

THE ORAL HEALTH CRISIS IN MASSACHUSETTS:

**Report of the
Special Legislative Commission on Oral Health**

**Authorized by
Section 42 of Chapter 170 of the Acts of 1997**

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PREFACE: A Crisis in Oral Health Care Delivery

The Special Legislative Commission on Oral Health, appointed by Governor Argeo Paul Cellucci and the Massachusetts Legislature in November 1998, was authorized by Chapter 170, section 42, of the Acts of 1997 to investigate oral health status, community prevention programs, and access to dental care services for residents of the Commonwealth. This report documents the findings and recommendations of the Commission in these areas.

In the course of reviewing and compiling these data, it has become apparent to the Commission that Massachusetts faces a very serious crisis in access to oral health care for its poorest and most vulnerable residents. **The strongest message of this report must be to alert the Legislature, Governor and other key stakeholders that the delivery system for oral health care for low-income residents - both those enrolled in MassHealth and those who are uninsured - is collapsing** and to encourage the state to play a leadership role in population-based dental disease prevention and surveillance.

The crisis in the MassHealth Program stems from rapid growth in the number of MassHealth members in combination with an accelerating disenrollment of dentists as MassHealth providers. One factor contributing to disenrollment is longstanding inadequacy of the MassHealth fee schedule: present reimbursement rates are so dramatically below current market levels that dentists who choose to treat MassHealth patients cannot cover their direct costs to provide the service. This crisis is also fueled by the fact that enrolled dentists cannot limit the number of MassHealth members whom they serve: as more dentists disenroll, those who remain face ever-increasing MassHealth caseloads.

Today, Massachusetts faces an untenable situation as a result of these trends. The MassHealth dental provider network, rather than being in the position to grow to meet the rapidly increasing number of MassHealth members, has, in fact, been decreasing in size and is likely to continue to do so at an accelerated rate without immediate action to increase MassHealth reimbursement rates.

As a result of decreasing dentist participation, MassHealth members are finding it increasingly difficult to utilize their dental benefits, and expenditures in the MassHealth dental program, as measured by amount spent per member per month, are declining. While approximately 69% of the general population visit the dentist annually, the percentage of MassHealth patients who received any dental care was just 42% in fiscal year 1998, down from 47% in fiscal year 1996. Yet, national data show that Medicaid recipients and the uninsured have unmet needs two to three times greater than those with private dental insurance.

With a projected MassHealth enrollment of around one million members and the current rate of dentist disenrollment, only about 40% of MassHealth members would receive dental care in fiscal year 2000. In other words, up to 600,000 members may not receive care – almost as many as the total MassHealth enrollment in 1996.

For the low-income uninsured, access to affordable dental care has been a chronic problem. Many people defer their care or their children's care until severe pain or infection occurs, which may necessitate utilization of higher-cost services, sometimes in a hospital setting. The network of dental safety net providers in the Commonwealth has been one source of affordable care for this population. Yet, since most of these dental providers also have significant numbers of MassHealth patients, the crisis in the MassHealth delivery system is affecting their financial solvency also. Many safety net providers are uncertain of their capacity in the future to offer dental services to underserved populations.

The Commission respectfully urges the Legislature and the Governor to address the crisis in access to care and the need for statewide population-based prevention programs as high priorities. While the Commission identifies in its recommendations many additional areas that the Commonwealth must address to improve the oral health of its residents, these programs will be effective only in the context of a viable dental care delivery system. This infrastructure must be stabilized and enlarged immediately and statewide prevention programs must be implemented in order to meet the needs of all residents of the Commonwealth.

ORAL HEALTH FACTS

IN MASSACHUSETTS....

ACCESS TO CARE:

- More than 2.3 million residents have no dental insurance - compared to 636,000 who have no medical insurance.
- The Division of Medical Assistance receives 4000 calls per month from MassHealth members unable to find dental care. (The second highest number of calls is for mental health services at 700 per month).
- 42% of MassHealth members utilize any dental service each year - compared to 69% of adults overall.
- 86% of practicing dentists are not active providers in MassHealth, contributing to a crisis in access to care for the almost one million Massachusetts residents enrolled in MassHealth.
- MassHealth dental expenditures are *declining* due to decreasing dentist participation, even though the eligible MassHealth population expanded by 41% over the past three years.
- Dental care was the second most requested health service in calls to the Mayor's Health Line in Boston from 1995 – 1998.

