the earliest stage (OH-6) in 2011 were not tested for statistical significance (Table 32–3).

Access to Preventive Services

- The age-adjusted proportion of persons aged 2 years and over who visited the dentist in the past year (OH-7) decreased from 44.5% in 2007 to 42.1% in 2012, moving away from the baseline and 2020 target (Table 32–2).
 - » In 2012, there were statistically significant disparities by sex, race and ethnicity, education, family income, disability status, and geographic location in the age-adjusted proportion of persons aged 2 years and over who visited the dentist in the past year (OH-7, Table 32–3).
- The proportion of children and adolescents aged 2–18 with a family income at or below 200% of the federal poverty level who received preventive dental services in the past year (OH-8) increased from 30.2% in 2007 to 34.6% in 2012, exceeding the 2020 target (Table 32–2).
 - » In 2012, the disparities by sex, race and ethnicity, disability status, and geographic location in the proportion of children and adolescents aged 2–18 with a family income at or below 200% of the federal poverty level who received preventive dental services in the past year (OH-8) were not statistically significant (Table 32–3).
- From 2007–2008 to 2010–2011, the proportion of school-based health centers with an oral health component that included dental sealants (OH-9.1) increased from 17.1% to 24.4%; the proportion that included dental care (OH-9.2) increased from 6.4% to 9.1%; and the proportion that included topical fluoride (OH-9.3) increased from 20.6% to 33.1%, all exceeding their 2020 targets (Table 32–2).

- There was little or no detectable change in the proportion of Federally Qualified Health Centers (FQHCs) with an oral health care program (OH-10.1) from 2007 (75.0%) to 2014 (71.4%) (Table 32–2).
- Data beyond the baseline were not available for the proportion of local health departments that have oral health prevention or care programs (OH-10.2: 25.8% in 2008), so progress toward the 2020 target could not be assessed (Table 32–2).
- The proportion of patients at Federally Qualified Health Centers (FQHCs) who received dental services (OH-11) increased from 17.5% in 2007 to 20.9% in 2014, moving toward the 2020 target (Table 32–2).

Oral Health Interventions

- From 1999–2004 to 2011–2012, the proportion of children aged 3–5 years who received dental sealants on their primary molar teeth (OH-12.1) increased from 1.4% to 4.3%, exceeding the 2020 target (Table 32–2).
- From 1999–2004 to 2011–2012, the proportion of children aged 6–9 years who received dental sealants on their permanent first molar teeth (OH-12.2) increased from 25.5% to 37.6%, exceeding the 2020 target (Table 32–2).
 - » In 2011–2012, the disparities by sex, race and ethnicity, and family income in the proportion of children aged 6–9 years who received dental sealants on their permanent first molar teeth (OH-12.2) were not statistically significant (Table 32–3).
- From 1999–2004 to 2011–2012, the proportion of adolescents aged 13–15 who received dental sealants on their first and second permanent molar teeth (OH-12.3) increased from 19.9% to 22.2%, exceeding the 2020 target (Table 32–2).
 - » In 2011–2012, the disparities by sex, race and ethnicity, and family income in the proportion of adolescents aged 13–15 who received dental sealants on their first and second permanent molar teeth (OH-12.3) were not statistically significant (Table 32–3).
- The proportion of the U.S. population served by community water systems with optimally fluoridated water (OH-13) increased from 72.4% in 2008 to 74.7% in 2014, moving toward the 2020 target (Table 32–2).
 - The proportion of the U.S. population served by community water systems with optimally fluoridated water (OH-13) varied by state. In 2014, 20 states and the District of Columbia had achieved the national 2020 target (Map 32–1).

- Data beyond the baseline were not available for the age-adjusted proportion of adults aged 18 and over who received information from a dentist on reducing tobacco use (OH-14.1: 10.5% in 2011–2012), so progress toward the 2020 target could not be assessed (Table 32–2).
 - » In 2011–2012, there were statistically significant disparities by family income and disability status in the age-adjusted proportion of adults who received information from a dentist on reducing tobacco use (OH-14.1, Table 32–3). The disparities by sex, race and ethnicity, and education were not statistically significant.
- Data beyond the baseline were not available for the age-adjusted proportion of adults aged 18 and over who received an oral and pharyngeal cancer screening from a dentist (OH-14.2: 23.3% in 2011–2012), so progress toward the 2020 target could not be assessed (Table 32–2).
 - In 2011–2012, there was a statistically significant disparity by family income in the age-adjusted proportion of adults who received an oral and pharyngeal cancer screening from a dentist (OH-14.2, Table 32–3). The disparities by sex, race and ethnicity, education, and disability status were not statistically significant.
- Data beyond the baseline were not available for the age-adjusted proportion of adults aged 18 and over who were tested or referred for glycemic control by a dentist (OH-14.3: 5.7% in 2011–2012), so progress toward the 2020 target could not be assessed (Table 32–2).
 - In 2011–2012, there were statistically significant disparities by education and disability status in the age-adjusted proportion of adults who were tested or referred for glycemic control by a dentist (OH-14.3, Table 32–3). The disparities by sex, race and ethnicity, and family income were not statistically significant.

