

The Burden of Oral Disease

Building a State Burden Document

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SAFER • HEALTHIER • PEOPLE



Burden of Oral Disease Tool (BODT)

- State oral disease burden document
 - status of oral diseases
 - disparities
 - ability of a state meet needs
 - current data



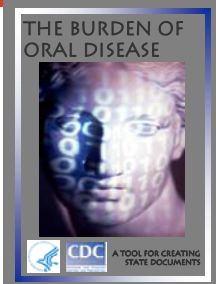
Burden of Oral Disease Tool (BODT)

- Oral health indicators
 - National Oral Health Surveillance System (NOHSS)
 - Water Fluoridation Reporting System (WFRS)
 - Synopses of State and Territorial Dental Public Health Programs (State Synopses)

Indicators of Oral Health Status

Indicator	NOHSS	HP2010	Source
Dental visits	*	21-10	BRFSS, NHIS, MEPS
Teeth cleaning	*		BRFSS
No tooth loss		21-13	BRFSS
Complete tooth loss	*	21-4	BRFSS
Fluoridation status	*	21-9	WFRS
Caries experience	*	21-1	BSS
Untreated caries	*	21-2	BSS
Sealants	*	21-8	BSS
Oral and pharyngeal cancer	*	3-6	NCHS-Registries

Burden of Oral Disease Tool (BODT)



- Outline
- Example Text
- References
- National data

<http://www.cdc.gov/OralHealth/publications/library/burdenbook/>



Parts of the BODT

- How to use the tool
- I. Introduction
- II. Executive Summary
- III. National and State Oral Health Objectives
- IV. The Burden of Oral Disease
 - Prevalence of Disease and Unmet Need
 - Disparities
 - Societal Impact of Oral Disease



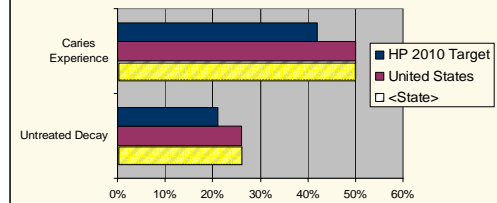
Sample Tables

Table II. Untreated Dental Decay Among 6 to 8-year-old Children in the United States and Third Graders in <STATE>, by Selected Demographic Characteristics

Untreated Decay		
	United States	Your State
TOTAL	26%	
Race or Ethnicity		
American Indian or Alaska Native	72%	
Asian or Pacific Islander	DSU	
Black or African American	36%	
White	26%	
Hispanic or Latino	DSU	

Sample Tables

Figure I. Dental Caries Experience and Untreated Decay among 3rd Grade Children in <state> and 6 to 8-year olds in the United States and the Healthy People 2010 Target



BODT Outline

- **V. Risk and Protective Factors**
 - Community Water Fluoridation
 - Topical Fluorides and Fluoride Supplements
 - Dental Sealants
 - Preventive Visits
 - Screening for Oral Cancer
 - Tobacco Control
 - Oral Health Education



BODT Outline

- **VI. Provision of Dental Services**
 - Dental Workforce
 - Use of Dental Services
 - Dental Medicaid and State Children's Health Insurance Program (SCHIP)
 - Community and Migrant Health Centers
 - Local Agencies



BODT Outline

- **VII. Conclusions**
- **VIII. References**
 - Behavioral Risk Factor Surveillance System (BRFSS): <http://apps.nccd.cdc.gov/brfss/page.asp?cat=TU&yr=2004&state=US#TU>
 - National Youth Tobacco Survey: <http://www.cdc.gov/mmwr/preview/mmwrhtml/ss5503a1.htm>
 - National Health Interview Survey (NHIS): <http://www.cdc.gov/nchs/nhis.htm>




BODT Outline

- **IX. APPENDICES**
 - Indicators of Oral Health Status



BODT Outline

- IX. APPENDICES
 - Indicators of Oral Health Status
 - Sample Fact Sheets
 - Fluoridation and Sealants



Community Water Fluoridation

"...one of the 10 great public health achievements of the twentieth century."



Oral Health in Your State: A Fact Sheet

Sealants

"...offer the most primary prevention of tooth decay."



Oral Health in Your State: A Fact Sheet

What is the public health issue?
Oral health is integral to general health.¹ Although preventable, tooth decay is a chronic disease affecting all age groups. In fact, it is the most common chronic disease of childhood.² The burden of disease is far worse for those who have restricted access to prevention and treatment services. Tooth decay, left untreated, can cause pain and tooth loss. Untreated tooth decay is associated with difficulty in eating and with being underweight.³ Untreated decay and tooth loss can have negative effects on an individual's self-esteem and employability.