PREVENTION:

- 2.5 million residents - 43% of the population do not live in fluoridated communities, making the Commonwealth 35th in the nation for this basic public health measure, even though fluoridated water has been shown to reduce tooth decay by up to 40%.
- More than 188,000 elementary school children in non-fluoridated communities go to schools that do not offer fluoride mouthrinse programs, even though fluoride mouthrinse reduces tooth decay by up to 35%.
- About 77-88% of schoolchildren have no dental sealants, according to community surveys, even though dental sealants are an important complement to fluoride as a preventive measure.
- Massachusetts has no statewide school dental sealant program. The federal government recommends such programs.
- The Commonwealth lacks a surveillance system to monitor the oral health status of its residents.
- Massachusetts ranks 22nd in the nation in the mortality rate for oral cancer. Mortality is closely linked to late stage diagnosis. A study of Boston residents found that adults with oral cancer had an average of 10.5 visits to a healthcare provider in the two years before they were diagnosed with cancer.
- 48% of adults have had at least one tooth removed due to tooth decay or gum disease.
- 22% of elderly residents have no teeth at all.

IN THE UNITED STATES...

- Dental caries (tooth decay) is the most common chronic condition of childhood, more common than asthma. Caries is almost wholly preventable.
- Children lose about 632,000 school days and adults lose about 3.6 million workdays annually due to oral health problems.
- 80% of childhood tooth decay is found in only 25% of the population – and disproportionately among low-income and minority children.
- There are significant racial disparities in oral disease. Blacks are four times as likely to have untreated tooth decay as whites. Black survival rates for oral cancer are approximately half that of whites.
- 90% of HIV(+) individuals have oral manifestations of the disease

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EXECUTIVE SUMMARY

The Special Legislative Commission on Oral Health was appointed by Governor Argeo Paul Cellucci and the Massachusetts Legislature in November 1998, as authorized by section 42 of Chapter 170, the Health Access Act of 1997. This Act authorized the Special Commission to investigate multiple aspects of oral health in the Commonwealth, including the mandate to:

- Investigate and study oral health status, effective community prevention programs, and access to dental care services for residents of the Commonwealth;
- Investigate the current status of oral health and care for high-risk populations and low-income and other residents of the Commonwealth and barriers to access for such residents;
- Review options for increasing the provision of dental services to children receiving medical assistance in light of the report by the United States Department of Health and Human Services that only 34% of eligible children receive preventive dental services;
- Examine options for improving provider enrollment in programs of medical assistance, and for public health dental prevention and promotion programs.

The Commission is the first in thirty years to be charged specifically with assessing oral health status in the Commonwealth.

THE IMPORTANCE OF ORAL HEALTH

“You are not healthy without good oral health.”

C. Everett Koop, M.D., Former U.S. Surgeon General

Oral health is inseparable from overall health status. The consequences of poor oral health on affected individuals can include:

- severe acute and chronic pain
- infections, which may become systemic and contribute to other health problems
- impaired eating ability, leading to poor diet and nutritional status
- speech difficulties
- partial or total tooth loss
- negative impact on social and financial well-being due to poor appearance
- the morbidity and mortality associated with oral cancer

Most of these problems are preventable, and early treatment is both cost-effective and critical to preventing later, more serious health problems. Yet oral health status and gaps in access to oral health care have not received the same attention as those in other areas of the health care system. This inattention has substantial costs for affected individuals and society.

Low-income and other vulnerable populations bear a disproportionate burden of poor oral health status, in part because of the lack of adequate public funding for oral health services. At this time in Massachusetts, there is an escalating crisis in access to care for the low-income members of the MassHealth Program caused by a rapidly declining number of actively participating dentists. This crisis threatens to undermine an already ineffective system of dental care for low-income populations in the Commonwealth, with one certain outcome being a further decline in oral health status for high-risk groups.

The federal government has recognized the national consequences of this ‘neglected epidemic’ in oral health and has begun a series of initiatives, as have many states, to re-establish oral health care as a necessary component of overall health care. Massachusetts should do the same.