Monitoring, Surveillance Systems

- The number of states with a recording system for cleft lips and cleft palates (OH-15.1) increased from 35 in 2013 to 39 in 2014, meeting the 2020 target (Table 32–2).
- The number of states with a referral system for cleft lips and cleft palates (OH-15.2) increased from 31 in 2013 to 36 in 2014, exceeding the 2020 target (Table 32–2).

Data beyond the baseline were not available for the number of states (including the District of Columbia) with oral and craniofacial state-based surveillance systems (OH-16: 32 in 2009), so progress toward the 2020 target could not be assessed (Table 32–2).

Public Health Infrastructure

- Data beyond the baseline were not available for the proportion of state and local dental programs serving jurisdictions with populations of 250,000 persons or more, directed by a public health dental professional. (OH-17.1: 23.4% in 2008), so progress toward the 2020 target could not be assessed (Table 32–2).
- Data beyond the baseline were not available for the number of Indian Health Service and Tribal dental programs directed by public health dental professionals serving jurisdictions with populations of 30,000 persons or more (OH-17.2: 11 in 2010), so progress toward the 2020 target could not be assessed (Table 32–2).

More Information

Readers interested in more detailed information about the objectives in this topic area are invited to visit the HealthyPeople.gov website, where extensive substantive and technical information is available:

- For the background and importance of the topic area, see: http://www.healthypeople.gov/2020/ topics-objectives/topic/oral-health
- For data details for each objective, including definitions, numerators, denominators, calculations, and data limitations, see: http://www.healthypeople.gov/2020/ topics-objectives/topic/oral-health/objectives
 Select an objective, then click on the "Data Details" icon.
- For objective data by population group (e.g., sex, race and ethnicity, or family income), including rates, percentages, or counts for multiple years, see: http://www.healthypeople.gov/2020/ topics-objectives/topic/oral-health/objectives Select an objective, then click on the "Data2020" icon.

Data for the measurable objectives in this chapter were from the following data sources:

Annual Synopses of State and Territorial Dental Public Health Programs: http://www.cdc.gov/oralhealthdata/ overview/synopses/index.html

- Indian Health Service, Division of Oral Health: https://www.ihs.gov/DOH/
- Medical Expenditure Panel Survey: https://meps.ahrq.gov/mepsweb/
- National Census of School-Based Health Centers: http://www.sbh4all.org/school-health-care/ national-census-of-school-based-health-centers/
- National Health and Nutrition Examination Survey: http://www.cdc.gov/nchs/nhanes.htm
- National Program of Cancer Registries: https://www.cdc.gov/cancer/npcr/
- Surveillance, Epidemiology, and End Results Program: http://seer.cancer.gov/
- Uniform Data System: http://www.bphc.hrsa.gov/ datareporting/reporting/index.html
- Water Fluoridation Reporting System: http://www.cdc.gov/fluoridation/factsheets/ engineering/wfrs_factsheet.htm

Footnotes

¹The Technical Notes provide more information on Healthy People 2020 statistical methods and issues.

³Measurable objectives had a national baseline value.

⁴**Target met or exceeded**—One of the following, as specified in the Midcourse Progress Table:

- » At baseline the target was not met or exceeded and the midcourse value was equal to or exceeded the target. (The percentage of targeted change achieved was equal to or greater than 100%.)
- » The baseline and midcourse values were equal to or exceeded the target. (The percentage of targeted change achieved was not assessed.)

⁵Improving—One of the following, as specified in the Midcourse Progress Table:

- » Movement was toward the target, standard errors were available, and the percentage of targeted change achieved was statistically significant.
- Movement was toward the target, standard errors were not available, and the objective had achieved 10% or more of the targeted change.

⁶Little or no detectable change—One of the following, as specified in the Midcourse Progress Table:

- » Movement was toward the target, standard errors were available, and the percentage of targeted change achieved was not statistically significant.
- » Movement was toward the target, standard errors were not available, and the objective had achieved less than 10% of the targeted change.
- » Movement was away from the baseline and target, standard errors were available, and the percentage change relative to the baseline was not statistically significant.
- » Movement was away from the baseline and target, standard errors were not available, and the objective had moved less than 10% relative to the baseline.
- » There was no change between the baseline and the midcourse data point.

⁷**Getting worse**—One of the following, as specified in the Midcourse Progress Table:

- » Movement was away from the baseline and target, standard errors were available, and the percentage change relative to the baseline was statistically significant.
- » Movement was away from the baseline and target, standard errors were not available, and the objective had moved 10% or more relative to the baseline.

⁹**Baseline only**—The objective only had one data point, so progress toward target attainment could not be assessed.

Suggested Citation

National Center for Health Statistics. Chapter 32: Oral Health. Healthy People 2020 Midcourse Review. Hyattsville, MD. 2016.

Table 32–1. Oral Health Objectives

LEGEND

Data for this objective are available in this chapter's Midcourse Progress Table.

Disparities data for this objective are available, and this chapter includes a Midcourse Health Disparities Table.



