

## Oral Health Improvement Plan for Disadvantaged Floridians Background Information

### INTRODUCTION

The mouth and face allow us to speak, smile, taste, eat, kiss, smell, and communicate a wide variety of feelings and emotions. They represent the very essence of our humanity.<sup>1</sup> The mouth and face reflect signs and symptoms of not only health and well-being, but may signify disease or injury that can affect a person's quality of life.<sup>1-5</sup> The Surgeon General's 2000 Report, *Oral Health in America: A Report of the Surgeon General (Report)*, concluded that even though not all Americans are achieving the same degree of oral health, "oral health is essential to the general health and well-being of all Americans and can be achieved by all Americans."<sup>1,2</sup>

The Report stated that there is a "silent epidemic" of dental and oral disease that "restricts activities in school, work and home, and often significantly diminishes the quality of life."<sup>1,2</sup> Millions of people in the United States (U.S.) experience tooth decay, gum diseases, orofacial trauma and injuries, malocclusions, oral and pharyngeal cancers, and developmental defects such as cleft lip and cleft palate, that can result in needless pain and suffering; difficulty in speaking, chewing, and swallowing; increased costs of care; loss of self-esteem and social interaction; significant illnesses; disfigurement; decreased economic productivity through lost work (164 million hours/year) and school days (51 million hours/year); and, in extreme cases, death.<sup>1-3</sup> In the last century there has been remarkable improvement in oral health in America. Oral diseases and conditions can be prevented and controlled at reasonable cost through personal and population-based prevention. Despite the fact that safe and effective means of maintaining oral health have benefited the majority of Americans, many still experience needless pain and suffering. This "silent epidemic" is "affecting our most vulnerable citizens."<sup>1</sup> The Report made it abundantly clear that there are "profound and consequential disparities" in the oral health of various disadvantaged populations that reside in the U.S.<sup>1,3</sup> The "disadvantaged" are those population groups that lack power and are without the knowledge or resources to achieve optimal oral care. This lack of power can be political (minorities have little political clout because of lack of numbers), legal (children, adults with mental incapacitation, and the incarcerated lack the power to vote and to contract for services), economic, social, physical, or mental. In any population group, those who suffer the worst oral health are the poor. This is especially true with children and the elderly. Members of racial and ethnic groups also experience a disproportionate level of oral health problems. People with disabilities and complex health conditions are at greater risk for oral diseases that in turn further complicate their health. Moreover, gender-specific issues cut across all populations.<sup>2</sup> Regardless of the cause, members of disadvantaged populations are at the highest risk for oral diseases and, subsequently, are subject to poorer systemic health and well-being as well.

Historically, the profession of dentistry developed independently from medicine. As an independent profession, dentistry has been able to regulate the practice of dentistry, to oversee the education of its practitioners, and establish its own set of ethics.<sup>6</sup> Consequently, the diseases, conditions, and treatments that come within the scope of dentistry have been thought of as independent of systemic health. However, oral health is more than healthy teeth. Recent research has indicated that the integration of oral health into the health of the whole human body is important throughout a person's entire lifetime.<sup>1-4</sup> However, with few exceptions, little has been



done to integrate dental systems of care with medical and social service systems for the most vulnerable among us. As Donna E. Shalala, the then Secretary of Health and Human Services stated in the Report, “[t]he terms oral health and general health should not be interpreted as separate entities.”<sup>1</sup>

Maintenance of good oral health through a lifetime requires timely advice for self-care, preventative therapies, early detection and treatment of problems, and restoration of function.<sup>2</sup> The goal of the Surgeon General’s Report on Oral Health<sup>2</sup>, the U.S. Department of Health and Human Services’ Healthy People 2010 document<sup>4, 5</sup>, and of Florida’s State Oral Health Improvement Plan<sup>7</sup> is to develop a plan to prevent oral disease and promote oral health in order to increase the quality of life and eliminate oral health disparities for all people. Having state-specific and local data that augment national data is critical in identifying high-risk populations, in identifying areas of oral health need, and in addressing oral health disparities.<sup>2</sup>

The State Oral Health Improvement Plan is structured around seven major sections that describe and compare the state of oral health and oral health services in Florida to those in the United States (U.S.). What follows is a brief description of each section of the State Oral Health Improvement Plan. For a more in depth examination of the state of oral health and oral health services in Florida see the comprehensive version State Oral Health Improvement Plan.

## **WHAT ARE ORAL DISEASES?**

Section One describes the array and magnitude of oral, dental, and craniofacial diseases and conditions that can affect the U.S. population. The array of oral, dental, and craniofacial diseases and conditions that can affect the U.S. population is extensive. Oral and facial tissues may signify not only health and well-being, but may also signal disease, disease progression, or exposure to risk factors.<sup>1, 2</sup> The mouth serves as a host environment and as a portal of entry for a wide variety of pathogens and toxins that affect the oral and facial tissues and may affect the rest of the body.<sup>1, 2</sup>

Infectious diseases, notably dental caries and the periodontal diseases, predominate.<sup>1</sup> However, tooth loss; birth defects and developmental disorders; malocclusions; oral and pharyngeal cancers; intentional and unintentional injuries; acute and chronic pain; oral infections and lesions; many systemic diseases and treatments for systemic diseases; and behavioral factors such as smoking and alcohol use can directly or indirectly affect the craniofacial complex.<sup>1, 2, 4</sup> Dental decay is so widespread in the population that nearly every American has or will experience oral disease.

Discussions of specific dental diseases, national data on specific dental diseases, and state profiles regarding oral health, state infrastructure and programs can be found in the following resources: the “2000 Surgeon General’s Report on Oral Health” (<http://www.nidcr.nih.gov/sgr/sgrohweb/home.htm>)<sup>2</sup>; “Healthy People 2010” (<http://www.healthypeople.gov/Document/pdf/Volume2/21Oral.pdf>)<sup>4, 5</sup>; “Oral Health U.S., 2002” (<http://drc.nidcr.nih.gov/report.htm>)<sup>8</sup>, the Centers for Disease Control and Prevention’s (CDC’s) “Synopses of State and Territorial Dental Health Programs” (<http://www2a.cdc.gov/nccdphp/doh/synopses/index.asp>)<sup>9</sup> and the CDC’s “National Oral Health Surveillance System: State Profiles” (<http://www2a.cdc.gov/nohss/statemap.asp>).<sup>10</sup>

Florida has limited data related to the burden of dental disease throughout the state.<sup>11</sup> The State has yet to implement a statewide dental health surveillance system.<sup>11, 12</sup> Most Florida-specific oral health data comes from five sources: the Florida Cancer Data System ([http://www.doh.state.fl.us/disease\\_ctrl/epi/cancer/1999AR.pdf](http://www.doh.state.fl.us/disease_ctrl/epi/cancer/1999AR.pdf))<sup>13</sup>; the Florida Birth Defect Registry ([http://www.doh.state.fl.us/environment/Information\\_resource/pdfs/fbdr\\_final.pdf](http://www.doh.state.fl.us/environment/Information_resource/pdfs/fbdr_final.pdf))<sup>14</sup>; the 2000 Florida Behavioral Risk Factor Surveillance System (BRFSS) (<http://www.floridacharts.com/charts/brfss.aspx>)<sup>15</sup>; the Florida Medicaid Management Information System; and the Florida County Health Department Clinic Management System.

The Florida Cancer Data System only provides data on oral cancer. The Florida Birth Defect Registry collects information on the number of cleft lips and palates per live birth. The 2000 Florida BRFSS provided limited information on health related risk factors, such as alcohol and tobacco use, and only covered three issues directly related to oral health – the percentage of adults who have had their teeth cleaned within past year; the percentage of adults who visited a dentist within past year; and the percentage of adults with no teeth removed.<sup>15</sup> The Florida Medicaid Management Information System and the Florida County Health Department Clinic Management System provide some data on the dental disease burden among Floridians. However, the data from these systems is limited in that Medicaid and the County Health Departments primarily provide services to low income individuals.<sup>11, 15</sup>

This section also examines the central premise underlying the need for improving oral health - that oral health is integral to general systemic health. Oral diseases and conditions may cause or influence the development and severity of many systemic diseases and conditions. Moreover, many systemic diseases and conditions or medical treatments may cause oral diseases and conditions or have oral complications that can compromise the quality of life. Poor oral health can cause eating, learning and speech problems, as well as diminished self-esteem. Poor nutrition can lead to poor systemic health.

In particular, the following findings are noted in this section:

- Oral health is a part of systemic health. They are not separate entities.
- Dental decay is so widespread in the population that nearly every American has or will experience oral disease. Untreated tooth decay has been associated with failure of very young children to succeed and thrive.
- Poor oral health can continue into adulthood and can affect speech, nutrition, economic productivity, quality of life, and health care costs.
- Recent research has pointed to possible associations between chronic oral infections, such as gum disease and diabetes; heart and lung diseases including stroke; and preterm, low-weight births.

## **WHAT ARE THE ORAL HEALTH RISK FACTORS?**

Most oral diseases and conditions are complex. They represent the product of interactions between genetic, socioeconomic, behavioral, environmental, and general health influences. Individual biology and genetics; the environment; access to care; the organization of health care;

and personal behaviors and lifestyle all interact over the life span and determine the health of individuals, population groups, and communities.<sup>2</sup>

This section describes the prominent risk factors that contribute to poor oral health. These factors include:

- Lack of access to dental sealants. The use of dental sealants has been effective in reducing tooth decay, especially among children. However, less than 30 percent of children in the U.S. and Florida have sealants on vulnerable teeth.
- Lack of access to fluoride. There are many methods of fluoride delivery including fluoride mouthrinses, fluoride varnishes, and community water fluoridation. Despite overwhelming evidence and widespread acceptance that fluoride is safe, reduces the burden of tooth decay, and is cost-effective, many persons in the U.S. and Florida do not have access to fluoride.
- Lack of access to professional care. The professional health care workforce as it exists today is not adequately servicing all segments of American and Florida society. There exist dental professional shortages; maldistribution of existing dental providers; a lack of appropriate training of dental providers regarding special needs populations; inadequately funded, poorly accepted, and burdensome public dental plans; underrepresented minorities in the dental profession; underutilization of dental and other health care providers; and a lack of specialty dental providers all of which contribute to individuals and populations going without optimal oral health care.
- Personal or behavioral risk factors. Personal lifestyle behaviors such as tobacco use, excessive alcohol use, drug use, poor nutrition and dietary choices, dental literacy, perceived need, and personal home care have been shown to negatively affect oral and craniofacial health. Moreover, social conditions may affect oral health. These may include cultural change or mobility, occupational status, social class, educational status, insurance status, home and work environment, and measures of income including SES.
- Psychosocial factors. Psychosocial factors are those factors relating to the mind and emotions such as language, culture, compliance, anxiety and fear. The interplay of these factors affects dental care access and utilization.