Oral Diseases and Conditions

Several major diseases or conditions contribute to poor oral health:

- Dental caries
- Early Childhood Caries (‘baby bottle tooth decay’)
- Periodontal disease
- Oral cancer
- Orofacial injuries
- Malocclusion
- Cleft lip and cleft palate
- Oral implications of systemic disease
- Temporomandibular Joint Dysfunction

FINDINGS OF THE COMMISSION

ORAL HEALTH STATUS

Massachusetts lacks the data to comprehensively evaluate the oral health needs of its residents. The Commonwealth does not have an ongoing statewide surveillance system to assess oral health status: only two statewide assessments of oral health in the Commonwealth have been conducted in the past half-century, both of which focused on the health status of school-age children.

The Commission used information available from community studies, survey results from the Behavioral Risk Factor Surveillance System (BRFSS), cancer mortality statistics, and national data to compile a composite picture of the current health status of Massachusetts' residents. The development of an oral health data and information system is a necessary step to more fully monitor and evaluate oral health status in the Commonwealth.

CHILDREN

Nationally, there has been significant improvement in overall oral health status among children in the past several decades, due in large part to the decreasing incidence of dental caries through exposure to fluoride. However, ***dental caries remains the most common childhood chronic disease***, affecting 84% of children by age 17. Almost one-third of cavities in 6-8 year olds have not been repaired, ***a higher percentage than 10 years ago***. Early childhood caries (“baby bottle tooth decay”), while completely preventable through proper infant feeding methods, affects approximately 5-10% of young children.

While dental disease has become less prevalent among most children, it remains a significant health problem for low-income and minority children, ***with 80% of caries concentrated in just 25% of children***. Poor children ages 6 – 12 years suffer twice the decay rate of children with family incomes over the poverty level.

Local assessments conducted in several Massachusetts communities with high representation of low-income children suggest that the higher rates of dental decay seen nationally among low-income children are also evident in the Commonwealth. In Cambridge, Lawrence and Boston, dental screenings found that 38 – 48% of children needed restorative dental care, with 9 – 14% requiring immediate referral for treatment. Students at one Boston high school had *four times* as many cavities as the national average.

The reasons for the disproportionate burden of dental disease among low-income and minority children are complex and not entirely understood. However, it is clear that access to preventive dental care and treatment is a significant barrier for low-income children and their families, and that lack of preventive dental care contributes to diminished oral health status. As described in more detail in the Access to Dental Care section below, the difficulties MassHealth families in Massachusetts experience when trying to find dental care has reached a crisis level.

Other common sources of diminished oral health status among children and adolescents are untreated malocclusion (poorly aligned teeth) and dental trauma, including fractured teeth from unintentional injuries. Mouthguard use during sports participation is an effective but underutilized preventive method for decreasing this frequent cause of dental trauma.

"I provide routine primary care to low-income children from Dorchester and surrounding neighborhoods at [a] health center... I was amazed to find that many children and teens had never been to a dentist, and of those who had been, they received dental care only sporadically. When I examine the children's mouth, I often see black teeth rotted down to the roots, a sight we should never see in this country."

– Boston nurse practitioner

ADULTS

Adult oral health status has also improved in recent years. Fewer adults have missing teeth, and many fewer have lost all their teeth. In Massachusetts, 52% of adults have all

their teeth and 22% of the elderly have no teeth at all. Because untreated dental caries and periodontal disease are progressive, the disease burden of poor oral health accumulates as one ages. Ninety-four percent (94%) of adults have evidence of past or present tooth decay.

The risk of oral cancer for those engaging in high-risk behaviors - tobacco use and heavy alcohol use- also increases with age. Massachusetts ranks 22nd in the nation in the mortality rate for oral cancer. When oral cancer is detected early, the prognosis for survival improves greatly. Dental health care workers are more likely to screen for oral cancer than are medical providers. A study of Boston adults with oral cancer, the majority of whom had late-stage diagnosis, found that they had had multiple visits to health care providers in the two years preceding diagnosis.

Minority adult populations nationally have poorer oral health status than do whites. Black adults are four times as likely to have untreated tooth decay, and are less likely to receive preventive dental care. The Commission found no Massachusetts studies that assessed racial disparities in these aspects of oral health status.

Blacks also have a significantly higher mortality rate for oral cancer. In Massachusetts, black males have a 28% five-year survival rate, compared to 53% for whites.