A state or county level map for this objective is available at the end of the chapter.

Not Applicable

Midcourse data availability is not applicable for developmental and archived objectives. **Developmental** objectives did not have a national baseline value. **Archived** objectives are no longer being monitored due to lack of data source, changes in science, or replacement with other objectives.

Objective Number Objective Statement		Data Sources	Midcourse Data Availability	
Oral Health of Childro	en and Adolescents			
OH-1.1	Reduce the proportion of children aged 3–5 years with dental caries experience in their primary teeth	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS		
OH-1.2	Reduce the proportion of children aged 6–9 years with dental caries experience in their primary and permanent teeth	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS		
OH-1.3	Reduce the proportion of adolescents aged 13–15 years with dental caries experience in their permanent teeth	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS		
OH-2.1	Reduce the proportion of children aged 3–5 years with untreated dental decay in their primary teeth	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS		
OH-2.2	Reduce the proportion of children aged 6–9 years with untreated dental decay in their primary and permanent teeth	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS		
0H-2.3	Reduce the proportion of adolescents aged 13–15 years with untreated dental decay in their permanent teeth	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS		
Oral Health of Adults				
OH-3.1	Reduce the proportion of adults aged 35–44 years with untreated dental decay	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS		
OH-3.2	Reduce the proportion of adults aged 65–74 years with untreated coronal caries	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS		
OH-3.3	Reduce the proportion of adults aged 75 years and over with untreated root surface caries	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS		
OH-4.1	Reduce the proportion of adults aged 45–64 years who have ever had a permanent tooth extracted because of dental caries or periodontal disease	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS		
0H-4.2	Reduce the proportion of adults aged 65–74 years who have lost all of their natural teeth	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS		

Table 32–1. Oral Health Objectives—Continued

LEGEND Data for this objective are available in this chapter's Midcourse Progress Table. Disparities data for this objective are available, and this chapter includes a Midcourse Health Disparities Table.

Not Applicable

Midcourse data availability is not applicable for developmental and archived objectives. **Developmental** objectives did not have a national baseline value. **Archived** objectives are no longer being monitored due to lack of data source, changes in science, or replacement with other objectives.

Objective Number	Objective Statement	Data Sources	Midcourse Data Availability	
Oral Health of Adults	—Continued			
ОН-5	Reduce the proportion of adults aged 45–74 years with moderate or severe periodontitis	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS		
ОН-6	Increase the proportion of oral and pharyngeal cancers detected at the earliest stage	National Program of Cancer Registries (NPCR), CDC/NCCDPHP; Surveillance, Epidemiology, and End Results Program (SEER), NIH/NCI		
Access to Preventive	Services			
OH-7	Increase the proportion of children, adolescents, and adults who used the oral health care system in the past year	Medical Expenditure Panel Survey (MEPS), AHRQ		
OH-8	Increase the proportion of low-income children and adolescents who received any preventive dental service during the past year	Medical Expenditure Panel Survey (MEPS), AHRQ		
OH-9.1	Increase the proportion of school-based health centers with an oral health component that includes dental sealants	Census of School-Based Health Centers (CSBHC), School Based Health Alliance (SBHA)		
OH-9.2	Increase the proportion of school-based health centers with an oral health component that includes dental care	Census of School-Based Health Centers (CSBHC), School Based Health Alliance (SBHA)		
OH-9.3	Increase the proportion of school-based health centers with an oral health component that includes topical fluoride	Census of School-Based Health Centers (CSBHC), School Based Health Alliance (SBHA)		
OH-10.1	Increase the proportion of Federally Qualified Health Centers (FQHCs) that have an oral health care program	Uniform Data System (UDS), HRSA/BPHC		
OH-10.2	Increase the proportion of local health departments that have oral health prevention or care programs	Annual Synopses of State and Territorial Dental Public Health Programs (ASTDD Synopses), Association of State and Territorial Dental Directors (ASTDD)		
OH-11	Increase the proportion of patients who receive oral health services at Federally Qualified Health Centers (FQHCs) each year	Uniform Data System (UDS), HRSA/BPHC		

Table 32–1. Oral Health Objectives—Continued

LEGEND Data for this objective are available in this chapter's Midcourse Progress Table. Disparities data for this objective are available, and this chapter includes a Midcourse Health Disparities Table.

Not Applicable

Midcourse data availability is not applicable for developmental and archived objectives. **Developmental** objectives did not have a national baseline value. **Archived** objectives are no longer being monitored due to lack of data source, changes in science, or replacement with other objectives.