For more information on sealants see the CDC's "Frequently Asked Questions: Dental Sealants" at: <http://www.cdc.gov/OralHealth/factsheets/sealants-faq.htm>.<sup>16</sup>, the Public Health Dental Program of the Florida Department of Health (<http://www.doh.state.fl.us/family/dental/index.html>)<sup>17</sup>, and the Florida Medicaid Management Information System are the sources of the Florida-specific data on sealant use.<sup>11</sup>

The CDC provides information on fluoridation at: <http://www.cdc.gov/OralHealth/topics/fluoridation.htm>.<sup>18</sup> and the state of Florida provides fluoridation information at <http://www.doh.state.fl.us/family/dental/fluoridation/index.html>.<sup>17</sup>

The Department of Health and Human Services identifies 1,171 areas of the U.S. (containing more than 25 million Americans) that are seriously, medically (including dental) underserved areas (MUA), or medically underserved populations (MUP), or have been designated as dental health professional shortage areas (DHPSA) at: <http://bhpr.hrsa.gov/shortage/>.<sup>2, 3, 19-22</sup>

For National information on tobacco usage see: “Targeting Tobacco Use: The Nation's Leading Cause of Death 2004” at [http://www.cdc.gov/nccdphp/aag/pdf/aag\\_osh2004.pdf](http://www.cdc.gov/nccdphp/aag/pdf/aag_osh2004.pdf)<sup>23</sup>; and “Health, United States, 2003” at <http://www.cdc.gov/nchs/data/hus/hus03.pdf>.<sup>24</sup>

For Florida-specific information on tobacco use see: “State Tobacco Activities Tracking and Evaluation (STATE)” at [http://www2.cdc.gov/nccdphp/osh/state/report\\_index.asp](http://www2.cdc.gov/nccdphp/osh/state/report_index.asp)<sup>25</sup>; the “Florida Youth Tobacco Survey: Monitoring Program Outcomes in 2002” at [http://www.doh.state.fl.us/disease\\_ctrl/epi/FYTS%20County%20Reports/FYTS\\_2002\\_report.pdf](http://www.doh.state.fl.us/disease_ctrl/epi/FYTS%20County%20Reports/FYTS_2002_report.pdf),<sup>26</sup> and “State Tobacco Settlement: Florida” at <http://tobaccofreekids.org/reports/settlements/2004/fullreport.pdf>).<sup>27</sup>

For National information on alcohol usage, see: “Health, United States, 2003” at <http://www.cdc.gov/nchs/data/hus/hus03.pdf>.<sup>24</sup>

For Florida-specific information on alcohol use, see: “2002 Behavioral Risk Factors Surveillance System telephone survey” at <http://www.floridacharts.com/charts/brfss.aspx>.<sup>15</sup>

Statistics on poverty for the nation and for Florida can be found at the U.S. Census Bureau’s website at: “Poverty in the United States: 2002” at <http://www.census.gov/prod/2003pubs/p60-222.pdf>.<sup>28</sup> For Florida-specific data on oral health related to poverty see: “2002 Behavioral Risk Factors Surveillance System telephone survey” at <http://www.floridacharts.com/charts/brfss.aspx>. (See; Health Resources Availability, Access to Dental Care by Low Income Persons.)<sup>15, 29</sup>

## **ORAL HEALTH DISPARITIES AMONG DISADVANTAGED POPULATIONS**

Disadvantaged groups are those population groups that are without the knowledge or resources to access optimal oral health care. The primary reason for this lack of access is economic. However, disparate access can also result from inequities in: political power; legal status; social status; physical abilities; or mental capacity. Consequently, disadvantaged populations face many barriers to optimal dental care.

This section identifies and describes 10 specific disadvantaged populations in the U.S. which are particularly relevant to Florida. Where applicable, these 10 disadvantaged populations are further subdivided into subgroups of populations that are distinctively vulnerable. The oral health burdens and needs of children, particularly low-income children, infants and toddlers, children with special needs, and foster children, are the main focus of this report. However, this section also addresses the oral health burdens and needs of adults, particularly the elderly and women; minorities, particularly Blacks, Hispanics, Native Americans, and Haitians; individuals with disabilities, those with birth defects, or developmental disabilities, or acquired disabilities; individuals with HIV/AIDS; rural populations; the homeless; migrant and seasonal farmworkers; immigrants and refugees; and the incarcerated.

- The primary barrier to dental care for children is economic. Additionally, children have no political or legal power. The needs and barriers a child faces become greater if the child has a developmental, physical, or mental disability; or is a member of a minority.

- Most adults possess the full measure of rights and powers available in the U.S. However, the elderly, due to the effects of age, and woman, due to historical discrimination and gender differences may lack legal, political, and social power.
- Historically, many minorities have been denied equal rights and benefits in the U.S. Minorities tend to lack social, political and legal power. Consequently, Blacks, Hispanics, and Native Americans have the poorest oral health and general health of any racial populations in the U.S.
- Many individuals with disabilities have special health care needs, including oral health care needs. The exact needs of the individual will vary by the severity of the disability. Irrespective of the cause, individuals with disabilities often lack legal, political, social, physical (limited mobility to visit a dental office or limited coordination to provide home care can create dependence on others), and mental power (mental disabilities may be severe - incapacity to understand oral health and oral hygiene or inability to make health care decisions, or mild – contributing to compliance, home care, and oral health literacy issues).
- Persons living with HIV disease have more limited access to oral health care than their counterparts without the disease because society has historically stigmatized HIV/AIDS individuals. Moreover, health care providers may not be adequately trained and fearful to treat HIV/AIDS patients.
- Twenty-five percent of Americans live in rural areas. Oral health is a critical unmet need in rural America. Rural populations are proportionately older, sicker and have lower-incomes than urban/suburban populations. Rural people have lower incomes on average and have reduced access to private dental insurance and thus, are dependent on Medicaid or the Children's Health Insurance Program for insurance coverage. Additionally, there is a lack of health care providers in rural areas.
- The homeless are 12 times more likely to have dental problems than individuals from stable home environments. The homeless lack economic and social power. The cause of homelessness remains rooted in poverty and society (and many health care providers) stigmatize a person for being homeless. Moreover, many homeless are physically or mentally disabled which only increases the risks, burdens, and oral health care needs of these individuals.
- Dental disease ranks as one of the top five health problems for migrant farmworkers ages 5 through 29. Poverty, frequent mobility, low literacy, language, cultural, and logistic barriers - impede migrant farmworkers from access to social services and cost effective primary and preventative health care. Migrant farmworkers are some of the most economically disadvantaged persons in the U.S. They are economically, socially, politically, and legally powerless, and many experience prejudice and hostility in the communities in which they work and live.
- Oral health is an issue for many immigrants and refugees. Cultural and language differences create communication, understanding, and compliance issues. Many dental health professionals are uncomfortable and thus, unwilling to treat persons from foreign countries. According to the 2000 Census, over 31 million people in the U.S. (11.1 percent of the population) are foreign born. In the year 2000, 70 percent of immigrants lived in one of six states: California, New York, Florida, Texas, Illinois, and New Jersey. The overwhelming majority of immigrants entering Florida are Cuban, followed by Columbian, and Haitian.

- On any given day there are approximately 2 million persons incarcerated in prisons throughout the U.S. including 75,000 throughout Florida. While inmates have lost political and legal rights, they are statutorily guaranteed proper health care and access to services is unlimited. However, qualification for particular services and treatments is predicated on patient compliance with oral health instruction and self-care responsibility. Moreover, recruiting and retaining oral health professionals who are willing to treat the prison populations has proved difficult.

## Children

The oral health issues and barriers affecting children vary widely depending on their developmental age. In general, all children face numerous barriers to dental care. Barriers arise, not only from the individual's condition, but also from the status of their family (income, education, and involvement in the child's life); place of residence; provider training and availability; health care payer; government; and healthcare systems.<sup>30</sup> The primary barrier to dental care for children is economic. Family income/poverty status affects the provision of basic needs such as nutritional foods, oral hygiene home care products, and access and utilization of dental services. There are striking disparities in dental disease by income.<sup>2</sup> Poor children suffer twice as much tooth decay as children from economically stable families.<sup>2</sup> Furthermore, the decay seen in poor children is more likely to be more severe and untreated than decay in those children living above the poverty level.<sup>2</sup> More than one third (36.8 percent) of poor children aged 2 to 9 have one or more untreated decayed primary tooth, compared to 17.3 percent of non-poor children.<sup>2</sup>

Additionally, children have no political power as they cannot vote.<sup>31, 32</sup> Legally, children are dependent on parents or guardians and the State for most all of their needs, including health care. Children cannot enter into contracts to generate income or to obtain needed services. Children face oral health barriers such as transportation issues, provider availability (e.g. geographic distribution, numbers of specialty pediatric dentists, and availability of providers who participate in certain insurance plans – e.g. Medicaid), who will pay for their dental care, and informed consent for treatment.<sup>2, 33</sup>

The needs and barriers a child faces become greater if the child has a developmental, physical, or mental disability; or is a member of a minority.<sup>2, 33</sup> Gross disparities exist in the extent and consequences of oral disease among young children of low-income, minority, immigrant, homeless, or other socially disadvantaged populations.<sup>30</sup> These children access dental care at considerably lower rates, have twice the prevalence of decayed teeth, twice the severity of decay when they have decayed teeth, and twice the dental pain experience than their more economically and socially advantaged peers.<sup>30</sup> Interestingly, while low-income and socially disadvantaged children have twice the dental insurance (due to public insurance programs), they have fewer dental visits than economically and socially advantaged children.<sup>30</sup>

The possession of dental insurance is indicative of the presence of tooth decay. Over 50 percent of all children have no dental insurance.<sup>34</sup> Uninsured children were more likely than children with Medicaid/public insurance (this percentage only includes those children who are enrolled in Medicaid/public insurance, not merely those who are eligible), and children with private

insurance to have unmet dental needs.<sup>34</sup> Moreover, these children tend to have more tooth decay per child and more untreated decay.<sup>34</sup>

For National oral health statistics regarding children see “Healthy People 2010”, Objectives 21-1, 21-2, 21-8, 21-10, and 21-12 at:

<http://www.healthypeople.gov/Document/HTML/Volume2/21Oral.htm>.<sup>4</sup>

### National Demographics

The U.S. Census Bureau determined that there were 72,293,812 persons (or 25.7 percent of the U.S. population) under the age of 18 in the U.S. in the year 2000.<sup>35</sup> The male to female ratio for persons under the age of 18 was approximately 1.05:1.00.<sup>35</sup> Whites comprise approximately 68 percent of the under 18 population, Blacks 15 percent, Hispanics 17 percent, and Native Americans 1 percent.<sup>35</sup> Moreover, in the U.S., 1 out of 4 children are born into poverty with minorities encountering a disproportionate share of poverty compared to Whites.<sup>35</sup> Nationally, the percentage of children at or below 200 percent of poverty (the poor and near poor) for the years 2000-2002 was 37.7 percent.<sup>35</sup>

### Florida Demographics

Florida had 3,646,340 persons (or 22.8 percent of Florida’s population) under the age of 18 in 2000.<sup>35</sup> The male to female ratio was 1.05:1.00.<sup>35</sup> The percentage of Florida children at or below 200 percent of poverty (the poor and near poor) for 2000-2002 was 41.2 percent.<sup>35</sup> Florida Census data does not detail Florida’s under 18 population by race or by disability.

### *Infants and Toddlers (up to age 5)*

Children under the age of 5 are at a seminal stage in their physical and cognitive development. Early childhood is marked by tremendous growth and development, especially of the face, mouth, and dentition.<sup>2, 30, 36</sup> Early childhood diseases and injuries combined with decisions regarding health, nutrition, education, socialization, and other basics of human existence can disturb the development of bone, tooth, and soft tissue formation and impact dental and systemic health for a lifetime.<sup>2, 30, 36</sup> Infants and toddlers generally have only primary teeth. Tooth decay, especially baby bottle decay or early childhood caries (ECC) are of particular concern in this age group. Healthy People 2010 has set the reduction of the proportion of young children (baseline data is on children ages 2-4) who have experienced tooth decay and the reduction of the proportion of young children who have untreated tooth decay as two of its goals (21-1a and 21-2a).<sup>4</sup>

### *Children with Special Needs*

While all children potentially face barriers to accessing oral health care, not all children are at equal risk for poor oral health and lack of access to needed care. Children with special needs (due to physical, mental, and emotional disabilities) are particularly vulnerable to poor oral health.<sup>30</sup> For these special needs children, every endeavor is more complex and demanding.<sup>30</sup>

Restricted physical dexterity may limit or prevent self home care, present problems with diet and nutrition, and limit mobility causing transportation problems.<sup>30</sup> Diminished mental capacity may cause a lack of understanding about the importance of oral health, compliance, and proper home care.<sup>30</sup> Moreover, physical and mental disabilities contribute to limited numbers of available oral health care providers willing or able to treat such persons.<sup>30</sup> Most general dentists have limited training regarding special needs children.<sup>30</sup> Thus, they may be unwilling or fearful of treating special needs children.<sup>30</sup> The number of dentists with specialty training is limited.<sup>30</sup> Moreover, many special needs children require general anesthesia in a hospital, further limiting the facilities a special needs child can access and something dental insurance usually does not cover.<sup>30</sup> Additionally, due to the complexity of special needs children's health, integration between the systems that deliver medical and dental care is necessary to provide optimal oral health.<sup>30</sup> However, these two systems remain essentially separate.