VULNERABLE POPULATIONS

Certain groups, in addition to low-income and minority populations, are at higher risk for poor oral health than the general population. These include the elderly, the homebound, nursing home residents, the disabled, the homeless, people with HIV/AIDS, and refugees and immigrants. The few studies assessing the oral health needs of these populations in Massachusetts communities confirm their high rate of unmet oral health needs.

ACCESS TO DENTAL CARE

While primary prevention must be the leading approach to maintaining oral health, even individuals with good oral health status need regular preventive dental care. For those with untreated oral diseases or conditions, lack of timely dental care can result in escalating oral problems, which may be more costly and difficult to treat. Ready availability of affordable dental care is thus a necessary component of good oral health status.

Although data on dental providers in Massachusetts has certain limitations, it does not appear that there is an overall shortage of dentists in the Commonwealth. There are an estimated 4,692 dentists practicing in 6,065 dental office locations. The overall ratio of one dentist for every 1,304 residents is higher than the national average. The distribution of dentists is more heavily concentrated in the eastern part of the state. There are also an estimated thirty communities that lack any dentist, particularly in the western part of the Commonwealth, although many are too small to sustain a dental practice.

The major barrier to access statewide are the declining numbers of dentists participating in the MassHealth Program the limited access to affordable comprehensive dental care for the uninsured, especially low-income uninsured residents; and the lack of access for particular high-risk populations.

- More than 2.3 million Massachusetts residents have no dental insurance. Those least likely to have insurance are adults and their family members where the adults work in small, low-paying businesses. Their only recourse is to pay out of pocket for services that can be quite expensive. Cost of care is one of the most significant reasons people report for not seeking dental care when they believe they have a need.
- Medicare does not cover dental care except in cases of trauma, giving elders one of the highest rates of uninsurance for dental care. As more elders benefit from preventive services, the percentage with significant or total tooth loss has decreased, thus increasing the need for ongoing restorative care and contributing to a critical access situation.
- Children's Medical Security Program (CMSP), the Massachusetts primary health care insurance program available to all uninsured children not eligible for MassHealth, has had dental coverage as an option in its legislative enabling language but is only now implementing it as a benefit. There are more than 18,000 children enrolled in CMSP, of whom one-third are in families with household incomes below 200% of the poverty level.
- MassHealth, the Massachusetts Medicaid program, does cover dental care. However, 86% of dentists in the Commonwealth are not active MassHealth providers. This percentage is increasing as more dentists leave the program, citing inadequate reimbursement rates, contributing to a crisis in access to care for the almost one million MassHealth members in Massachusetts. This growing crisis is discussed extensively below.
- Very few minorities enter dentistry, and private dental practices do not generally have bi-lingual staff or access to translation services. Linguistic and cultural barriers to care may therefore be high.
- Disabled individuals and those with special health care needs, such as HIV, face multiple barriers to finding accessible care, including discrimination.

ACCESS TO CARE FOR MASSHEALTH MEMBERS

The Division of Medical Assistance receives 4000 calls per month from MassHealth members unable to find dental care, more than for any other service. The next most requested service, mental health, receives 700 calls per month.

One of the Commission's most significant findings is that the dental care delivery system for MassHealth members is on the verge of collapse. Data from the Division of Medical Assistance (DMA) show that only 42% of MassHealth members received any dental care in fiscal year 1998, a decrease from 47% in fiscal year 1996. By contrast, national data show that on average, 57% of the general population and 70% of those covered by private dental insurance utilize at least one dental service each year. Yet Medicaid recipients nationally have unmet dental needs two to three times those of the general population.

The primary barrier to improving utilization of dental services by MassHealth members is the critical and growing shortage of participating dentists. The number

of dentists actively participating in the MassHealth program is declining. In 1999, only 971 dentists - 20% of the estimated 4692 practicing dentists in the Commonwealth - submitted any billing claims to MassHealth, a 19% decline from 1996. However, even these numbers overstate participation, because about 30% of these dentists bill less than \$5000 per year, which represents a very small fraction of a typical dentist's annual revenue. The number of actively participating dentists is probably closer to 680.

