



the burden of oral disease

Introduction

Oral disease creates a significant burden in the United States and across the world. Worldwide, 3.9 billion people are impacted by oral disease, and 35% of the world's population suffers from untreated decay in their permanent teeth.¹ In the United States, 14% of 2-8 year old children have untreated decay in their primary (baby) teeth and 8% of 9-11 year old children suffer from untreated decay in their permanent teeth.² American adults are also affected by untreated decay, with 24% of those 20-64 years suffering from the condition.³ Additionally, almost 46% of adults over the age of 30 have some form of periodontal disease⁴ and an average of over 8,000 Americans die each year from oropharyngeal cancers.⁵ The disease burden from oral conditions leads to American children missing approximately 50 million hours of school, and American adults missing approximately 164 million hours of work each year.⁶

In the pages that follow, the burden of oral disease in Iowa is presented through a series of seven factsheets. These factsheets were created to deliver snapshots of the current status of oral health and oral disease for each stage of life. Factsheets have been created for:

- Very young children,
- Children,
- Children and youth with special healthcare needs,
- Adolescents,
- Adults, and
- Older adults.

One additional factsheet discusses access to oral health services in Iowa.

Each factsheet provides an introduction to common oral conditions for the given stage of life. This is followed by a section describing both risk factors that increase the likelihood of developing oral diseases and protective factors that work to prevent them. Iowa-specific oral health data and a description of Iowa oral health programs are described in the remaining two sections.

These factsheets use the most current data available to describe the burden of oral disease in Iowa. Whenever possible, these values for Iowa are compared to Healthy People objectives for 2020. Healthy People 2020 objectives are national benchmarks, selected by representatives from a large number of federal agencies, to track America's progress toward achieving improved health outcomes. There are currently over 1,200 objectives organized within 42 topic areas.⁷ The topic area of oral health (OH) contains 17 objectives. Other objectives that relate to oral health and access to dental care exist within the topic areas of access to health services (AHS), diabetes (D), cancer (C), and tobacco use (TU). Of the 22 oral health-related objectives, Iowa routinely collects and reports data related to 14 of them. A complete table comparing Iowa data to these objectives has been included on the following page.

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Healthy People 2020 Objective		2020 Target	U.S.	Iowa	Objective Met
OH-1	Dental caries experience				
	• Children, 3-5 years	30.0%	27.9% ¹	43.3% ¹⁶	No
	• Children, 6-9 years	49.0%	57.7% ¹	53.6% ¹⁷	No
	• Adolescents, 13-15 years	48.3%	53.4% ¹	DNC	DNC
OH-2	Untreated dental decay				
	• Children, 3-5 years	21.4%	11.7% ¹	17.2% ¹⁶	Yes
	• Children, 6-9 years	25.9%	21.5% ¹	16.0% ¹⁷	Yes
	• Adolescents, 13-15 years	15.3%	11.4% ¹	DNC	DNC
OH-3	Untreated dental decay				
	• Adults, 35-44 years (dental decay)	25.0%	24.9% ¹	DNC	DNC
	• Adults, 65-74 years (coronal caries)	15.4%	14.8% ¹	DNC	DNC
	• Adults, 75+ years (root surface caries)	34.1%	37.9% ²	DNC	DNC
OH-4	Permanent tooth loss				
	• Adults, 45-64 years (at least one)	68.8%	69.8% ¹	49.7% ¹⁸	Yes
	• Adults, 65-74 years (lost all teeth)	21.6%	12.9% ¹	13.0% ¹⁹	Yes
OH-5	Moderate or severe periodontitis				
	• Adults, 45-74 years	40.8%	47.3% ¹	DNC	DNC
OH-6	Oral and pharyngeal cancers detected at earliest stage (Stage 1)	35.8%	30.9% ³	DNC	DNC
OH-7	Used oral health care system in past year (all ages)	49.0%	42.1% ⁴	DNC	DNC
OH-8	Any preventive dental service for low-income children and adolescents	33.2%	34.6% ⁴	49.9% ²⁰	Yes
OH-9	School-based health centers with oral health components				
	• Includes dental sealants	18.8%	24.4% ⁵	DNC	DNC
	• Includes fillings and extractions	7.0%	9.1% ⁵	DNC	DNC
	• Includes topical fluoride	22.7%	33.1% ⁵	DNC	DNC
OH-10	Health centers with oral health programs				
	• FQHCs with oral health programs	83.0%	71.4% ⁶	85.7% ⁶	Yes
	• Local health departments with oral health programs	28.4%	25.8% ⁷	DNC*	DNC
OH-11	FQHC patients that receive oral health services (at FQHCs)	33.0%	20.9% ⁶	33.1% ⁶	No
OH-12	Dental sealants on molar teeth (at least one)				
	• Children, 3 to 5 years	1.5%	4.3% ¹	DNC	DNC
	• Children, 6 to 9 years	28.1%	37.6% ¹	59.4% ¹⁷	Yes
	• Adolescents, 13 to 15 years	21.9%	22.2% ¹	DNC	DNC
OH-13	Population served by community water systems with optimally fluoridated water	79.6%	74.7% ⁸	90.8% ²¹	Yes

DNC: Data Not Collected

*Iowa has 23 I-Smile™ Coordinators that provide oral health program services in all 99 counties.