Objective Number	Objective Statement	Data Sources	Midcourse Data Availability		
Oral Health Intervent	lions				
OH-12.1	Increase the proportion of children aged 3–5 years who have received dental sealants on one or more of their primary molar teeth	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS			
OH-12.2	Increase the proportion of children aged 6–9 years who have received dental sealants on one or more of their permanent first molar teeth	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS			
OH-12.3	Increase the proportion of adolescents aged National Health and Nutrition Examination 13–15 years who have received dental sealants on one or more of their permanent molar teeth				
OH-13	Increase the proportion of the U.S. population served by community water systems with optimally fluoridated water	Water Fluoridation Reporting System (WFRS), CDC/NCCDPHP			
OH-14.1	Increase the proportion of adults who received information from a dentist or dental hygienist focusing on reducing tobacco use or on smoking cessation in the past year	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS			
OH-14.2	Increase the proportion of adults who received an oral and pharyngeal cancer screening from a dentist or dental hygienist in the past year	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS			
OH-14.3	Increase the proportion of adults who were tested or referred for glycemic control from a dentist or dental hygienist in the past year	Increase the proportion of adults who were tested or referred for glycemic control from a dentist or dental hygienist in the past year			
Monitoring, Surveilla	ance Systems				
OH-15.1	Increase the number of states and the District of Columbia that have a system for recording cleft lips and cleft palates	Annual Synopses of State and Territorial Dental Public Health Programs (ASTDD Synopses), Association of State and Territorial Dental Directors (ASTDD)	2		
OH-15.2	Increase the number of states and the District of Columbia that have a system for referral for cleft lips and cleft palates to rehabilitative teams	Annual Synopses of State and Territorial Dental Public Health Programs (ASTDD Synopses), Association of State and Territorial Dental Directors (ASTDD)			

Table 32–1. Oral Health Objectives—Continued

LEGEND				
Data for this chapter's Mic	objective are available in this dcourse Progress Table. Disparities data t and this chapter Disparities Table	for this objective are available, A state of includes a Midcourse Health . A state of the chapt	r county level map for this is available at the end of er.	
Not Applicat	Midcourse data availability is not applicable for have a national baseline value. Archived objectives science, or replacement with other objectives	or developmental and archived objectives. Developr ctives are no longer being monitored due to lack of	nental objectives did not data source, changes in	
Objective Numb	er Objective Statement	Data Sources	Midcourse Data Availability	
Monitoring, Surv	eillance Systems—Continued			
OH-16	Increase the number of states and the District of Columbia that have an oral and craniofacial health surveillance system	Annual Synopses of State and Territorial Dental Public Health Programs (ASTDD Synopses), Association of State and Territorial Dental Directors (ASTDD)		
Public Health Infr	astructure			
OH-17.1	Increase the proportion of states (including the District of Columbia) and local health agencies that serve jurisdictions of 250,000 or more persons with a dental public health program directed by a dental professional with public health training	ne Annual Synopses of State and Territorial Dental s Public Health Programs (ASTDD Synopses), Association of State and Territorial Dental Directors (ASTDD)		
ОН-17.2	Increase the number of Indian Health Service Areas and Tribal health programs that serve jurisdictions of 30,000 or more persons with a dental public health program directed by a dental professional with public health training	Indian Health Service, Division of Oral Health		

Table 32–2. Midcourse Progress for Measurable¹ Oral Health Objectives

LEGEN	ID								
\checkmark	Target met or exceeded ^{2,3}	Improving ^{4,5}	O Little detect	or no table change ^{6–10}	Getting wo)rse ^{11,12}	Baseline only	13	nformational ¹⁴
		Objective Description		Baseline Value (Year)	Midcourse Value (Year)	Target	Movement Toward Target ¹⁵	Movement Away From Baseline ¹⁶	Movement Statistically Significant ¹⁷
Oral	Health of Childre	en and Adolescents							
\checkmark	OH-1.1 Childrexperience in (percent, 3–5	ren with dental caries e their primary teeth years)	experience	33.3% (1999–2004)	27.9% (2011–2012)	30.0%	163.6%		No
0	³ OH-1.2 Childreitheir primary (percent, 6–9	ren with dental caries e and permanent teeth years)	experience in	54.4% (1999–2004)	57.7% (2011–2012)	49.0%		6.1%	No
0	OH-1.3 Adole experience in (percent, 13–	scents with dental cari their permanent teeth 15 years)	es	53.7% (1999–2004)	53.4% (2011–2012)	48.3%	5.6%		No
\checkmark	OH-2.1 Child their primary	ren with untreated dent teeth (percent, 3–5 yea	tal decay in ars)	23.8% (1999–2004)	11.7% (2011–2012)	21.4%	504.2%		
\checkmark	OH-2.2 Childreft their primary (percent, 6–9	ren with untreated den and permanent teeth years)	tal decay in	28.8% (1999–2004)	21.5% (2011–2012)	25.9%	251.7%		No
\checkmark	OH-2.3 Adole in their perma	scents with untreated anent teeth (percent, 13	dental decay 3–15 years)	17.0% (1999–2004)	11.4% (2011–2012)	15.3%	329.4%		No
Oral	Health of Adults								
\checkmark	OH-3.1 Adulta (percent, 35–	s with untreated dental 44 years)	decay	27.8% (1999–2004)	24.9% (2011–2012)	25.0%	103.6%		No
\checkmark	OH-3.2 Adulta (percent, 65–	s with untreated coron 74 years)	al caries	17.1% (1999–2004)	14.8% (2011–2012)	15.4%	135.3%		No
1	¹³ OH-3.3 Adulta (percent, 75+	s with untreated root s years)	urface caries	37.9% (1999–2004)		34.1%			
÷	OH-4.1 Adulta dental caries (percent, 45–	s with permanent tooth experience or periodor 64 years)	n loss due to Ital disease	76.4% (1999–2004)	69.8% (2011–2012)	68.8%	86.8%		Yes
\checkmark	OH-4.2 Adult: (percent, 65–	s with complete tooth I 74 years)	OSS	24.0% (1999–2004)	12.9% (2011–2012)	21.6%	462.5%		No
0	OH-5 Adults v periodontitis	with moderate or sever (percent, 45–74 years)	е	47.5% (2009–2010)	47.3% (2011–2012)	40.8%	3.0%		No