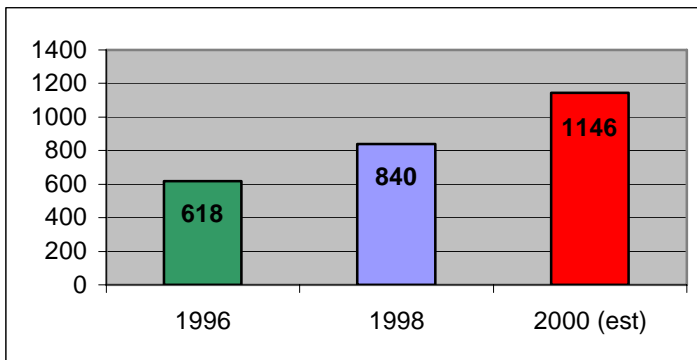
At the same time that fewer dentists are willing to take MassHealth patients, the number of MassHealth members has increased 41% in the past two years as a result of expanded eligibility criteria and aggressive enrollment efforts. **The ratio of MassHealth members to available dentists will almost double from FY 1996 through FY 2000, even assuming no further dentist decline in fiscal year 2000.** While the estimated statewide ratio has increased to 1146 MassHealth members for every actively participating dentist (see chart), the Commission recommends that the maximum ratio should be *no greater than 500:1*.

“I am one of the few dentists still in the program in this area. My office gets twenty to thirty calls a day from patients looking for a MassHealth dentist. My name is still on the list, but I can't do this anymore. I feel bad for the patients, but I can't run my practice like this. I'm overwhelmed.” - Leominster dentist

Significant regional maldistribution of participating dentists exists within this critical overall shortage. In some of DMA's 40 sub-regions, provider capacity is so low that even if all participating providers *only* saw MassHealth members, they could not meet the need. ***Most of the sub-regions need 3 to 7 times the number of currently participating dentists to establish minimally adequate MassHealth provider capacity.***

Dentists in Massachusetts cite a number of reasons for their declining participation, similar to those found by the federal Department of Health and Human Services in its 1994 study of the dental needs of children in the Medicaid program. One of the most significant factors is the longstanding inadequacy of the MassHealth fee schedule. Present reimbursement rates are so dramatically below current market levels that dentists who choose to treat MassHealth patients receive fees that cover only about 75% of their direct costs of providing the service.

Ratio of MassHealth Members per Participating Provider



DMA reimbursement rates, for a subset of all dental procedures, were last raised in 1994. In the subsequent five years, the dental consumer price index has risen 25%. Overall dental rates were last raised in 1988, by 4.3%.

Without rapid and significant change, the Commission anticipates that the poor dentist participation rates will further deteriorate, creating a deepening crisis in dental care access for MassHealth members. The immediate first step must be to increase reimbursement rates for dental procedures to cover dentists' costs in providing the care. Reforms in the administration of the MassHealth program are also needed, and DMA has begun implementation of many of these, including a mechanism for dental providers to set caseload capacity.

“I'm just waiting to see what happens with the fee schedule and the program changes. If there isn't a significant increase in fees soon, I'm resigning. There hasn't been an increase in over 10 years. I'll keep my long-term patients. I don't mind treating them at no charge, but unless there are drastic changes soon and a reason for me to stay in the program, I'm gone.”

- Lynn dentist

SAFETY NET PROVIDERS

Massachusetts has an array of programs and agencies that offer dental services to those who are unable to obtain access to a traditional dental office. Twenty-three community health centers, seven hospital-based dental clinics, three dental schools, seven dental hygiene schools and several dental assisting schools offer services to the general public either on a sliding fee scale or flat reduced rates. The Massachusetts Dental Society administers a program, Dentistry for All, in which dentists voluntarily participate in offering reduced-fee services to qualified low-income uninsured patients. Other safety net programs serve special populations with barriers to dental care, such as the HIV Dental Ombudsperson Program and the Dental Program for the Developmentally Disabled. DMA has recently funded special infrastructure-building projects in six low dental access areas of the Commonwealth to enhance the delivery of dental care and increase utilization through safety-net providers.

While these safety-net providers are invaluable resources in filling gaps in care in many areas of the Commonwealth, they do not and cannot replace an effective private dental delivery system. They are not uniformly distributed throughout the state and they serve only a small portion of the Commonwealth's needy residents. Additionally, most safety-net providers also serve many MassHealth members and are struggling under the same inadequate reimbursement rates as are dentists in private practice. One community health center closed its dental practice in the past year. Other safety net providers report that they are uncertain of their future ability to continue offering dental services to underserved populations if the reimbursement structure does not improve.