### *Foster Children*

Children in foster care are a particularly vulnerable population. They are more likely than other children to have a significant physical or behavioral health problem.<sup>37</sup> Foster children experience high rates of physical, dental, and mental health problems that are the result of poverty, harmful exposures, socio-emotional deprivation, and neglect prior to being removed from their families; of the emotional consequences of that separation and of their subsequent inconstant, unpredictable life circumstances.<sup>37</sup> This means that the foster care population often has special health care needs (30% to 65% have at least 1 behavioral problem or developmental disability).<sup>37, 38</sup> Foster children are at great risk for having these health care needs remain unidentified and untreated because health care typically has been obtained sporadically prior to foster home placement and is discontinuous, fragmented, and of varying quality after placement.<sup>37</sup>

Foster children are under the control of the State. According to the Supreme Court, the State is responsible for their general well-being and health, including oral health.<sup>39</sup>

Even though the State has responsibility for their oral health, foster children still face a number of barriers to oral health care. Most foster children are eligible for Medicaid and, in fact, utilize the Medicaid system almost twice as often as other populations of Medicaid eligible children. However, for all children eligible for Medicaid, obtaining comprehensive, coordinated, continuous health care of good quality is hampered by a system that itself is struggling to provide good child welfare services.<sup>37</sup>

Foster children are dependent on their foster parents for scheduling dental appointments, arranging transportation to appointments, providing a proper, nutritious diet, supplying oral hygiene products, and supervising home care. Thus, the dental literacy of the foster parent will affect the dental health of the foster child.<sup>30</sup>

Additionally, foster children tend to move from foster home to foster home.<sup>37, 38, 40</sup> The result is the lack of establishment of a dental home. Thus, continuity of care and follow-up of treatment are problematic for foster children.<sup>37, 38, 40</sup>

While the numbers of children in foster care vary from month to month, Florida has approximately 20,000 children at any given time in foster care.<sup>38</sup> Approximately, 26 percent of

these children are age 3 or younger, 45 percent are between the ages of 4 and 12, and 30 percent of these children are over 12.<sup>38</sup> Slightly half of the children in foster care are White (45.8%), about a third are Black (37.7%), 7 percent are Hispanic, and 1.7 percent are Haitian.<sup>38</sup>

## Adults

In general, adults are not a disadvantaged population. Most adults possess the full measure of rights and powers available in the U.S. However, certain subgroups of adults are situated such that they experience disparities in access and utilization to oral health care services and disparities in burdens and outcomes to certain dental diseases. The elderly, due to the effects of age; and women, due to historical discrimination and gender differences, are such disadvantaged populations.

### *The Elderly*

The U.S. is an aging society. The 65 and older population has increased 10.2 percent since 1992 to a level of 35.6 million in 2002.<sup>41</sup> Older women outnumber older men 20.8 million to 14.8 million.<sup>41</sup> Persons reaching the age of 65 have an average life expectancy of an additional 18.1 years (19.4 years for women and 16.0 years for men).<sup>41</sup> Continuing improvements in health care and technology and the aging of the baby boomer generation will cause the 65 and older population to double by the year 2030.<sup>41, 42</sup> Moreover, members of minority groups which currently represent 16.4 percent of the elderly population are projected to represent 26.4 percent of the U.S. elderly population in 2030.<sup>41</sup> Approximately 3.6 million or 10.4 percent of the elderly live in poverty and another 2.2 million or 6.4 percent were “near poor”.<sup>41</sup> Moreover, 31.2 percent of males and 43.7 percent of females 65 and older were below 200 percent of the poverty threshold.<sup>35</sup>

Simply defining the elderly population chronologically is not entirely useful in dentistry.<sup>43</sup> Rather, categorizing the elderly functionally may be more constructive.<sup>43</sup> Functionally, the elderly can be categorized into three distinct groups: the functionally independent; the frail older adult; and the functionally dependent older adult.<sup>43</sup>

The majority of elderly adults (70%) live functionally independent in the community.<sup>43</sup> The frail older adult population represents approximately 20 percent of the elderly population - 4.7 percent of the elderly live in the community, but are homebound and another 16.2 percent of the elderly live in the community, but with a major limitation in mobility due to a chronic condition.<sup>43</sup> Approximately 10 percent of the elderly population is functionally dependent – living in nursing homes facilities, assisted living facilities, or requiring long term home care.<sup>43</sup>

Functionally independent older adults were more likely to have seen a dental care provider than either frail or functionally dependent older adults.<sup>43</sup> Frail and functionally dependent older adults not only have higher levels of medical and oral complications, but also may not have the skills to perform self care and oral hygiene.<sup>43</sup> Therefore, the elderly may lack physical and mental (and thus, legal) power.

The elderly face a number of barriers in obtaining oral health care. As more people age and keep more of their natural teeth, the complexity of their treatment will only continue to increase. One

barrier is perception.<sup>42</sup> Many people associate aging with losing their teeth and no longer needing dental care. With or without teeth, regular visits to the dentist are important to maintain proper function of any prostheses and to monitor the elderly for the presence of other systemic diseases.<sup>42</sup> Additionally, the incidence of oral cancers increases with age.<sup>43, 44</sup>

Because the prevalence of tooth decay increases with age, many older adults will retain teeth that have existing restorations.<sup>43</sup> Additionally, root caries is a problem. The percentage of teeth with decayed or filled root surfaces increases every decade of life.<sup>43</sup> Moreover, incidence and severity of periodontal disease increases with age.<sup>2, 4, 8</sup>

Complicating elder care is the fact that most elderly persons have at least one chronic condition.<sup>41-43</sup> As a result, the elderly are taking an ever-expanding variety of medications.<sup>42, 43</sup> Some medications (along with some diseases and radiation treatment) can cause xerostomia (dry mouth) that can lead to oral complications.<sup>2, 42, 43</sup> Poor oral health can increase the risk of systemic disease and conditions and the cycle continues.<sup>2, 42, 43</sup>

Older adults also may face financial barriers – most lose their health insurance upon retirement, Medicare prohibits the provision of routine dental treatment (with the exception of care that is integral to the provision of Medicare-covered medical treatment and a few other minor exceptions), and Medicaid coverage for the elderly is at state option (only 22% of the elderly had dental insurance in 1995 – 7% of the elderly “poor”, 14% of the elderly “near poor”, and 31% of the elderly “nonpoor”).<sup>43, 45, 46</sup> Elderly adults, especially the frail and functionally dependent, are faced with transportation issues and experience reduced access to dental care facilities and providers.

Federal regulations require Medicare/Medicaid skilled nursing facilities (SNF’s) to provide or arrange, but not pay for emergency and routine dental services for residents.<sup>47</sup> However, Medicaid nursing facilities (NF’s) must provide or arrange and pay for emergency dental services, and any other routine dental services that a particular state’s Medicaid plan provides, for all residents.<sup>47</sup> Moreover, all long-term care facilities are responsible for the maintenance of good oral hygiene in all residents.<sup>47</sup> As a result, about 60 percent of nursing home or assisted living facilities do not have the services of a dentist, or only had dentists on limited call, or only provided services off site.<sup>43</sup>

Florida’s elderly population (65+) numbered 3,075,699 persons or 17.9 percent of the total population of Florida in the year 2003 and continues to increase both numbers and percentage.<sup>29</sup> The elderly population aged 85 and older has been one of the fastest growing age groups in Florida over the past few decades (75.1% growth in 1980 and 61.2% growth in 1990).<sup>29</sup> The reasons for this growth are not only the natural increases from the aging of the baby boomer generation and improvements in health care technology, but also migration – many elderly persons from around the country come to Florida to retire.<sup>48</sup>

Females outnumber males - 1,748,139 (56.8%) compared to 1,327,687 (43.2%), respectively.<sup>29</sup> Moreover, 2,841,440 (92.4%) elderly Floridians were White, 201,734 (3.3%) were Black, and 32,525 (0.01%) were other non-White.<sup>29</sup> Of Florida’s elderly, between 9 and 16 percent live in poverty - 8.4 percent are “poor” with another 10-15 percent in the “near poor” category.<sup>29, 35, 49</sup>

Florida does not maintain statistics on the number of elderly who are functionally independent, frail, or functionally dependent.

Florida has limited data on the oral health burden and needs of the elderly within the state. Limited oral health statistics on Florida's elderly can be accessed at the "2002 Behavioral Risk Factors Surveillance System telephone survey" at <http://www.floridacharts.com/charts/brfss.aspx>. (See; BRFSS category "Oral Health", grouped by "Age").<sup>15</sup> Florida does not calculate oral cancer incidence or mortality by age group. Moreover, Florida maintains no state-specific data on the incidence or prevalence of tooth decay or gum disease in the elderly.

### *Women*

While women's status in U.S. society has improved over the years, historically, they have suffered politically, legally, and socially. Currently, although women are promised equal rights and status under the law, economically and socially, especially in the workplace, they still face discriminatory treatment. During the past few decades women's health has been a prominent issue in the nation's health agenda. While significant strides have occurred, notably that women have enjoyed a general improvement in oral health, there still remain areas of disparity between females and males.<sup>2</sup>

Women still earn less than men.<sup>50</sup> In 1998, women made only 76 percent of men's median earnings.<sup>50</sup> This income gap contributes to the higher poverty rates found among women.<sup>50</sup> Moreover, almost 20 percent of women have no health insurance.<sup>50</sup> Women who live in poverty tend to face more problems than males in the same condition.<sup>2</sup> More women are the sole head of their households than men (12% to 4.2%).<sup>35</sup> This situation puts an increased strain on the family's economic situation.<sup>2</sup> The number of female householder families (with no husband present) in poverty increased to 3.6 million in 2002 from 3.5 million in 2001.<sup>28</sup> The poverty rate for these female housholder families was 26.5 percent (compared to 5.3 percent for two parent families).<sup>28</sup> For these women needed oral health care is much more difficult to obtain.<sup>2</sup>

The comparative longevity of women, their compromised physical status over time, gender-role expectations put on women (e.g. the concept that women are the traditional caregiver can result in dependency upon their spouse – both economically and in the acquisition of health care insurance), genetic and physiological differences, and continued social and economic discriminatory practices in society put women at increased risk of certain oral diseases.<sup>2</sup> Females have a higher prevalence of oral-facial pain, including pain from oral sores; jaw joints; face/cheek; and burning mouth syndrome, and are subject to oral complications from and during pregnancy, such as pregnancy gingivitis and the possible connection between gum disease and preterm, low birth-weight babies.<sup>2</sup> Moreover, historically, women's health was not an area that was included in clinical studies. Thus, there are many areas for which information on women's systemic health and dental health is partial or nonexistent.<sup>2</sup> Conversely, woman of all races have a lower incidence and mortality rate from oral cancers.<sup>2</sup> This may be due to the fact that women smoke less than men.<sup>2</sup> However, women are beginning to smoke at younger ages.<sup>50</sup>

Approximately, one-third of all adult women in the U.S. are racial minorities.<sup>50</sup> In the year 1998, 71 percent of women were White, 13 percent were Black, 11 percent were Hispanic, and 1

percent were Native American.<sup>50</sup> Women of racial minority are more likely to be economically disadvantaged and to have lower levels of educational attainment than White women.<sup>50</sup> Nationally (and in Florida), the male to female ratio (males per 100 females) varies by age. In general, there are more males than females from birth to age 34 (from 105.1 for the 15-24 age group to 101.8 for the 25-34 age group).<sup>35</sup> However, after age 34 the male to female ratio favors females and becomes more favorable for each successive older age group (98.9 for the 35-44 age group to 40.7 for the over 85 age group).<sup>35</sup>

There is little Florida-specific data that indicates the oral health burdens and needs of Florida's females. The Florida Department of Health's "2002 Behavioral Risk Factors Surveillance System telephone survey" at <http://www.floridacharts.com/charts/brfss.aspx> (See; BRFSS category "Oral Health", grouped by "Gender")<sup>15</sup> provides limited oral health statistics by gender.