Table 32–2. Midcourse Progress for Measurable¹ Oral Health Objectives—Continued

LEGEN	ID						
\checkmark	Target met or exceeded ^{2,3} Improving ^{4,5} O Lit	tle or no tectable change ^{6–10}	Getting wor	rse ^{11,12}	Baseline only	13	nformational ¹⁴
	Objective Description	Baseline Value (Year)	Midcourse Value (Year)	Target	Movement Toward Target ¹⁵	Movement Away From Baseline ¹⁶	Movement Statistically Significant ¹⁷
Oral	Health of Adults—Continued						
0	OH-6 Oral and pharyngeal cancers detected in earliest stage (percent)	32.5% (2007)	30.9% (2011)	35.8%		4.9%	
Acce	ess to Preventive Services						
	OH-7 Children, adolescents, and adults who visited the dentist in the past year (age-adjuste percent, 2+ years)	44.5% d, (2007)	42.1% (2012)	49.0%		5.4%	Yes
✓	OH-8 Low-income children and adolescents receiving preventive dental services in the past year (percent, 2–18 years, ≤ 200 percent of poverty)	30.2% (2007)	34.6% (2012)	33.2%	146.7%		No
\checkmark	OH-9.1 School-based health centers with an oral health component that includes dental sealants (percent)	17.1% (2007–2008)	24.4% (2010–2011)	18.8%	429.4%		
\checkmark	OH-9.2 School-based health centers with an oral health component that includes dental care (percent)	6.4% e (2007–2008)	9.1% (2010–2011)	7.0%	450.0%		
\checkmark	OH-9.3 School-based health centers with an oral health component that includes topical fluoride (percent)	20.6% (2007–2008)	33.1% (2010–2011)	22.7%	595.2%		
0	OH-10.1 Federally Qualified Health Centers with an oral health care program (percent)	h 75.0% (2007)	71.4% (2014)	83.0%		4.8%	
1	¹³ OH-10.2 Local health departments with oral health prevention or care programs (percent)	25.8% (2008)		28.4%			
-	OH-11 Patients at Federally Qualified Health Centers receiving dental services (percent)	17.5% (2007)	20.9% (2014)	33.3%	21.5%		
Oral	Health Interventions				- ·		
\checkmark	OH-12.1 Children receiving dental sealants on primary molar teeth (percent, 3–5 years)	1.4% (1999–2004)	4.3% (2011–2012)	1.5%	2900.0%		
\checkmark	OH-12.2 Children receiving dental sealants on permanent first molar teeth (percent, 6–9 years	25.5% s) (1999–2004)	37.6% (2011–2012)	28.1%	465.4%		No

Table 32–2. Midcourse Progress for Measurable¹ Oral Health Objectives—Continued

LEGEN	ID						
\checkmark	Target met or exceeded ^{2,3} Improving ^{4,5}	Little or no detectable change ^{6–10}	Getting wo	rse ^{11,12}	Baseline only	13	nformational ¹⁴
	Objective Description	Baseline Value (Year)	Midcourse Value (Year)	Target	Movement Toward Target ¹⁵	Movement Away From Baseline ¹⁶	Movement Statistically Significant ¹⁷
Oral	Health Interventions—Continued						
\checkmark	OH-12.3 Adolescents receiving dental seals on their first and second permanent molars (percent, 13–15 years)	ants 19.9% s (1999–2004)	22.2% (2011–2012)	21.9%	115.0%		No
-	⁵ OH-13 Population served by community was systems with optimally fluoridated water (percent)	ater 72.4% (2008)	74.7% (2014)	79.6%	31.9%		
	OH-14.1 Adults who received information of reducing tobacco use from a dentist (age-adjusted, percent, 18+ years)	on 10.5% (2011–2012)		13.2%			
	OH-14.2 Adults who received an oral cance screening from a dentist (age-adjusted, per 18+ years)	er 23.3% rcent, (2011–2012)		28.6%			
	OH-14.3 Adults who were tested or referred for glycemic control by a dentist (age-adjust percent, 18+ years)	d 5.7% sted, (2011–2012)		7.3%			
Mon	itoring, Surveillance Systems						
\checkmark	OH-15.1 States with a recording system fo lips and cleft palates (number)	r cleft 35 (2013)	39 (2014)	39	100.0%		
\checkmark	OH-15.2 States with a referral system for c lips and cleft palates (number)	left 31 (2013)	36 (2014)	34	166.7%		
	OH-16 Oral and craniofacial state-based surveillance systems (number of states and D.C.)	32 d (2009)		51			
Publ	ic Health Infrastructure				-		
	OH-17.1 State and local dental programs directed by public health dental professiona (percent of jurisdictions, population ≥ 250,)	23.4% als (2008) 000)		25.7%			
	OH-17.2 Indian Health Service and tribal dental programs directed by public health dental professionals (percent of jurisdiction population ≥ 30,000)	11 (2010) 1s,		12			