PREVENTION OF ORAL DISEASE

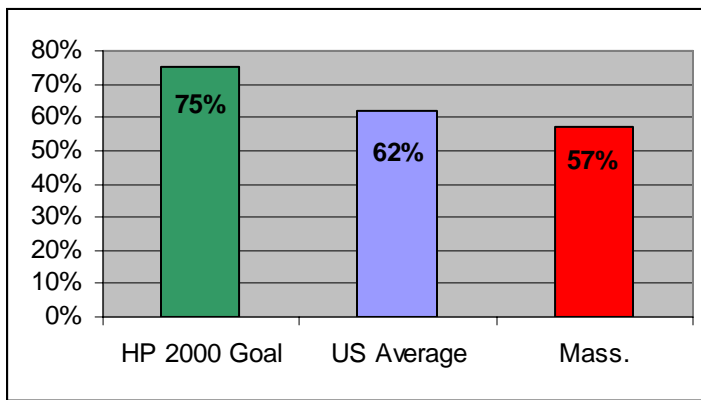
In oral health, effective primary prevention measures are well established, safe, and cost-effective. Yet they are only partially implemented in Massachusetts, which lags behind many other states.

FLUORIDE

Fluoridation of community water supplies is one of the major public health advances of the 20th century. Fluoride, a naturally occurring substance in water, substantially reduces tooth decay when available in appropriate concentrations. Because most water supplies do not contain the recommended concentration, it is adjusted at the source of the supply. Living in a fluoridated community from birth reduces tooth decay as much as 40%.

Despite these proven benefits, *Massachusetts lags behind many states in implementing fluoridation*. Only 57% of Massachusetts residents live in a fluoridated community, ranking the Commonwealth 35th in the nation for this basic public health measure (see chart). While many communities do not have public water supplies, 59% of communities with public water supplies are *not* fluoridated.

Percentage of Residents with Fluoridated Water



Fluoridation is safe, inexpensive, and practical. Each dollar spent on fluoridation results in up to \$80 savings in treatment costs. Yet 2.5 million Massachusetts residents do not live in fluoridated communities.

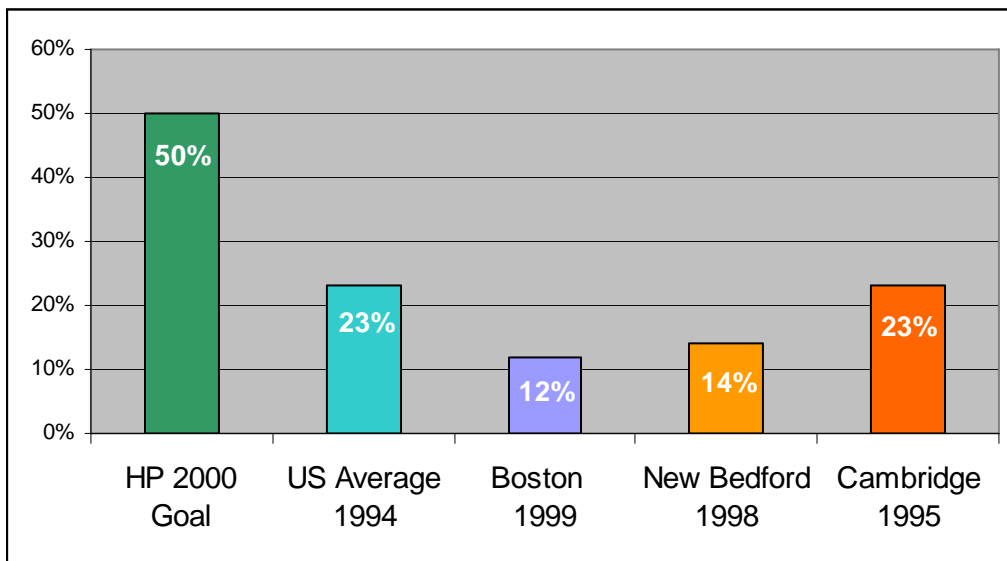
In communities that don't or can't fluoridate their water supplies, it is important that children in particular receive fluoride through other means. Pre-school and school-based fluoride programs are effective methods to reach high-risk children. Fluoride mouthrinse programs cost only 78 cents per child per school year and decrease the amount of tooth decay in children using it by up to 35%.