### **Minorities**

The 2000 U.S. Census determined that minorities make up close to 25 percent of the U.S. population.<sup>35</sup> Blacks comprised 12.3 percent, Hispanics 12.5 percent, and Native Americans 0.9 percent of the total U.S. population.<sup>35</sup> Moreover, certain immigrant and refugee populations are unique to certain parts of the country. In Florida, especially in Dade County, a large Haitian population exists. Haitian leaders and activists estimate that close to 1.2 million Haitians live in the United States.<sup>51</sup> By the year 2050 the U.S. Census Bureau estimates that 50 percent of the U.S. population will be Asian, Black, Hispanic, and Native American.<sup>2</sup>

Although minority populations are growing, politically and socially they still lack power. Historically, minorities have been subject to blatant discrimination. Socially, politically, and legally minorities have been denied equal rights and benefits in the U.S. Consequently, Blacks, Hispanics, and Native Americans have the poorest oral health and general health of any racial populations in the U.S.<sup>2</sup>

### National Demographics

National demographic statistics on minorities can be found in the U.S. Census Bureau's "Census 2000" at <http://www.census.gov/main/www/cen2000.html><sup>28, 35</sup> and in the U.S. Census Bureau's "Poverty in the United States: 2002" at <http://www.census.gov/prod/2003pubs/p60-222.pdf>.<sup>28</sup> Poverty in minority populations is most striking.<sup>35</sup> Nationally in 2002, 24.1 percent of Blacks and 21.8 percent of Hispanics lived in poverty compared to 10.2 percent of Whites.<sup>35</sup>

Health care data on many minorities is limited. Historically, the majority of health care studies centered on Whites. Only in the last few decades have researchers begun to study minority groups and the subsequent, disparities in health care access and outcomes that these populations face. However, some minority oral health statistics are significant.

### Florida Demographics

In Florida the population has become increasingly non-White over the past few decades. The non-White population has increased from 14.7 percent in 1980 to 17.8 percent in 2000 and is expected to reach 19.2 percent of the population by 2010.<sup>48</sup> The Hispanic population is the

fastest growing and currently the largest minority population in Florida. In 1980, Hispanics numbered approximately 860,000 (8.8% of Florida's total population).<sup>48</sup> This population increased in numbers to approximately 1,575,000 (12.2%) in 1990 and to over 2,680,000 (16.8%) in 2000.<sup>48</sup> Blacks represent 14.6 percent of Florida's population and Native Americans total 0.3 percent.<sup>35, 48</sup> Additionally, there are an estimated 200,000 Haitians living in Florida, mainly in Dade County.<sup>51</sup> The Florida Community Health Assessment Resource Tool Set (CHARTS) system that provides data on Florida's population only describes minorities by age and gender using the race characterizations "white", "black" and "other nonwhite".<sup>29</sup> Thus, information is limited as to the numbers of minority children and elderly that live in Florida.

Florida demographic statistics on minorities can be found in the "Florida Community Health Assessment Resource Tool Set (CHARTS)" available at:

<http://www.floridacharts.com/charts/Domain2.aspx?Domain='03'>.<sup>29</sup> There are no poverty statistics for Floridians by race.

Specific national dental disease burden statistics for minorities can be found in the "2000 Surgeon General's Report on Oral Health" at <http://www.nidcr.nih.gov/sgr/sgrohweb/home.htm><sup>2</sup> and in the Dental Oral and Craniofacial Data Resource Center's Oral Health U.S., 2002 at <http://drc.nidcr.nih.gov/report.htm>.<sup>8</sup>

Florida-specific statistics on dental disease burden can be found at The Department of Health's "2002 Behavioral Risk Factors Surveillance System telephone survey" at <http://www.floridacharts.com/charts/brfss.aspx> (See; BRFSS category "Oral Health", grouped by "Race/Ethnicity")<sup>15</sup>

### *Blacks*

For people of all ages, Blacks had higher rates of untreated dental decay and incidence of gum disease than Whites.<sup>2</sup> A greater percentage of Black adults have missing teeth compare to White or Hispanic adults of the same age.<sup>2, 8</sup> However, Black adults are only slight more likely to have lost all their teeth than White or Hispanic adults.<sup>8</sup> Black males have the highest oral cancer incidence and mortality rates and lowest 5-year survival rates than any other minority and gender group.<sup>2</sup> However, Blacks have about a third lower incidence rate for cleft lip and cleft palate than Whites.<sup>2</sup> Moreover, the percentage of Black children with dental sealants is 3-4 times less than the percentage for same aged White children.<sup>8</sup>

### *Hispanics*

Health care data on Hispanics is even more incomplete than that on Blacks.<sup>2</sup> However, in general, employed Hispanic adults had twice the untreated dental decay as Whites.<sup>2</sup> Moreover, preliminary data suggests that Hispanic children aged 2-4 are more likely to have experienced dental caries in their primary teeth, have on average more decayed and filled tooth surfaces, and have more untreated dental decay than Whites or even Blacks of the same ages.<sup>2</sup> However, adult Hispanics 35-44 have significantly less decayed, missing, or filled surfaces in permanent teeth than Whites or Blacks.<sup>8</sup>

Language and cultural differences are a major barrier to access for many Hispanics.

### *Native Americans*

Native Americans represented 1.6 percent of the total U.S. in the year 2000.<sup>35</sup> In the same year there were 66,138 Native Americans living in Florida (or 4.0 percent of Florida's population).<sup>35</sup> The Federal Indian Health Service (INS) program is responsible for the health, including dental needs, of the Native American population.

The INS maintains data on the oral health status of Native Americans, but only records data on those Native Americans living on reservations.<sup>2</sup> Little is known about the health status of the 1 million Native Americans the INS does not serve.<sup>2</sup> In general, Native Americans aged 2-4 years, have 5 times the rate of dental decay compared to all children of that age group.<sup>2</sup> Moreover, Native American children ages 6-8 suffer twice the dental decay experience and have 2-3 times the untreated dental decay than similar aged children in the U.S.<sup>2</sup> In adults, gum disease is 2.5 times greater than in the general U.S. adult population.<sup>2</sup>

Florida has no dental disease burden or dental health care utilization data on Native Americans.

### *Haitians*<sup>51</sup>

Haitians bring to the health care system a different set of beliefs and values about health and illness that is a challenge to health care practitioners who must try to explain treatments while acknowledging their clients' cultural convictions. The uniqueness of their culture and subsequent personal behaviors make delivery of oral health care services challenging.

Haitians do not believe in orthodox medicine as a first resort. Instead they try home remedies for treating illness. Because Haitians perceive orthodox medicine as a second choice, Haitians usually present with more severe disease or complex issues. Haitians also practice certain risky behaviors that contribute to poor health. Drinking alcohol and smoking cigarettes are culturally accepted for men and are used socially when friends gather. In addition, the sexual practices of Haitians resulted in HIV/AIDS becoming rampant within their society. In 1982, Haiti became the first developing country to be blamed for the origin of AIDS. As a result, Haitians have had to endure the stigma associated with the belief that Haitians were "AIDS carriers". Additionally, many Haitians speak Creole or French and do not speak the English language well.

Many Haitians are refugees or immigrants and thus, are in low-paying jobs that do not provide health insurance. Therefore, economics can also act as a barrier to health promotion and access. While many Haitian children may be eligible for Medicaid or SCHIP or other government programs, many Haitians do not take advantage of such programs because they believe they are at risk of deportation.

### **Individuals with Disabilities**

The Americans with Disabilities Act defines a disability as a mental or physical impairment that substantially limits one or more major life activities such as walking, hearing, seeing, learning, or caring for one's self.<sup>52</sup> A variety of diseases, disorders, defects, and conditions can cause any number of impairments and render a person disabled. Many disabled persons have special health

care needs, including oral health care needs. The exact needs of the individual will vary by the severity of the disability. Irrespective of the cause, individuals with disabilities often lack legal, political, social, physical, and mental power. Socially society stigmatizes the disabled, physically they may not be able to take care of their personal needs, and mentally and legally they may not have the capacity to make decisions on their own. Performing oral hygiene home care, accessing professional dental care, and informed consent concerning health care treatment are significant issues among this population. Moreover, individuals with severe developmental disabilities who cannot communicate their oral discomfort are at great risk that their dental disease may go undetected for long periods of time. Thus, they may suffer needlessly from severe dental pain. Dental care is one of the most difficult services for citizens with developmental disabilities to access. Additionally, severely disabled individuals, especially children, may be uncooperative or difficult to treat. Many dental health care professionals are poorly educated in treating individuals with disabilities (and uncooperative patients of any kind). Thus, many dental offices are unwilling to treat individuals with disabilities (or any difficult patients, including children and the elderly).

Nationally, 54 million Americans have a disability.<sup>53</sup> Of these, approximately, 26 million have a severe disability.<sup>53</sup> Comparatively, in Florida, approximately 3.5 - 4.5 million Floridians are disabled.<sup>53</sup> More national and Florida-specific demographic statistics on disabled persons can be found in the U.S. Census Bureau's "Disability Status, 2000" available at <http://www.census.gov/prod/2003pubs/c2kbr-17.pdf>.<sup>53</sup>

There is no national or Florida-specific data on the oral health burdens and needs of the disabled.

### *Birth Defects*

A birth defect is a problem that happens while a baby is developing in the mother's body.<sup>54</sup> One of every 33 babies is born with a birth defect.<sup>54</sup> Most birth defects originate during the first 3 months of pregnancy.<sup>54</sup> A birth defect may affect how the body looks or functions or both. A birth defect can affect almost any part of the body and can cause physical and/or mental impairments.<sup>54</sup> Birth defects can be found before birth, at birth, or anytime after birth.<sup>54</sup> Birth defects can vary from mild to severe. Babies with birth defects may need surgery or other medical treatments.<sup>54</sup> If they receive the help and treatment they need, these babies often lead full lives.