Table 32–2. Midcourse Progress for Measurable¹ Oral Health Objectives—Continued

NOTES

See HealthyPeople.gov for all Healthy People 2020 data. The Technical Notes provide more information on the measures of progress.

FOOTNOTES

¹Measurable objectives had a national baseline value.

Target met or exceeded:

- ²At baseline the target was not met or exceeded and the midcourse value was equal to or exceeded the target. (The percentage of targeted change achieved was equal to or greater than 100%.)
- ³The baseline and midcourse values were equal to or exceeded the target.
- (The percentage of targeted change achieved was not assessed.)

Improving:

⁴Movement was toward the target, standard errors were available, and the percentage of targeted change achieved was statistically significant. ⁵Movement was toward the target, standard errors were not available, and the objective had achieved 10% or more of the targeted change.

Little or no detectable change:

⁶Movement was toward the target, standard errors were available, and the percentage of targeted change achieved was not statistically significant. ⁷Movement was toward the target, standard errors were not available, and the objective had achieved less than 10% of the targeted change.

⁸Movement was away from the baseline and target, standard errors were available, and the percentage change relative to the baseline was not statistically significant.

⁹Movement was away from the baseline and target, standard errors were not available, and the objective had moved less than 10% relative to the baseline. ¹⁰There was no change between the baseline and the midcourse data point.

Getting worse:

¹¹Movement was away from the baseline and target, standard errors were available, and the percentage change relative to the baseline was statistically significant.

¹²Movement was away from the baseline and target, standard errors were not available, and the objective had moved 10% or more relative to the baseline.

¹³Baseline only: The objective only had one data point, so progress toward target attainment could not be assessed.

¹⁴Informational: A target was not set for this objective, so progress toward target attainment could not be assessed.

¹⁵For objectives that **moved toward** their targets, movement toward the target was measured as the percentage of targeted change achieved (unless the target was already met or exceeded at baseline):

¹⁶For objectives that **moved away** from their baselines and targets, movement away from the baseline was measured as the magnitude of the percentage change from baseline:

$$\frac{\text{Magnitude of percentage}}{\text{change from baseline}} = \frac{| \text{Midcourse value} - \text{Baseline value} |}{\text{Baseline value}} \times 100$$

¹⁷Statistical significance was tested when the objective had a target and at least two data points, standard errors of the data were available, and a normal distribution could be assumed. Statistical significance of the percentage of targeted change achieved or the magnitude of the percentage change from baseline was assessed at the 0.05 level using a normal one-sided test.

DATA SOURCES

- OH-1.1 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
- OH-1.2 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
- OH-1.3 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
- OH-2.1 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
- OH-2.2 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
- OH-2.3 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
- OH-3.1 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
- OH-3.2 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
- OH-3.3 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
- OH-4.1 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
- OH-4.2 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
- OH-5 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
- OH-6 National Program of Cancer Registries (NPCR), CDC/NCCDPHP; Surveillance, Epidemiology, and End Results Program (SEER), NIH/NCI
- OH-7 Medical Expenditure Panel Survey (MEPS), AHRQ
- OH-8 Medical Expenditure Panel Survey (MEPS), AHRQ
- OH-9.1 Census of School-Based Health Centers (CSBHC), School Based Health Alliance (SBHA)
- OH-9.2 Census of School-Based Health Centers (CSBHC), School Based Health Alliance (SBHA)
- OH-9.3 Census of School-Based Health Centers (CSBHC), School Based Health Alliance (SBHA)
- OH-10.1 Uniform Data System (UDS), HRSA/BPHC
- OH-10.2 Annual Synopses of State and Territorial Dental Public Health Programs (ASTDD Synopses), Association of State and Territorial Dental Directors (ASTDD)
- OH-11 Uniform Data System (UDS), HRSA/BPHC
- OH-12.1 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
- OH-12.2 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
- OH-12.3 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
- 0H-13 Water Fluoridation Reporting System (WFRS), CDC/NCCDPHP 0H-14.1 National Health and Nutrition Examination Survey (NHANES),
- OH-14.2 CDC/NCHS National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
- OH-14.3 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
- OH-15.1 Annual Synopses of State and Territorial Dental Public Health Programs (ASTDD Synopses), Association of State and Territorial Dental Directors (ASTDD)
- OH-15.2 Annual Synopses of State and Territorial Dental Public Health Programs (ASTDD Synopses), Association of State and Territorial Dental Directors (ASTDD)
- OH-16 Annual Synopses of State and Territorial Dental Public Health Programs (ASTDD Synopses), Association of State and Territorial Dental Directors (ASTDD)
- OH-17.1 Annual Synopses of State and Territorial Dental Public Health Programs (ASTDD Synopses), Association of State and Territorial Dental Directors (ASTDD)
- OH-17.2 Indian Health Service, Division of Oral Health