What is the impact of sealants?
Sealants are a plastic material placed on the pits and fissures of the chewing surfaces of teeth where 1 to 90 percent of decay occurs in school children.⁴ Sealants prevent tooth decay by creating a barrier

In the U.S., tooth decay⁵ affects:

- ✓ 18 percent of children 2-4 years
- ✓ 52 percent of children 6-8 years
- ✓ 61 percent of teenagers 16-19



Community water fluoridation

What is the Public Health Issue?
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In the U.S., tooth decay⁵ affects:

- ✓ 1 in 4 elementary school children
- ✓ 5 out of 10 adolescents

Oral Health in Maine – a Fact Sheet

Children with Special Health Needs

Children with special health needs are those who have or are at increased risk for a chronic physical, developmental, behavioral, or emotional condition who require health and health-related services of a type or amount beyond that required by children generally.¹⁻³ Conditions which engender special needs include, but are not limited to, Down syndrome, craniofacial defects (cleft lip/palate), cerebral palsy, developmental disabilities, autism, vision or hearing deficits, diabetes, asthma, and HIV. It has been reported that the number one unmet need for children with special needs is dental care.⁴

Who has special needs?
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What are the oral health issues for children with special needs?

1. Children with developmental disabilities: enamel irregularities, gum and oral infections, delayed tooth eruption, bite irregularities⁵
2. Children with Down syndrome: gum disease, dry mouth, fissures of tongue and lip, and bite irregularities.⁶


Facts at a glance:

- ✓ 1 in 8 children between 6 and 14 years old have some sort of disability⁷
- ✓ Number one unmet need for children with special needs: dental care⁸
- ✓ One in four parents of children with special needs report their child has some dental need.⁹



Parts of the Template

- IX. APPENDICES
 - Indicators of Oral Health Status
 - Calendar of Expected Data Release Dates
 - Sample Fact Sheets
 - Fluoridation and Sealants
 - Sample Policy Briefs



HEALTH POLICY BRIEF

CHILDREN'S ORAL HEALTH IN MISSISSIPPI: Addressing a Silent Epidemic

Linda H. Southward, Ph.D.,
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Neva Penton Eklund, D.M.D.,
David K. Curtis, D.M.D.,
Connie Lane, D.B.W.

A NATIONAL CALL TO ACTION
The first ever Report on Oral Health in America (2000), issued by U.S. Surgeon General Dr. David Satcher, served as a platform to increase public awareness on the importance of oral health. Among the major themes of the report are that oral health is essential to general health and well-being and that profound and consequential oral health disparities exist in the United States. Dr. Satcher stated that what amounts to a silent epidemic of dental and oral diseases is affecting some population groups—restricting activities at schools, work, and home—and often significantly diminishing the quality of life. U.S. Surgeon General Dr. Richard Carmona issued a National Call to Action to Promote Oral Health (2003) as a wake-up call to community and industry leaders, policymakers, health professionals, the media, and the public on issues regarding the nation's oral health.

So what are the major concerns that inspired this national call to action?

The U.S. Surgeon General (2000) reported that:

- Dental caries, or "tooth decay," in childhood is alarmingly pervasive: it is 5 times more common than asthma.
- American children, particularly those in poverty, receive too little dental care, which results in unnecessary disease and discomfort for the children as well as expensive antibiotic
- Oral diseases are progressive and cumulative and become more complex and costly to treat over time. Therefore, problems that were preventable in early childhood can escalate to irreversible damage over one's lifespan.

CAUSES OF CHILDHOOD DENTAL CARIES, OR "TOOTH DECAY"
Dental caries (tooth decay) is an infectious and transmissible, yet preventable, disease. Among infants and toddlers, the newer term "early childhood caries" (ECC) has also been used interchangeably with "baby bottle tooth decay," "bottle mouth," and other similar names; however, research demonstrates that ECC also occurs when bottles are not used (Pitt & Coles, 2000). Tooth decay is initiated by the bacterium *Streptococcus mutans*. Because ECC is infectious, it can be easily spread to infants through mothers' or caregivers' saliva during nurturing activities such as feeding and using a pacifier (Elienger, 1999). As the bacteria accumulate in dental plaque over time and are nourished by sugar-laden foods or drinks, both enamel deterioration and cavities form. Since tooth decay can be prevented even prior to the formation of cavities, the American Academy of Pediatrics, American Academy of Pediatric Dentistry, and American Public Health Association all advise that children should receive a dental check-up before their first birthday. Effective measures for preventing and treating childhood caries include fluoridating water supplies, appropriately using fluoridated toothpaste



BODT Examples

Impact of Oral Disease



Status of Oral Health in Georgia, 2007

Summary of Oral Health Data Collected in Georgia

Introduction

Oral health is an essential component of health throughout life. Poor oral health and untreated oral infections can have a significant impact on the overall health and quality of life of the individual, and can affect self-esteem. Despite medical advances and expanded opportunities for diagnosis, prevention, and treating oral diseases, as well as increasing patient and care practices,¹ children's dental status indicates that preventive dental services are cost-effective and save children and adults from pain and the cost of disease or death.