Some common birth defects that have oral or craniofacial complications are "neural tube defects," which are defects of the spine (e.g. spina bifida) and brain (e.g. anencephaly). Neural tube defects affect about 1 of 1,000 pregnancies.<sup>54</sup> Birth defects of the lip and of the palate are also common. These birth defects, known as "orofacial clefts," include cleft lip, cleft palate, and combined cleft lip and cleft palate. Cleft lip is more common than cleft palate. In the U.S., orofacial clefts affect about 1 in 1,000 babies.<sup>54</sup> Additionally, many genetic conditions, such as Down's syndrome, occur with mental or physical complications that can compromise a person's home care abilities. Down's syndrome affects about 1 in 800 babies.<sup>54</sup>

### *Developmentally Disabled*

There are many definitions and thus, much confusion in attempting to define who is developmentally disabled. The Federal definition of a “developmental disability” is noted in the Developmental Disabilities Assistance and Bill of Rights Act of 2000.<sup>55</sup> In general terms, the definition states that the term developmental disabilities is “a severe, chronic disability of an individual”.<sup>55</sup>

However, according to the Florida Statutes, a developmental disability is “a disorder or syndrome that is attributable to retardation, cerebral palsy, autism, spina bifida, or Prader-Willi syndrome and that constitutes a substantial handicap that can reasonably be expected to continue indefinitely.”<sup>56</sup>

Nationally, approximately 17 percent of all U.S. children less than 18 years of age have a developmental disability.<sup>57</sup>

In 2002, Florida estimated that there were 533,500 Florida residents with developmental disabilities: 30,000 with autism (1/500 incidence); 45,000 with cerebral palsy (3/1000 incidence); 450,000 with mental retardation (3/100 incidence); 1,000 with Prader-Willi syndrome (1/15,000 incidence); and 7,500 with spina bifida (1/2000 incidence).<sup>56</sup> For more information on oral health care and developmental disabilities in Florida see the Florida Developmental Disabilities Council’s white paper entitled “Access to Oral Health Care for Florida's Citizens with Developmental Disabilities” available at <http://fdcd.org/Services/pdf/AOHCfull.pdf>.<sup>56</sup>

In December 1996, the Florida Medicaid program began to provide dental services to adult beneficiaries enrolled in the Medicaid Developmental Services/Home and Community-Based Services (DS) waiver.<sup>58</sup> Adult dental services cover dental treatments and procedures that the Medicaid State Plan does not otherwise cover.<sup>58</sup> The DS waiver is a Medicaid program that provides home and community-based support and services to eligible persons with developmental disabilities living at home or in a home-like setting, as an alternative to living in an Intermediate Care Facility for the Developmentally Disabled.<sup>58</sup>

### *Acquired Disabilities and Illnesses*

Children or adults can also become disabled from accidents or illnesses and may have temporary or permanent disabilities. Persons with acquired disabilities may be physically and/or mentally impaired such that they cannot perform home care, cannot access professional care, or may not understand the need for dental care. Acquired disabilities may include those persons who have experienced traumatic brain injuries, stroke victims, para- or quadriplegics, or individuals who have suffered from any number of diseases that affect physical or mental capabilities.

### **Individuals with HIV/AIDS**

Researchers identified oral health problems as a significant issue early in the AIDS epidemic. Oral health problems in patients living with HIV/AIDS can be more complicated and harder to treat than similar oral health problems in the general population.<sup>59</sup> Their oral health problems often require the attention of both dental and medical providers.<sup>59</sup> Oral manifestations of HIV disease occur in approximately 30 to 80 percent of people living with HIV/AIDS worldwide.<sup>59</sup>

HIV/AIDS individuals lack social power. Society stigmatizes most HIV/AIDS individuals even though many can still function normally in most aspects of everyday living. Thus, barriers to dental care exist. These barriers include a lack of funding for HIV/AIDS research and clinical care, a lack of willingness of health care providers to treat, geographic and social isolation, the fact that other HIV/AIDS complications are so devastating for the patient that those related to oral health seem relatively unimportant, and issues concerning the financing of the cost of dental care.<sup>59</sup> Many HIV/AIDS individuals do not have health care insurance as they may lose their insurance upon becoming too sick to work (or being fired upon discovery of HIV/AIDS status).<sup>59</sup> Persons living with HIV disease have more limited access to oral health care than their counterparts without the disease.<sup>59</sup>

Nationally, the Dental Reimbursement Program (DRP) of the Ryan White CARE Act supports access to oral health care for people with HIV infection.<sup>59</sup> The program compensates dental schools, hospitals, and other institutions with dental education programs for non-reimbursed costs they incur in treating people living with HIV/AIDS.<sup>59</sup>

### National Demographics

In 2002 there were 886,575 cumulative cases of AIDS cases in the U.S.<sup>60</sup> National demographic statistics on persons with HIV/AIDS can be found in the Centers for Disease Control and Prevention's "HIV/AIDS Surveillance Report, 2002" available at <http://www.cdc.gov/hiv/stats/hasr1402/2002SurveillanceReport.pdf>.<sup>60</sup> There is little national data on the distribution of dental disease among HIV/AIDS persons.

### Florida Demographics

Florida ranked third in the country (behind New York and California) for cumulative AIDS cases with 90,233 cases as of December 2002.<sup>61</sup> Florida-specific demographic statistics on persons with HIV/AIDS can be found in the Henry Kaiser Family Foundation's "State Health Facts Online: Florida: At-A-Glance: HIV/AIDS" available at: <http://www.statehealthfacts.kff.org/cgi-bin/healthfacts.cgi?action=profile&area=Florida&welcome=1&category=HIV%2fAIDS>.<sup>61</sup>

For fiscal year 2003-04, there were 107 State dental providers under written contract or verbal agreement to provide dental care to Florida HIV/AIDS clients. Moreover, the University of Florida, College of Dentistry; Nova Southwestern University College of Dental Medicine; and the University of Miami/Jackson Memorial Hospital received federal Ryan White grant funding for dental reimbursement for treatment of HIV/AIDS clients. Additionally, the University of South Florida, the North Broward Hospital District, and the University of Miami School of Medicine received federal Ryan White grant funding for AIDS education and training (USF), and research demonstration projects (North Broward and UM). Additionally, the Florida legislature funded the Targeted Outreach for Pregnant Women Act (TOPWA) in 1998 to reach high-risk or HIV infected pregnant women not receiving services in a limited number of counties.<sup>62</sup>

There is no state-specific data on the distribution of dental disease and oral health needs among Florida HIV/AIDS persons.

### **Rural Populations**

Twenty-five percent of Americans live in rural areas.<sup>5</sup> Oral health is a critical unmet need in rural America. Rural areas are proportionately older, sicker and have lower-incomes than urban/suburban populations.<sup>63</sup> Statistics on the oral health needs and burdens of rural Americans can be found in the National Rural Health Association's "National Rural Health Association Policy Brief: Oral Health in Rural America" available at: <http://www.nrharural.org/dc/policybriefs/oralhealthbrief.pdf>.<sup>63</sup>

Rural people have lower incomes on average and have reduced access to private dental insurance.<sup>63</sup> Therefore, many persons who live in rural areas are dependent on Medicaid or the Children's Health Insurance Program for insurance coverage compared to their urban counterparts.<sup>63</sup>

Additionally, the lack of health care providers limits access to oral health care services for rural Americans.<sup>63</sup> On average, there are 61-62 dentists per 100,000 population in large metro areas; compared to 40 dentists per 100,000 population in rural cities and 30 per 100,000 population in rural non-city areas.<sup>2, 63</sup> Many rural areas have considerable shortages of physicians, physician assistants, nurse practitioners, dentists, and other health care providers and are designated as Health Professional Shortage Areas (HPSA), Dental Health Provider Shortage Areas (D-HPSA), and Medically Underserved Areas/Medically Underserved Populations (MUA/MUP).<sup>64</sup> The number of D-HPSAs has increased to 2,477 (from 2056 in 2003), that encompass just under 42 million people.<sup>65</sup> These underserved areas are mainly inner city and rural areas.<sup>63, 65</sup> Economics in the form of student indebtedness, the high overhead costs of practicing in rural areas, the lower income of rural residents and thus, lower income potential for health care providers create disincentives for dental health care providers to practice in rural areas.<sup>63</sup> Moreover, rural areas lack coordinated school or community-based oral health education programs; have geographic and transportation barriers encountered by residence in remote, isolated areas, and suffer from confidentiality issues and perceptions (in a small town it is believed that "everyone knows everyone else's business").<sup>63, 64</sup>

Several Federal programs, including the Rural Health Clinics Program, the National Health Services Corps, and Community Health Center Grants, help to recruit, stabilize, and support rural providers and the provision of health care services in rural communities.<sup>64</sup>

### **The Homeless**

The Department of Housing and Urban Development defines the homeless as "persons who are living on the streets or in shelters, as well as those who are at imminent risk for becoming homeless."<sup>66</sup> Because the makeup of the homeless population is continually changing and the homeless by their nature are hard to track, most data on the composition of the homeless population are only estimates. The homeless lack economic and social power. Moreover, they can lack physical, mental, and to some extent political power. Although they are legally

empowered to vote, lack of a permanent address compromises their ability to register and thus, vote.

The majority of the homeless have little money; limited health care insurance; no permanent addresses; and they are stigmatized by society.<sup>66-68</sup> To this end, access to health care is difficult as health care providers are unwilling to serve them.<sup>66</sup> Although many homeless adults and children are eligible for public health programs, they are unaware that such programs exist or unaware that they are eligible for services. Moreover, the homeless are difficult to reach with educational or informative information about health care services.

The causes of homelessness remain rooted in poverty and the lack of affordable housing.<sup>66-68</sup> Other factors contributing to homelessness include substance abuse and mental illness.<sup>66-68</sup> However, these factors are more specific to the long-term and chronic homeless populations. Homeless people have low educational levels.<sup>66</sup> This makes it harder for homeless people to get jobs.

Health and disability problems are common among homeless people. Many homeless persons have chronic systemic health problems and/or mental health problems. Orally, the homeless are 12 times more likely to have dental problems than individuals from stable home environments.<sup>66</sup> They utilize dental services less than the general population.<sup>66</sup> Homeless adults tend to have intensive dental problems. Consequently, the homeless have more severe gum disease, grossly decayed teeth, missing teeth, and missing teeth than the general population, and even more than the impoverished population who live in residences.<sup>66</sup> Tooth extraction is the least expensive dental care treatment and is often the only choice for the homeless.<sup>66</sup> Moreover, homeless children are less likely to have ever seen a dentist compared to children from families living in residences.<sup>66</sup>

Unreliable sources of food and inadequate nutrition contribute to poor systemic and oral health.<sup>66</sup> Personal hygiene for the homeless is poor as access to facilities to attend to personal care is difficult.<sup>66</sup> Moreover, using personal items such as toothbrushes and toothpaste is difficult as personal items are hard to carry and keep.<sup>66</sup>

Each year there are approximately 2 million homeless persons in the U.S. at any given time with children accounting for 25-39 percent of the homeless population.<sup>66,67</sup> More national demographic statistics on the homeless can be found in the National Maternal and Child Oral Health Resources Center's "Homelessness and Oral Health" available at <http://www.ncemch.org/pubs/PDFs/OHhomeless.pdf><sup>66</sup> and in the National Coalition for the Homeless' "Who is Homeless?" available at <http://www.nationalhomeless.org/who.pdf>.<sup>67</sup>

In Florida, the Department of Children and Families' Office on Homelessness ([http://www.state.fl.us/cf\\_web/myflorida2/healthhuman/homelessness/docs/00-01report.pdf](http://www.state.fl.us/cf_web/myflorida2/healthhuman/homelessness/docs/00-01report.pdf)) estimated there were 67,981 homeless persons on any given day in Florida in the year 2001.<sup>69</sup> Children under 18 comprised 27.2 percent of Florida's homeless population.<sup>69</sup> The elderly (over 60 years of age) made up 5.1 percent.<sup>69</sup> Florida's homeless population consists mainly of single, adult males (40.8%).<sup>69</sup> However, trends show that the number of homeless families and children are growing.<sup>69</sup>

## Migrant and Seasonal Farmworkers

The Migrant Health Program of the Bureau of Primary Health Care, Health Resources and Services Administration, U.S. Department of Health and Human Services defines a “Seasonal Farmworker” as “[a]n individual whose principle employment (51% of the time) is in agriculture on a seasonal basis, who has been so employed within the last twenty-four months.”<sup>70</sup> A “Migrant Farmworker”, according to the Public Health Services Act of the U.S. Code, is essentially the same, but “establishes for the purposes of such employment a temporary abode.”<sup>70</sup> The migrant and seasonal farmworkers (migrant farmworkers) population also includes many children and family members who may or may not perform farm work, but reside with the actual migrant or seasonal farmworker.<sup>70</sup>

Migrant farmworkers are economically, socially, politically, and legally powerless. They are some of the most economically disadvantaged persons in the U.S. Most migrant farmworkers are foreign born and thus, are not citizens or legal residents of the U.S.<sup>71</sup> Many experience prejudice and hostility in the communities in which they work and live.<sup>70</sup> Moreover, this population is highly mobile in and among various U.S. states.<sup>70-72</sup> This mobility causes problems with receiving state public program benefits, as eligibility for individual state programs is not portable or reciprocated from state to state.<sup>70-72</sup>