Table 32–3. Midcourse Health Disparities¹ for Population-based Oral Health Objectives

Most favorable (least adverse) and least favorable (most adverse) group rates and summary disparity ratios^{2,3} for selected characteristics at the midcourse data point

LEGEND At the midcourse data point Group with the most favorable Group with the least favorable Data are available, but this group did Data are not available for this group because (least adverse) rate (most adverse) rate not have the highest or lowest rate. the data were statistically unreliable, not collected, or not analyzed. Characteristics and Groups Sex Race and Ethnicity Education⁴ Family Income⁵ Disability Location Native Hawaiian or other Pacific Islander American Indian or Alaska Native Persons without disabilities Ratio² Summary Disparity Ratio² Summary Disparity Ratio³ Ratio³ Summary Disparity Ratio³ Summary Disparity Ratio² Persons with disabilities Less than high school High school graduate At least some college 4-year college degree Summary Disparity White, not Hispanic **Summary Disparity** Black, not Hispanic Two or more races Hispanic or Latino Associate's degree Advanced degree Nonmetropolitan Metropolitan Near-poor Near-high Female Middle Asian Poor Male High Population-based Objectives **Oral Health of Adults** OH-1.1 Children with dental caries experience in their primary teeth (percent, 3–5 years) (2011–2012) 2 109 052 а 950 OH-1.2 Children with dental caries experience in their primary and permanent teeth (percent, 6-9 years) 1.56 123 (2011 - 2012)**OH-1.3** Adolescents with dental caries experience in their permanent teeth (percent, 13–15 years) 1.338 (2011 - 2012)OH-2.1 Children with untreated dental decay in their primary teeth (percent, 3-5 years) (2011-2012) 2 278 OH-2.2 Children with untreated dental decay in their primary and permanent teeth (percent, 6–9 years) 1 45 (2011 - 2012)**OH-2.3** Adolescents with untreated dental decay in their permanent teeth (percent, 13–15 years) 1.073 .818 (2011 - 2012)**Oral Health of Children and Adolescents OH-3.1** Adults with untreated dental decay (percent, 35-44 years) (2011-2012) 2.297 1.542 1 1 2 5 882 **OH-3.2** Adults with untreated coronal caries (percent, 65-74 years) (2011-2012) .84 .400

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Table 32–3. Midcourse Health Disparities¹ for Population-based Oral Health Objectives—Continued

Most favorable (least adverse) and least favorable (most adverse) group rates and summary disparity ratios^{2,3} for selected characteristics at the midcourse data point

LEGEND At the midcourse data point Group with the most favorable Group with the least favorable Data are available, but this group did Data are not available for this group because (least adverse) rate (most adverse) rate not have the highest or lowest rate. the data were statistically unreliable, not collected, or not analyzed. Characteristics and Groups Sex Race and Ethnicity Education⁴ Family Income⁵ Disability Location Vative Hawaiian or other Pacific Islander American Indian or Alaska Native Persons without disabilities Ratio² Summary Disparity Ratio² Summary Disparity Ratio³ Ratio³ Summary Disparity Ratio³ Summary Disparity Ratio² Persons with disabilities Less than high school High school graduate At least some college 4-year college degree Summary Disparity White, not Hispanic **Summary Disparity** Black, not Hispanic Two or more races Hispanic or Latino Associate's degree Advanced degree Nonmetropolitan Metropolitan Near-poor Near-high Female Middle Asian Poor Male High Population-based Objectives Oral Health of Adults-Continued **OH-3.3** Adults with untreated root surface caries (percent, 75+ years) (1999-2004) е С 1.090 271 1 1 9 1 159 **OH-4.1** Adults with permanent tooth loss due to dental caries experience or periodontal disease (percent, 1 344 1 296 1 018 40 45-64 years) (2011-2012) OH-4.2 Adults with complete tooth loss (percent, 65-74 years) (2011-2012) 2.91 2.39 **OH-5** Adults with moderate or severe periodontitis (percent, 45–74 years) (2011–2012) 696 65 352 OH-6 Oral and pharyngeal cancers detected in earliest stage (percent) (2011) g 563 Access to Preventive Services **OH-7** Children, adolescents, and adults who visited the dentist in the past year (age-adjusted, percent, .132* 2 067 2+ years) (2012) **OH-8** Low-income children and adolescents receiving preventive dental services in the past year (percent, 1.090 1.030 2–18 years, \leq 200 percent of poverty) (2012) **OH-12.1** Children receiving dental sealants on primary molar teeth (percent, 3-5 years) (2011-2012) 0.000

Table 32–3. Midcourse Health Disparities¹ for Population-based Oral Health Objectives—Continued

18+ years) (2011–2012)

Most favorable (least adverse) and least favorable (most adverse) group rates and summary disparity ratios^{2,3} for selected characteristics at the midcourse data point