- The National Institutes of Dental and Craniofacial Research and the National Education Association the research showing that untreated children miss 12 million hours of school each year and adults miss over 100 million hours of work due to oral health problems.² In addition to lost days of work or school due to dental treatment and pain, dental problems impact children from learning and affect an individual's ability to maintain a job or job promotion.
- Oral health status can serve as an early warning system for patients suffering from oral risk for costly chronic diseases such as diabetes, cardiovascular disease, osteoporosis, and obesity. Oral diseases can both complicate and be complicated by certain chronic diseases.
- Tooth decay is the most common pain of the mouth to be reported by adults. Most patients with tooth decay miss 20 days of work.³
- Dental caries are a cost-effective means of preventing dental caries in at-risk groups. In the U.S., 10% of tooth decay is preventable and is reported for only 27% of the children. Dental sealants cost approximately one third (33%) the cost of an average filling (20%).⁴ Early filling removal is dental prevention such as sealant and 20% in health expenses. Pediatric Dentistry reported a study on Medicaid dental expenditures indicating that hospital care is ten times more expensive (\$6,400) than preventive treatment (600).⁵
- The American Dental Association rates the quality of evidence for the efficacy of fluoride varnish as high for preventing and controlling dental caries in the primary teeth of high-risk children and strongly recommends its use.⁶ In March 2007, the Georgia Oral Health Prevention Program provided fluoride varnish treatment to over 12,750 babies and/or children.
- Oral cancer is most often diagnosed in those over the age of 60.⁷ Sealants can be all forms, in the number one oral factor. At least 70% of those affected oral cancer cases occur. Those with tooth decay miss 20 days of work in the three months after diagnosis.



3

the 2002-2003 Keep Smiling Vermont Oral Health Survey

Survey Method

The survey methodology was an epidemiological survey... The survey was conducted in Vermont... The survey was conducted in Vermont... The survey was conducted in Vermont...

Vermont compared to Other States

Category	Vermont	Other States
Adults who visited a dentist in the last year	62%	55%
Adults who visited a dentist in the last year by education level	77%	62%
Adults who visited a dentist in the last year by income level	62%	55%

CDC

Figure 10: Percentage of Adults That Visited the Dentist Within the Last Year by Education Level, 2002

Education Level	Percentage
Elementary school	29%
Some high school	46%
High School	62%
Some college	69%
College	77%

BRFSS

Chronic Disease Indicators

Figure 11: Percentage of Adults with Chronic Disease Who Have Lost Teeth Due to Illness or Gum Disease - BRFSS 2002

Chronic Disease	Percentage
All Adults	35%
High Blood Pressure	44%
High Cholesterol	40%
High Blood Pressure and High Cholesterol	51%
Fair/Poor Health	54%
Diabetic	59%

CDC

The importance of good oral health is not being discussed with pregnant women. While 69.3% of pregnant women were counseled by their prenatal provider on smoking and 72.4% were counseled on alcohol use, less than 40% received counseling on dental care.

PRAMS

Figure 7. Counseling Received by a Health Care Professional During Pregnancy

Topic	Percentage
Smoking or drug use	69.3%
Alcohol or drug use	72.4%
Oral health (brushing teeth, flossing, etc.)	38.1%

CDC

Links to State Burden Documents

- **Colorado 2005:**
<http://www.cdphe.state.co.us/pp/oralhealth/impact.pdf>
- **Georgia 2007:**
<http://health.state.ga.us/pdfs/familyhealth/oral/ohinga07.pdf>
- **Michigan 2007:**
<http://www.mohc.org/files/2007%20Burden%20of%20dis ease.pdf>
- **Nevada 2006:**
<http://health.nv.gov/PDFs/OH/Burdenoforaldisease2006.pdf>

Links to State Burden Documents

- **North Dakota 2006:**
<http://www.ndhealth.gov/oralhealth/Publications/Oral%20Health%20Burden%20Overview.pdf>
- **New York 2006:**
http://www.health.state.ny.us/prevention/dental/docs/imp act_of_oral_disease.pdf
- **Oregon 2006:**
<http://www.oregon.gov/DHS/ph/oralhealth/docs/burden.pdf>
- **South Carolina 2007:**
<http://www.scdhec.gov/administration/library/CR-006942.pdf>

BODT Link:

- **CDC/DOH Home Page:**
www.cdc.gov/oralhealth
- **Burden Document:**
<http://www.cdc.gov/OralHealth/publications/library/burdenbook/>

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