Nearly three-quarters of U.S. migrant farmworkers earn less than \$10,000 per year.<sup>71, 73</sup> Three out of five migrant farmworker families have incomes below the poverty line.<sup>71, 73</sup> Migrant farmworker housing is substandard or non-existent.<sup>70</sup> Where it does exist it is overcrowded and unsanitary.<sup>71</sup> Migrant farmworkers rarely have workers compensation (20%), disability benefits, or any private health care insurance (5%).<sup>71, 73</sup> Migrant farmworkers are not protected by sick leave and risk losing their jobs to take time off work.<sup>73</sup>

These and other factors - poverty, frequent mobility, low literacy, language, cultural, and logistic barriers - impede migrant farmworkers from access to social services and cost effective primary and preventative health care.<sup>71</sup> While many migrant farmworkers or their children are eligible for Medicaid and State Children’s Health Insurance Programs (SCHIP), administrative barriers regarding different state eligibility requirements and portability issues prevent most farmworkers from gaining access to these programs.<sup>71</sup> The combination of all these factors result in the tendency of migrant farmworkers to postpone health care treatment unless their condition is so severe that they cannot work.<sup>71, 72</sup>

Dental disease ranks as one of the top five health problems for migrant farmworkers ages 5 through 29.<sup>72</sup> For children ages 10 to 19, dental disease is the primary health care complaint.<sup>72</sup> Most migrant farmworkers only seek care for pain.<sup>71, 72</sup> For oral health statistics on migrant farmworkers see the National Center for Farmworker Health’s “Oral Health” available at <http://www.ncfh.org/docs/fs-ORAL%20HEALTH%20FACT%20SHEET.pdf>.<sup>72</sup>

The most common barriers to receiving dental care among migrant farmworkers are cost and time.<sup>71, 72</sup> Other barriers to proper oral health include language and cultural differences, lack of access to preventative care and health education (migratory patterns result in sporadic access to optimal fluoride intake), poor diet and nutrition (highly cariogenic), poor oral hygiene (poor living conditions), and no regular dentist (due to mobility of population).<sup>71, 72</sup>

Because migrant farmworkers are so highly mobile it is difficult to survey and count this population.<sup>70, 73</sup> The Migrant Enumeration Study of 1993 estimated that there are over 3 million farmworkers in the U.S. at any given time.<sup>71, 73</sup> Demographic statistics on migrant farmworkers can be found in the National Center for Farmworker Health's "Migrant and Seasonal Farmworker Demographics Fact Sheet" available at <http://www.ncfh.org/docs/fs-Migrant%20Demographics.pdf>.<sup>73</sup> There are no national data on the numbers of migrant farmworker children.

The 2000 Migrant and Seasonal Farmworkers Enumeration Profiles Study (<http://bphc.hrsa.gov/migrant/Enumeration/final-fl.pdf>.) is an update of the migrant farmworker population for 11 states, including Florida.<sup>70, 73</sup> Florida is a difficult state to assess the migrant farmworker population because Florida has not only intrastate migrant farmworkers (who travel only within the state to work), but also both Florida-based interstate migrant farmworkers (who travel out of Florida to work) and other state-based migrant farmworkers (who travel to Florida from another state to work).<sup>70</sup> Florida has the fourth highest migrant farmworker population behind California, Tennessee, and Washington State.<sup>70</sup> The 2000 Enumeration study found that there were 286,725 migrant farmworkers in Florida.<sup>70, 73</sup> Of this number, 91,953 were children (defined as under 20 years of age).<sup>70</sup> There are no data about the oral health burdens and needs of Florida's migrant farmworkers.

### **Immigrants and Refugees**

According to the 2000 Census, over 31 million people in the U.S. (11.1 percent of the population) are foreign born.<sup>35</sup> Over 51 percent of these foreign born persons were born in Latin America.<sup>35</sup> The next largest subset of the foreign born are Asian immigrants, followed by European immigrants.<sup>35</sup> In the year 2000, 70 percent of immigrants lived in one of six states: California, New York, Florida, Texas, Illinois, and New Jersey.<sup>35</sup>

In federal fiscal year 2000, the U.S. government admitted 91,960 refugees, entrants, and Amerasians to the U.S. for resettlement.<sup>74</sup> Florida was the initial resettlement state for approximately 23 percent of these individuals, receiving more than twice as many arrivals than any other state.<sup>74</sup> The overwhelming majority of immigrants entering Florida are Cuban, followed by Columbian, and Haitian.<sup>75</sup>

Immigrants and refugees face a number of barriers to health care. Culture and language differences create communication, understanding, and compliance issues.<sup>2, 76, 77</sup> Because of these issues, many dental health professionals are uncomfortable and thus, unwilling to treat persons from foreign countries. Many dental health care providers are not multilingual or trained to relate to different cultures. Therefore, providing care can be time consuming, frustrating, and involved.

Additionally, many immigrants and refugees are leery of government. Many came to the U.S. to escape governments that abused its citizens. Many may be in the U.S. illegally or on questionable terms. Thus, any contact with government services, including Medicaid and SCHIP which immigrant and refugee children may be eligible for, give rise to fears of deportation.

## **Incarcerated**

On any given day there are approximately 2 million persons incarcerated in prisons throughout the U.S.<sup>78</sup> The Florida prisoner population numbers some 75,000 local, state, and federal inmates.<sup>78</sup> The Federal Bureau of Prisons (FBOP) is statutorily charged with providing essential health care services to the federal inmate population.<sup>79</sup> Moreover, the Supreme Court in *Estelle v. Gamble* recognized that the Eighth Amendment's prohibition against cruel and unusual punishment requires the State to provide adequate medical care to any incarcerated prisoners.<sup>80</sup>

Dental care is a major element of these health care services.<sup>79</sup> The prevalence of tooth decay and gum disease in inmate populations is relatively similar to the U.S. adult population, although there were more decayed and missing teeth, and fewer filled teeth, than the general adult population.<sup>79</sup> These differences are ascribed primarily to differences in SES.<sup>79</sup>

While the FBOP dental services system is demand-driven, access to services is unlimited.<sup>79</sup> However, qualification for particular services and treatments is predicated on patient compliance with oral health instruction and self-care responsibility.<sup>79</sup> The primary barrier to oral health for incarcerated populations is recruiting and retaining oral health professionals who are willing to treat the prison populations.

There is little information or data on the oral health needs and burdens of state or local incarcerated populations.

## **WHY ARE THERE ORAL HEALTH DISPARITIES?**

A variety of barriers and workforce issues interact and serve to limit access to and utilization of dental services and the provision of dental care for disadvantaged populations in the U.S. and Florida.

This section examines some of the main provider barriers, patient barriers, government/policy barriers, and workforce issues that combine to act as barriers to optimal oral health care for disadvantaged populations. Specifically, this section found that:

- Provider barriers are barriers that prevent or limit the provision of optimal oral health care services. These barriers include: reimbursement rates, broken or missed appointments, administrative issues, anxiety and fear of treating disadvantaged populations, and informed consent issues.
- Patient barriers are barriers that prevent individuals from accessing and utilizing dental health services. These barriers include: transportation, time off work, language and cultural differences, perceived need, oral health education, health care insurance, physical and mental disabilities, dental distrust, fear, anxiety or phobia, and continuation of care and follow-up issues.
- Government/policy barriers are barriers that restrict provision of oral health care services or act as barriers to accessing and utilizing oral health services. These barriers include: a lack of knowledge among policymakers that oral health is important, advocacy issues, data issues, funding and budget constraints, and restrictive policy.

- Workforce/infrastructure issues are issues that affect the quantity and quality of services available to the public. These issues include: a shortage of general oral health providers, a shortage of oral health specialists, a shortage of safety net oral health providers, the geographic distribution of oral health providers, loan repayment/minority scholarship issues, scope of practice and licensing issues, professional dental education, oral health care training of para-professional health care providers, and training and utilization of medical personnel.

## **STATE, COMMUNITY, AND SCHOOL-BASED OPPORTUNITIES FOR IMPROVING ORAL HEALTH DISPARITIES**

A variety of approaches are available to improve access to and utilization of oral health care services among disadvantaged populations.

This section reviews various State, community, and school-based opportunities that could limit or eliminate oral health disparities among all Floridians. This section found that:

- School health delivery services lack trained oral health providers.
- School health entry exams are limited and lack an oral health component.
- Safe and effective community and school-based prevention programs including community water fluoridation, fluoride mouthrinse programs, and dental sealant programs are underutilized.
- There are a lack of community and school-based education programs to teach the public about dental disease, the importance of good oral health, and proper home care and prevention.
- Statewide, there is a lack of integration of direct or linked oral health care service and oral health care prevention programs in many State, community, and school general health programs.
- Currently, in the state of Florida there is no statewide dental disease-based data surveillance system that can provide information to the public, policymakers, and academics.
- Success in improving the oral health of disadvantaged populations will depend upon cooperation among various diverse groups and individuals throughout the state of Florida. Successful oral health coalitions have been implemented in various other states. However, Florida currently has no statewide public or private, non-profit coalitions.

For a profile of Florida dental public health programs see: the CDC's "National Oral Health Surveillance System: Florida – Oral Health Profile" available at <http://www2.cdc.gov/nohss/bystate.asp?stateid=12><sup>81</sup> and CDC's "Synopsis of State and Territorial Dental Public Health Programs: Synopses by State: Florida -2003" available at <http://www2.cdc.gov/nccdphp/doh/synopses/StateDataV.asp?StateID=FL&Year=2003>.<sup>82</sup>

## **FEDERAL AND STATE PROGRAMS THAT IMPROVE ORAL HEALTH DISPARITIES**

There are a number of Federal and State programs that cover health care services. Dental services are included in some of these programs, but in various degrees.

This section looks at the major Federal and State public and private health care service and training programs. These programs include Medicare, Medicaid, SCHIP, Head Start, State safety-net programs, Florida Department of Health programs, State dental, dental hygiene, and medical school programs, private community health centers, volunteer and faith-based programs, school-based programs, and private advocacy programs. This section found that:

- Medicare does not cover oral health services except in certain limited situations.
- Medicaid and SCHIP provide dental services to limited populations and limited services to some of these populations.
- While Medicaid and SCHIP are the main dental service programs for low-income persons, only approximately 20 percent of persons eligible for Medicaid and SCHIP dental services utilize these services.
- Florida Medicaid and SCHIP programs, including the Florida KidCare family of programs, are complex and under funded. Moreover, these programs have not been able to attract enough oral health care providers to adequately service all the Medicaid/SCHIP-eligible persons currently enrolled in these programs, let alone those eligible persons not enrolled in the programs.
- The remaining Federal and State programs tend to run independently. These programs tend to serve fragmented areas and populations and have little coordination with other Federal and State service programs.

Information on Medicare can be found at: <http://www.cms.hhs.gov/medicare/>, information on Medicaid can be found at: <http://www.cms.hhs.gov/medicaid/>, information on Florida Medicaid can be found at: <http://www.fdhc.state.fl.us/Medicaid/index2.shtml>, information on SCHIP can be found at: <http://www.cms.hhs.gov/schip/>, information of Florida SCHIP can be found at: <http://www.fdhc.state.fl.us/Medicaid/MediKids/kidcare.shtml>, and information on Head Start can be found at: <http://www2.acf.dhhs.gov/programs/hsb/about/index.htm>.