MDPH currently supports fluoride mouthrinse programs in 246 schools in 141 communities, serving approximately 55,000 students. Despite the proven efficacy of these programs, 90 non-fluoridated communities in the Commonwealth do not have schools participating in fluoride mouthrinse programs.

DENTAL SEALANTS

The application of dental sealants - thin resin coatings applied to the chewing surfaces of molar teeth by a dental health care worker - is an important complementary prevention practice to fluoride. Sealants are most effective when applied soon after molar eruption, at ages 6-8 for first molars and again at ages 12-14 for second molars.

Nationally, approximately 23% of 8 year olds have at least one sealed permanent tooth, far short of the Healthy People (HP) 2000 goal of 50%. Although the federal government recommends statewide surveillance programs to monitor the percentage of third-graders with dental sealants, Massachusetts lacks a system to determine the prevalence of sealant application. Several local community surveys have found sealant application rates of only 12 – 23% of schoolchildren examined (see chart)



Percentage of Children with Dental Sealants

One of the most effective methods for implementing sealant programs is through school-based programs. There is no state-supported sealant program, and only one community in the Commonwealth operates a school-based program.

OTHER PREVENTION INITIATIVES

Individual preventive behavior is an important component of oral health. Regular toothbrushing with fluoride toothpaste; flossing; limiting the intake of sugary foods- especially among children; and receiving regular preventive dental exams and cleanings are all necessary for good oral health.

Tobacco use is a known risk factor for many diseases, including oral cancer and periodontal disease. ***Seventy-five percent of all oral cancers are attributable to tobacco*** – smoked, chewed or spit. Heavy alcohol use in itself is also a risk factor for oral cancer and in combination with tobacco use contributes to even higher risk.

Injury prevention is an important component of oral health prevention programs. Protective mouthguard use during contact sports is an effective method to prevent unintentional injuries to the mouth, teeth and other facial areas. The Massachusetts Interscholastic Athletic Association (MIAA) has taken a proactive stance in requiring mouthguards for organized athletics and has collaborated with the Massachusetts Dental Society in identifying dentists who will make mouthguards available for a nominal fee. It is important that schools, coaches and families emphasize compliance with these standards and that mouthguard use in other levels of sports and in informal sports participation also is emphasized

CONCLUSIONS

Overall oral health has improved nationally in the past four decades, in large part due the role of fluoride in reducing tooth decay. While Massachusetts residents undoubtedly have benefited from the same trends, the Commission was unable to evaluate the full extent of need among our residents, because of the lack of an adequate oral health surveillance system.

Continuing public health prevention efforts to implement community water fluoridation and school-based fluoride mouthrinse programs and the widespread application of dental sealants in age-appropriate schoolchildren are needed to further reduce the prevalence of dental caries.

Regular preventive dental care is necessary even for those with good oral health status, and critically important for those with untreated oral diseases or other conditions. Low-income and other vulnerable population groups continue to experience higher levels of dental disease than the general population. Community studies in Massachusetts confirm the high level of disease found in national studies for these populations. Yet these populations have even less access to care in Massachusetts today than do those with lesser oral health needs.

Adequate funding for MassHealth and CMSP dental programs and for public health prevention programs is necessary investments for the good oral health of Massachusetts residents.

SPECIAL LEGISLATIVE COMMISSION ON ORAL HEALTH

MAJOR RECOMMENDATIONS

1. Improve access to public and private dental insurance for residents of the Commonwealth to increase access to dental care.
2. Improve access to oral health screening and treatment services for all residents of the Commonwealth by increasing the private and public capacity to provide dental services.
3. Promote statewide individual and population based preventive services and programs, especially for children and high-risk populations.
4. The Department of Public Health should develop and implement an oral health data and information system to monitor oral health status as well as access and utilization of oral health preventive and treatment services for all residents of the Commonwealth.
5. A Special Advisory Committee on Oral Health, whose primary focus will be to improve the oral health of residents of the Commonwealth, should be established as an ongoing advisory body for the Department of Public Health, the Division of Medical Assistance and other relevant state agencies.