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Healthy People 2020 Objective		2020 Target	U.S.	Iowa	Objective Met
OH-14	Increase the proportion of adults who receive preventive interventions in dental offices				
	<ul style="list-style-type: none"> Increase the proportion of adults who received information from a dentist or a dental hygienist focusing on reducing tobacco use or on smoking cessation in the past year 	13.2 ¹	10.5 ¹		
	<ul style="list-style-type: none"> Increase the proportion of adults who received an oral and pharyngeal cancer screening from a dentist or dental hygienist in the past year 	28.6 ¹	23.3 ¹	DNC	DNC
OH-15	Increase the proportion of adults who were tested or referred for glycemic control from a dentist or a dental hygienist in the past year	7.3 ¹	5.7 ¹		
	Increase the number of States and the District of Columbia that have a system for recording and referring infants and children with cleft lips and cleft palates to craniofacial anomaly rehabilitative teams				
	<ul style="list-style-type: none"> Increase the number of states and the District of Columbia that have a system for recording cleft lips and cleft palates 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 	39 34	39 ⁹ 36 ⁹	DNC	DNC
OH-16	States with an oral and craniofacial health surveillance system	50+ District of Columbia	32 ¹⁰	Yes	Yes
OH-17	Dental public health program directed by dental professional with public health training	25.7%	23.4% ⁷	Yes	Yes
C-6	Reduce oropharyngeal cancer death rate (per 100,000 population)	2.3	2.4 ¹¹	2.2 ²²	Yes
AHS-6.3	Persons unable to obtain or delay in obtaining necessary dental care	5.0%	5.7% ¹²	DNC	DNC
D-8	Persons with diabetes with at least an annual dental exam	61.2%	54.5% ¹³	66.9% ²³	Yes
TU-1	Reduce tobacco use by adults				
	<ul style="list-style-type: none"> Reduce use of cigarettes Reduce use of smokeless tobacco 	12.0% 0.3%	17.0% ¹³ 2.7% ¹⁴	18.5% ¹⁹ 5.1% ¹⁹	No No
TU-2	Reduce tobacco use by adolescents (past month)				
	<ul style="list-style-type: none"> Reduce use of tobacco products 	21.0%	22.4% ¹⁵	25.3% ²⁴	No
	<ul style="list-style-type: none"> Reduce use of cigarettes Reduce use of smokeless tobacco 	16.0% 6.9%	15.7% ¹⁵ 8.8% ¹⁵	18.1% ²⁴ 10.4% ²⁴	No No

DNC: Data Not Collected

Sources for Healthy People 2020 Objective Table

1. 2011-2012 National Health and Nutrition Examination Survey (NHANES)
2. 1999-2004 National Health and Nutrition Examination Survey (NHANES)
3. 2011 data from Surveillance, Epidemiology, and End Results Program (SEER) and National Program of Cancer Registries (NPCR)
4. 2012 Medical Expenditure Panel Survey (MEPS)
5. 2010-2011 School-Based Health Care Census (SBHCC)
6. 2014 Uniform Data System (UDS)
7. 2008 Association of State and Territorial Dental Directors (ASTDD) Annual Synopsis
8. 2014 Water Fluoridation Reporting System (WFRS)
9. 2014 Association of State and Territorial Dental Directors (ASTDD) Annual Synopsis
10. 2009 Association of State and Territorial Dental Directors (ASTDD) Annual Synopsis
11. 2013 National Vital Statistics System - Mortality
12. 2012 Medical Expenditure Panel Survey (MEPS)
13. 2014 National Health Interview Survey (NHIS)
14. 2010 National Health Interview Survey (NHIS)
15. 2013 Youth Risk Behavior Surveillance System (YRBSS)
16. 2015 Iowa Department of Public Health Head Start Survey (Children 3-6 Years)
17. 2016 Iowa Department of Public Health 3rd Grade Oral Health Survey
18. Calculated from 2014 Behavioral Risk Factor Surveillance System (BRFSS)
19. 2014 Behavioral Risk Factor Surveillance System (BRFSS)
20. 2015 Iowa Department of Public Health EPSDT Report, for Medicaid-enrolled children and adolescents aged 1-20 years with a preventive service by a dentist
21. 2016 Iowa Water Fluoridation Reporting System (WFRS)
22. 2008-2012 Iowa Cancer Registry
23. 2012 Behavioral Risk Factor Surveillance System (BRFSS)
24. 2011 Youth Risk Behavior Surveillance System (YRBSS)