Information on the Florida programs such as: the Florida KidCare Family of Programs<sup>83-87</sup> can be found at: <http://www.floridakidcare.com/families/programs.html>; the Florida Department of Health programs can be found at: <http://www.doh.state.fl.us/><sup>88</sup>; and the Florida Public Health Dental Program can be found at: <http://www.doh.state.fl.us/family/dental/index.html><sup>17</sup>

## **HISTORY OF THE STATE OF FLORIDA ORAL HEALTH INITIATIVES<sup>7</sup>**

This section relates current and past State collaborative efforts to address the oral health problems of disadvantaged populations. Up to this point, most efforts have revolved around the Florida Department of Health and the Florida Agency for Health Care Administration which initiated a state dental summit that resulted in the establishment of a Statewide Dental Coordinating Council (SWDCC). The SWDCC is composed of major public and private organizations interested in improving the oral health of low-income populations and was the core component of the Florida team that participated in the National Governors Association (NGA) Oral Health Policy Academy in 2001. This section found that:

- Current and past State collaborative efforts to address the oral health problems of disadvantaged populations have not resulted in significant progress.

- State efforts have generally been fragmented and have resulted in no broad consensus on defining the problem or workable policy solutions.
- Past efforts have concluded that if significant progress is to be made in addressing the oral health problems of disadvantaged populations, a comprehensive state oral health plan developed through a broad-based collaborative process that provides direction for the continued development of an integrated, coordinated oral health system between the public and private sectors is vitally needed.

## APPENDIX

<b>Demographics</b>	<b>Florida</b>	<b>USA</b>	<b>HP 2010</b>
Population, 2000	15,982,378	281,421,906	NA(a)
Female persons, percent, 2000	51.2%	50.9%	NA
Persons under 5 years old, percent, 2000	5.9%	6.8%	NA
Persons under 18 years old, percent, 2000	22.8%	25.7%	NA
Persons 65 years old and over, percent, 2000	17.6%	12.4%	NA
Nursing Home and Long Term Care Residents			NA
White persons, percent, 2000 (b)	78.0%	75.1%	NA
Black or African American persons, percent, 2000 (b)	14.6%	12.3%	NA
Persons of Hispanic or Latino origin, percent, 2000 (c)	16.8%	12.5%	NA
Native American persons, percent, 2000 (b)	0.3%	0.9%	NA
Persons with a disability, age 5+, 2000	3,274,566	49,746,248	NA
Persons with a disability, age 5+, 2000, percent	20.5%	17.6%	NA
Persons living with HIV/AIDS, 2002	70,204	529,035	NA
Children (under 13) living with HIV/AIDS, 2002	652	3708	NA
Homeless - Total, 2001 estimate	67,981	~2,000,000	NA
Homeless – Percent Children	27.2%	25%	NA
Homeless – Percent Elderly (over 55)	5.1%	28%	NA
Homeless – Percent With a Disability – Physical and/or Developmental	14%	NDA(d)	NA
Homeless – Percent With a Disability - Mental	24%	20-25%	NA
Migrant and Seasonal Workers, 2000 (U.S. data is 1993)	197,182	3,038,644	NA
Migrant and Seasonal Workers – Children (e)	91,953	NDA	NA
<b>Dental Services Utilization</b>	<b>Florida</b>	<b>USA</b>	<b>HP 2010</b>
Percentage of population that utilizes dental services in a year		44%	56%
Children below poverty line who receive dental		20%	50%

services			
Long-term care residents who receive dental services		19%	25%
<b>Risk Factors</b>	<b>Florida</b>	<b>USA</b>	<b>HP 2010</b>
Tobacco Use - Adults	22.2%	24.0%	12%
Tobacco Use - Adolescents	29.8%	40.0%	21.0%
Spit Tobacco Use	1.2%	2.6%	0.4%
Alcohol Use (adults 18 and over)	14.1%(f)	62.5%	NA
Persons below poverty line, percent, 2002	12.6%	12.1%	NA
Children below poverty line	17.7%	16.7%	
Percent of Persons with Dental Insurance		61.6%	NA
Medicaid Eligible – children (under 21), 2002-03	1,576,683		NA
Medicaid Utilization – children, 2002-03	18.0%		NA
Medicaid Eligible – adults (21+), 2002-03	1,046,425		NA
Medicaid Utilization - adults (21+), 2002-03	2.1%		NA
Medicaid Eligible – disabled, 2002-03	323,755		NA
Medicaid Utilization – disabled, 2002-03	10.4%		NA
Number of Professionally Active Dentists, 2000	9,802	166,049	NA
Percent of Dentists that accept Medicaid	10.5%		NA
Local health department and community-based centers with dental component	52.2%	19%	75%
<b>Preventative Services</b>	<b>Florida</b>	<b>USA</b>	<b>HP 2010</b>
Water Fluoridation of Public Water Supplies	68.8%(g)	65.8%	75%
Sealants - Children aged 8 years	30%(h)	23%	50%
Adolescents aged 14 years	22%(h)	15%	50%
<b>Oral Disease</b>	<b>Florida</b>	<b>USA</b>	<b>HP 2010</b>
Dental Caries – Experienced (aged 2-4)		18%	11%
Experienced (aged 6-8)		52%	42%
Experienced (aged 15)		61%	51%
Dental Caries – Untreated (aged 2-4)		16%	9%
Untreated (aged 6-8)		29%	21%
Untreated (aged 15)		15%	20%
Periodontal Disease – Gingivitis (aged 35-44)		48%	41%
Periodontal Disease – Periodontitis (aged 35-44)		22%	14%
Edentulism in Older Adults (aged 65-74)		26%	20%
Cleft Lip with or without Cleft Palate (per 1000 births)	0.87	1.0	NA

Cleft Palate without Cleft Lip (per 1000 births)	0.61	0.56	NA
Oral and Pharyngeal Cancer – Incidence Rate (per 1000,000)	12.8	10.4	NA
Oral and Pharyngeal Cancer – Mortality Rate (per 100,000)	3.1	2.9	2.7

(a) Not Applicable

(b) Includes persons reporting only one race.

(c) Hispanics may be of any race, so may also be included in other applicable race categories.

(d) No Data Available

(e) Migrant and Seasonal children may or may not work. Thus, some may be included in the Migrant and Seasonal Workers total.

(f) Florida alcohol use percent is based upon “binge or heavy” drinking, while national data is based on “current” drinking.

(g) Recent decisions in Palm Beach and Pinellas counties, along with Orange County’s decision to fluoridate water supplies last year, will bring the percentage up to 79 percent.

(h) The Public Health Dental Program of the Florida Department of Health and the Florida Medicare and Medicaid Information System are the sources of Florida-specific data on sealant use is recorded.

## REFERENCES

1. U.S. Department of Health and Human Services. *Oral Health in America: A Report of the Surgeon General, Executive Summary*. Rockville, MD: U.S. Department of Health and Human Services, National Institutes of Health, National Institute of Dental and Craniofacial Research; 2000.
2. U.S. Department of Health and Human Services. *Oral Health in America: A Report of the Surgeon General*. Rockville, MD: U.S. Department of Health and Human Services, National Institutes of Health, National Institute of Dental and Craniofacial Research; 2000.
3. U.S. Department of Health and Human Services. *National Call to Action to Promote Oral Health*. Rockville, MD: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Institutes of Health, National Institute of Dental and Craniofacial Research; 2003. NIH Publication No. 03-5303.
4. U.S. Department of Health and Human Services. *Healthy People 2010. 2nd ed. With Understanding and Improving Health and Objectives for Improving Health. 2 vols.* Washington, DC: U.S. Government Printing Office; 2000.
5. U.S. Department of Health and Human Services. *Healthy People 2010: Understanding and Improving Health. 2nd ed.* Washington, DC: U.S. Government Printing Office; November 2000.
6. Beltran-Aguilar ED, Beltran-Neira RJ. Oral diseases and conditions throughout the lifespan. I. Diseases and conditions directly associated with tooth loss. *Gen Dent*. 2004;52:21-27.

7. Florida Department of Health. *State Oral Health Improvement Plan Narrative*. (Unpublished report). Available on request. Tallahassee, FL: Florida Department of Health, Department of Family Health Services, Public Health Dental Office; 2003.
8. Dental Oral and Craniofacial Data Resource Center. *Oral Health U.S., 2002*. Bethesda, MD: National Institute of Dental and Craniofacial Research, National Institute of Health and the Division of Oral Health, Centers for Disease Control and Prevention; 2002.
9. Centers for Disease Control and Prevention. Synopses of State and Territorial Dental Health Programs. *Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Oral Health*. Available at: <http://www2a.cdc.gov/nccdphp/doh/synopses/index.asp>. Accessed June 20, 2004.
10. Centers for Disease Control and Prevention. National Oral Health Surveillance System: State Profiles. *Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Oral Health*. Available at: <http://www2a.cdc.gov/nohss/statemap.asp>. Accessed June 20, 2004.
11. Duval County Department of Health. Center for Health Statistics Report, Duval County Oral Health Report Card. April, 2002;1(1):1-5.
12. Centers for Disease Control and Prevention. State Oral Health Surveys: Oral Health Surveys by State and Territory. *Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Oral Health*. Available at: <http://www.cdc.gov/nohss/sealants/surveys.htm>. Accessed June 20, 2004.
13. Florida Bureau of Epidemiology. *2002 Florida Annual Cancer Report: Incidence and Mortality for 1999*. Tallahassee, FL: Florida Cancer Data System and Florida Department of Health, Bureau of Epidemiology; October 2002.
14. Florida Birth Defects Consortium. *Annual Report on Birth Defects in Florida: 1996*. Tallahassee, FL: Florida Department of Health, Bureau of Environmental Epidemiology; September 1996.
15. Florida Department of Health. *2002 Behavioral Risk Factors Surveillance System Telephone Survey*. Tallahassee, FL: Florida Department of Health, Bureau of Epidemiology; 2002.
16. Centers for Disease Control and Prevention. Frequently Asked Questions: Dental Sealants. *Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Oral Health*. Available at: <http://www.cdc.gov/OralHealth/factsheets/sealants-faq.htm>. Accessed June 20, 2004.
17. Florida Department of Health. Public Health Dental Program. *Florida Department of Health*. Available at: <http://www.doh.state.fl.us/family/dental/index.html>. Accessed March 20, 2004.
18. Centers for Disease Control and Prevention. Water Fluoridation. *Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Oral Health*. Available at: <http://www.cdc.gov/OralHealth/topics/fluoridation.htm>. Accessed June 20, 2004.
19. American Dental Association. *Future of Dentistry*. Chicago, IL: American Dental Association, Health Policy Resources Center; 2001.
20. Oral Health America. *Keep America Smiling: Oral Health in America: The Oral Health America National Grading Project 2003*. Chicago, IL: Oral Health America; 2003.
21. Oral Health America, W.K. Kellogg Foundation. *The Disparity Cavity: Filling America's Oral Health Gap*. Chicago, IL: Oral Health America; 2000.