LEGEND At the midcourse data point Group with the most favorable Group with the least favorable Data are available, but this group did Data are not available for this group because (least adverse) rate (most adverse) rate not have the highest or lowest rate. the data were statistically unreliable, not collected, or not analyzed. Characteristics and Groups Sex Race and Ethnicity Education⁴ Family Income⁵ Disability Location Native Hawaiian or other Pacific Islander American Indian or Alaska Native Persons without disabilities Ratio² Summary Disparity Ratio² Summary Disparity Ratio³ Summary Disparity Ratio³ Summary Disparity Ratio³ Summary Disparity Ratio² Persons with disabilities Less than high school High school graduate At least some college 4-year college degree Summary Disparity White, not Hispanic Black, not Hispanic Associate's degree Two or more races Hispanic or Latino Advanced degree Nonmetropolitan Metropolitan Near-poor Near-high Female Middle Asian Poor Male High Population-based Objectives Access to Preventative Services—Continued OH-12.2 Children receiving dental sealants on permanent first molar teeth (percent, 6–9 years) С 1 329 038 а (2011 - 2012)**OH-12.3** Adolescents receiving dental sealants on their first and second permanent molars С 1 533 1 016 43 (percent, 13-15 years) (2011-2012) **OH-14.1** Adults who received information on reducing tobacco use from a dentist (age-adjusted, percent, 18+ 1.210 years) (2011-2012) **OH-14.2** Adults who received an oral cancer screening from a dentist (age-adjusted, percent, 18+ years) 1 045 1.38 606 (2011 - 2012)OH-14.3 Adults who were tested or referred for glycemic control by a dentist (age-adjusted, percent, 1 200 823 2 017

NOTES

See HealthyPeople.gov for all Healthy People 2020 data. The Technical Notes provide more information on the measures of disparities.

FOOTNOTES

¹**Health disparities** were assessed among population groups within specified demographic characteristics (sex, race and ethnicity, educational attainment, etc.). This assessment did not include objectives that were not population-based, such as those based on states, worksites, or those monitoring the number of events.

²When there were only two groups (e.g., male and female), the **summary disparity ratio** was the ratio of the higher to the lower rate.

³When there were three or more groups (e.g., white non-Hispanic, black non-Hispanic, Hispanic) and the most favorable rate (R_b) was the highest rate, the **summary disparity ratio** was calculated as R_b/R_a , where R_a = the average of the rates for all other groups. When there were three or more groups and the most favorable rate was the lowest rate, the summary disparity ratio was calculated as R_a/R_b .

⁴Unless otherwise footnoted, data do not include persons under age 25 years.

⁵Unless otherwise footnoted, the poor, near-poor, middle, near-high, and high income groups are for persons whose family incomes were less than 100%, 100%–199%, 200%–399%, 400%–599%, and at or above 600% of the poverty threshold, respectively.

^aData are for Mexican-American persons.

^bData are for persons whose family income was 400% to 499% of the poverty threshold.

 $^\circ\textsc{Data}$ are for persons whose family income was 500% or more of the poverty threshold.

^dData are for persons who completed more than high school.

^eData are for persons with activity limitations.

^fData are for persons without activity limitations.

⁹Data are for Asian or Pacific Islander persons.

^hData are for persons whose family income was 400% or more of the poverty threshold.

ⁱData do not include persons under age 20 years.

*The summary disparity ratio was significantly greater than 1.000. Statistical significance was assessed

at the 0.05 level using a normal one-sided test on the natural logarithm scale.

[†]The summary disparity ratio was not tested for statistical significance because standard errors of the

data were not available or normality on the natural logarithm scale could not be assumed.

DATA SO	DURCES
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0H-1.1	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
0H-1.2	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
0H-1.3	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
0H-2.1	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
0H-2.2	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
0H-2.3	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
OH-3.1	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
0H-3.2	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
OH-3.3	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
0H-4.1	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
0H-4.2	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
0H-5	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
OH-6	National Program of Cancer Registries (NPCR), CDC/NCCDPHP;
	Surveillance, Epidemiology, and End Results Program (SEER), NIH/NCI
0H-7	Medical Expenditure Panel Survey (MEPS), AHRQ
OH-8	Medical Expenditure Panel Survey (MEPS), AHRQ
OH-12.1	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
0H-12.2	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
OH-12.3	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
OH-14.1	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
0H-14.2	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
0H-14 3	National Health and Nutrition Examination Survey (NHANES) CDC/NCHS

Map 32–1. U.S. Population Served by Community Water Systems With Optimally Fluoridated Water, by State: 2014

Healthy People 2020 Objective OH-13 • National Target = 79.6% • National Rate = 74.7%



NOTES: Data are for the U.S. population served by community water systems (CWS) receiving fluoridated water. Data are displayed by a modified Jenks classification for U.S. states which creates categories that minimize within-group variation and maximize between-group variation. The Technical Notes provide more information on the data and methods.

DATA SOURCE: Water Fluoridation Reporting System (WFRS), CDC/NCCDPH