22. U.S. Department of Health and Human Services. Shortage Designation. *U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professionals*. Available at: <http://bhpr.hrsa.gov/shortage/>. Accessed April 20, 2004.
23. National Center for Chronic Disease Prevention and Health Promotion. *Targeting Tobacco Use: The Nation's Leading Cause of Death 2004*. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion; 2004.
24. National Center for Health Statistics. *Health, United States, 2003*. Hyattsville, MD: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Center for Health Statistics; 2003.
25. Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health. State Tobacco Activities Tracking and Evaluation (STATE). Available at: [http://www2.cdc.gov/nccdphp/osh/state/report\\_index.asp](http://www2.cdc.gov/nccdphp/osh/state/report_index.asp). Accessed March 23, 2004.
26. Florida Department of Health. *Florida Youth Tobacco Survey: Monitoring Program Outcomes in 2002*. Tallahassee, FL: Florida Department of Health; 2003.
27. Campaign for Tobacco-Free Kids. *State Tobacco Settlement: Florida*. Washington, DC: National Center for Tobacco-Free Kids, Campaign for Tobacco-Free Kids; 2004.
28. U.S. Census Bureau. *Poverty in the United States: 2002*. Washington, DC: U.S. Department of Commerce, Economics and Statistics Administration, U. S. Census Bureau; September 2003.
29. Florida Department of Health. Florida Community Health Assessment Resource Tool Set (CHARTS). Available at: <http://www.floridacharts.com/charts/Domain2.aspx?Domain='03'>. Accessed March 22, 2004.
30. Edelstein BL. Dental Care Considerations for Young Children. *Spec Care Dentist*. 2002;22:11S-25S.
31. U.S. Constitution, Amendment XXVI: Voting Age set to 18 years; 1971.
32. Florida Constitution, Article VI, Section 2: Electors.
33. Children's Dental Health Project. *The Interface Between Medicine and Dentistry In Meeting the Oral Health Needs of Young Children*. Washington, DC: Children's Dental Health Project and the American Academy of Pediatric Dentistry; 2003.
34. Child Trends DataBank. *Unmet Dental Needs*. Washington, DC: Child Trends DataBank; 2001.
35. U.S. Census Bureau. Census 2000. *U.S. Department of Commerce, Economics and Statistics Administration, U. S. Census Bureau*. Available at: <http://www.census.gov/main/www/cen2000.html>.
36. Burt BA, Eklund SA. *Dentistry, Dental Practice, and the Community*. 5th ed. Philadelphia, PA: W.B. Saunders Company; 1999.
37. Institute for Healthcare Improvement. *Improving Healthcare for Children in Foster Care*. Boston, MA: Institute for Healthcare Improvement and the Casey Family Programs; 2004.
38. The Lawton and Rhea Chiles Center for Healthy Mothers and Babies at the University of South Florida, Department of Health Policy and Epidemiology Institute for Health Policy Research University of Florida. *Medical, Developmental and Behavioral Problems of*

- Foster Children and the Capacity Foster Care Providers in Florida*. Tallahassee, FL: Florida Department of Children and Families; 2001.
39. Deshaney v. Winnebago. 489 U.S. 189; 1989.
  40. Rosenbach M, Lewis K, Quinn B. *Health Conditions, Utilization, and Expenditures of Children in Foster Care*. Washington, DC: U.S. Department of Health and Human Resources; 2000.
  41. Administration on Aging. *Profile of Older Americans: 2003*. Washington, DC: U.S. Department of Health and Human Services, Administration on Aging; 2003.
  42. Slavkin HC. Maturity and Oral Health: Live Longer and Better. *J Am Dent Assoc*. 2000;131:805-808.
  43. Ettinger RL, Mulligan R. The Future of Dental Care for the Elderly Population. *J Cal Dent Assoc*. 1999;27:687-692.
  44. Ries LAG, Eisner MP, Kosary BF, et al. *SEER Cancer Statistics Review*. Bethesda, MD: National Institute of Health, National Cancer Institute; 2003.
  45. Health Resources and Services Administration. *Opportunities to Use Medicaid In Support of Oral Health Services*. Rockville, MD: U.S. Department of Health and Human Services, Health Resources and Services Administration; December 2000.
  46. Patton LL, White BA, Field MJ. Extending Medicare Coverage to Medically Necessary Dental Care. *J Am Dent Assoc*. 2000;132:1294-1299.
  47. Schneider D. Personal communication regarding nursing home facilities' and assisted living facilities' requirements for providing dental care to residents. Available on request. Sarasota, FL; 2004.
  48. Office of Economic and Demographic Research. *Florida Demographic Summary*. Tallahassee, FL: Florida Legislature, Office of Economic and Demographic Research; December 2003.
  49. Department of Elder Affairs State of Florida. *Florida 2003 Projected Profiles*. Tallahassee, FL: Department of Elder Affairs State of Florida; April 2003.
  50. Misra D, editor. *The Women's Health Data Book: A Profile of Women's Health in the United States*. 3rd ed. Washington, DC: The Jacobs Institute of Women's Health and the Kaiser Family Foundation; 2001.
  51. Colin JM, Paperwalla G. Haitian-Americans. *F. A. Davis Company*. Available at: <http://www-unix.oit.umass.edu/~efhayes/haitian.htm>. Accessed May 25, 2004.
  52. Americans with Disabilities Act, 42 U.S.C. sec, 12102(2); 1990.
  53. U.S. Census Bureau. *Disability Status: 2000*. Washington, DC: U.S. Department of Commerce, Economics and Statistics Administration, U. S. Census Bureau; March 2003.
  54. National Center on Birth Defects and Developmental Disabilities. Birth Defects. *Centers for Disease Control and Prevention, National Center on Birth Defects and Developmental Disabilities*. Available at: <http://www.cdc.gov/ncbddd/bd/faq1.htm>. Accessed February 20, 2004.
  55. Developmental Disabilities Assistance and Bill of Rights Act of 2000. Public Law 103-230; 2000.
  56. The University of Florida College of Dentistry and Nova Southeastern School of Dental Medicine. *Access to Oral Health Care for Florida's Citizens with Developmental Disabilities*. Tallahassee, FL: Florida Developmental Disabilities Council, Inc.; January 2002.
  57. National Center on Birth Defects and Developmental Disabilities. Developmental Disabilities. *Centers for Disease Control and Prevention, National Center on Birth*

- Defects and Developmental Disabilities*,. Available at:  
<http://www.cdc.gov/ncbddd/dd/default.htm>. Accessed February 20, 2004.
58. Agency for Health Care Administration. Developmental Services/Home and Community-Based Services (DS/HCBS) waiver. *Florida Department of Health and Human Services, Agency for Health Care Administration*. Available at:  
[http://www.fdhc.state.fl.us/Medicaid/dev\\_serv/index.shtml](http://www.fdhc.state.fl.us/Medicaid/dev_serv/index.shtml). Accessed May 13, 2004.
  59. Health Resources and Services Administration. *HRSA Care ACTION: Providing HIV/AIDS Care in a Changing Environment: Oral Health and HIV Disease*. Rockville, MD: U.S. Department of Health and Human Services, Health Resources and Services Administration, HIV/AIDS Bureau; April 2002.
  60. Centers for Disease Control and Prevention. *HIV/AIDS Surveillance Report, 2002*. Atlanta: Centers for Disease Control and Prevention, National Center for HIV, STD, and TB Prevention, Division of HIV/AIDS Prevention-Surveillance and Epidemiology; 2002.
  61. The Henry Kaiser Family Foundation. State Health Facts Online: Florida: At-A-Glance: HIV/AIDS. *The Henry Kaiser Family Foundation*. Available at:  
<http://www.statehealthfacts.kff.org/cgi-bin/healthfacts.cgi?action=profile&area=Florida&welcome=1&category=HIV%2fAIDS>. Accessed March 13, 2004.
  62. St. Lucie County Health Department. T.O.P.W.A. *Florida Department of Health, St. Lucie County Health Department*. Available at:  
[http://www.stluciecountyhealth.com/hiv\\_aids/topwa.htm](http://www.stluciecountyhealth.com/hiv_aids/topwa.htm). Accessed July 6, 2004.
  63. National Rural Health Association. National Rural Health Association Policy Brief: Oral Health in Rural America. *National Rural Health Association*. Available at:  
<http://www.nrharural.org/dc/policybriefs/oralhealthbrief.pdf>. Accessed December, 2002.
  64. Hartley D, Gale J. *Rural Health Care Safety Nets: Tools for Monitoring the Safety Net*. Rockville, MD: Agency for Healthcare Research and Quality; September 2003.
  65. American Dental Education Association. *Dental Education At-A-Glance 2004*. Washington, DC: ADEA Institute for Public and Advocacy; 2004.
  66. National Maternal and Child Oral Health Resources Center. *Homelessness and Oral Health*. Washington, DC: U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Bureau, National Maternal and Child Oral Health Resources Center; June 1999.
  67. National Coalition for the Homeless. *Who is Homeless?* Washington, DC: National Coalition for the Homeless; September 2002.
  68. Urban Institute, Burt MR, Aron LY, et al. *Homelessness: Programs and the People They Serve. Findings of the National Survey of Homeless Assistance Providers and Clients*. Washington, DC: U.S. Department of Housing and Urban Development; December 1999.
  69. Florida Department of Children and Families. *Annual Report on Homeless Conditions in Florida*. Tallahassee, FL: Florida Department of Children and Families, Office on Homelessness; June 2002.
  70. Larson AC. *Migrant and Seasonal Farmworkers Enumeration Profiles Study: Florida*. Washington, DC: U.S. Department of Health and Human Services, Health Resources and Services Administration, Bureau of Primary Health Care, Migrant Health Program; September 2000.
  71. National Center for Farmworker Health. *Facts About Farmworkers*. Buda, TX: National Center for Farmworker Health, Inc.; 2003.

72. National Center for Farmworker Health. *Oral Health*. Buda, TX: National Center for Farmworker Health, Inc.; 2003.
73. National Center for Farmworker Health. *Migrant and Seasonal Farmworker Demographics Fact Sheet*. Buda, TX: National Center for Farmworker Health, Inc.; 2003.
74. Florida Refugee Health Program. Refugee Health Program Overview. *Florida Department of Health, Florida Refugee Health Program*. Available at: [http://www.doh.state.fl.us/disease\\_ctrl/refugee/mission.html](http://www.doh.state.fl.us/disease_ctrl/refugee/mission.html). Accessed March 22, 2004.
75. Florida Department of Health. Refugee Health Program. *Florida Department of Health*. Available at: [http://doh.state.fl.us/disease\\_ctrl/refugee?Statistics.html](http://doh.state.fl.us/disease_ctrl/refugee?Statistics.html). Accessed May 13, 2004.
76. Genshaw S, Straw T. *Access to Oral Health Services for Low-Income People-Policy Barriers and Opportunities for Intervention for the Robert Wood Johnson Foundation*. Washington, DC: The National Conference of State Legislators; October 2002.
77. Jacobs EA, Goldin GL. *Overcoming Language Barriers Part I: For Clinicians: A Volunteers in Health Care Guide*. Pawtucket, RI: Volunteers in Health Care; 2002.
78. Bureau of Justice Statistics. *Prison and Jail Inmates Population at Midyear 2002*. Washington, DC: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics; April 2003.
79. Isman R, Isman B. *Access to Oral Health Services in the U.S.: 1997 and Beyond*. Chicago, IL: Oral Health America; December 1997.
80. Estelle v. Gamble, 429 U.S. 97; 1976.
81. Centers for Disease Control and Prevention. National Oral Health Surveillance System: Florida - Oral Health Profile. *Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Oral Health*. Available at: <http://www2a.cdc.gov/nohss/bystate.asp?stateid=12>. Accessed June 20, 2004.
82. Centers for Disease Control and Prevention. Synopses by State: Florida - 2003. *Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Division of Oral Health*. Available at: <http://www2a.cdc.gov/nccdphp/doh/synopses/StateDataV.asp?StateID=FL&Year=2003>. Accessed June 20, 2004.
83. Agency for Health Care Administration. State Children's Health Insurance Program. *Agency for Health Care Administration*. Available at: <http://www.cms.hhs.gov/schip/stateplans/plans/flplan.pdf>. Accessed March 25, 2004.
84. Florida KidCare Coordinating Council. The Florida KidCare Family of Programs. *Florida KidCare Coordinating Council*. Available at: <http://www.floridakidcare.com/families/programs.html>. Accessed March 24, 2004.
85. Agency for Health Care Administration. What is KidCare? (Florida Children's Health Insurance Program). *Florida Department of Health and Human Services, Agency for Health Care Administration*. Available at: <http://www.fdhc.state.fl.us/Medicaid/MediKids/kidcare.shtml>. Accessed February 5, 2004.
86. Institute for Child Health Policy. *The Florida KidCare Evaluation Series: Florida KidCare Program Evaluation Report, 2003*. Gainesville, FL: Institute for Child Health Policy, Under Contract to the Agency for Health Care Administration; January 2004.

87. Centers for Medicare and Medicaid Services. *Florida Title XXI Program and Title XXI Amendment Fact Sheet*. Baltimore, MD: U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services; March 11, 2004.
88. Florida Department of Health. Florida Department of Health. *Florida Department of Health*. Available at: <http://www.doh.state.fl.us/>. Accessed March 20, 2004.