RECOMMENDATIONS

1. Improve access to public and private dental insurance for residents of the Commonwealth, to increase access to dental care

Increase funding for the Division of Medical Assistance to ensure fair reimbursement levels for the MassHealth dental program.

- Increase the MassHealth fee schedule to 65% - from the current 50% - of the statewide median fees, estimated to cost about \$30 million at current levels of member utilization.
- Increase the MassHealth fee schedule every two years in significant increments in order to increase provider participation and member utilization.
- Increase the number of dentists enrolled in MassHealth by using various strategies- such as establishing caseload capacity, safety-net provider incentives, and other administrative and procedural improvements.

Encourage all employers who provide medical health benefits to also provide dental health benefits and create incentives for employers to provide these benefits. All third party dental plans should include and promote preventive services such as prophylaxis, periodic recall examinations, fluoride treatments, sealants, mouthguards, oral cancer screening for high-risk patients, oral health education, nutrition counseling, and tobacco cessation intervention.

Fund dental health benefits as a component of the Children’s Medical Security Plan for all eligible children and youth, through age 18. At a minimum, dental health benefits should include the same coverage as that for children under MassHealth.

Assess the need for a dental health care assistance program for adults and elders who do not have access to employer-based insurance or other dental coverage. This may include developing eligibility criteria, premium levels, and scope of service.

2. Improve access to oral health screening and treatment services for all residents of the Commonwealth by increasing the private and public capacity to provide dental services.

Fund expansion of the service capacity of safety-net providers, such as community health centers, and expansion to locations where residents still face barriers to care.

- Develop and improve safety-net provider locations:
 - a. Provide funds for capital, expansion, start-up, and initial operating expenses at safety-net provider locations, with a special focus on community health centers and hospitals, to fund more dental services, or to start up dental programs where there are currently none.
 - b. Provide technical assistance for safety-net providers to enhance business and financial stability.
 - c. Identify and submit applications for all underserved areas within the Commonwealth that may be eligible for federal dental Health Professional Shortage Area designation.

- Facilitate and improve human resources associated with safety-net providers:
 - a. Create state loan forgiveness and tuition reimbursement programs for dentists, hygienists and dental assistants who commit to serve in underserved areas or to serve high-risk populations for two or more years.
 - b. Provide low cost loans to establish dental offices in underserved areas.
 - c. Investigate the creation of a state Dental Service Corps, which would focus on providing care in low-access areas.
 - d. Explore state tax credits for dentists who establish dental offices in under-served areas and/or participate in MassHealth.
 - e. Develop strategies to increase dental, dental hygiene, and dental assisting schools' enrollment and professional participation for cultural, linguistic, and racial minorities and low-income students.
 - f. Create scholarships, state tuition reimbursement, and loan forgiveness programs for under-represented minorities, including African-American, Hispanic, and Native American students, who commit to serve in underserved areas for two or more years so that the dental workforce reflects the population's diversity, and to encourage under-represented populations to choose dental careers.

Fund grants and/or demonstration programs designed to meet community-identified needs and fill current service gaps. These programs should be designed to increase access to care and participation of providers in community-based programs. These may include community-based programs for:

- Improving children's oral health: programs for Early Childhood Caries, preventive dental sealants, school-based oral health, and the detection and treatment of cleft lip/palate.
- Improving access for underserved adult populations, such as interpreter services for linguistic minorities; specialized outreach to cultural and racial minorities, the homeless, persons with HIV, and low-income individuals; and mobile dental care for the homebound, elderly, disabled and rural populations.
- Targeting services across the lifespan for people with special needs, including individuals with chronic illnesses and disabilities; children and youth in the custody of the Department of Social Services or the Department of Youth Services; persons with HIV; and the developmentally disabled.

3. Promote statewide individual and population based preventive services and programs, especially for children and high-risk populations.

State and local agencies should develop comprehensive oral health prevention programs.

- The Massachusetts Department of Education and the Massachusetts Department of Public Health should develop and implement a comprehensive school-based oral health program that includes, but is not limited to:
 - a. Oral health education programs for all children in grades K-12
 - b. Oral health services
 - Developing school-based fluoride programs for children living in non-fluoridated communities.
 - Encouraging development of oral health screening and dental sealant programs for high-risk children.

- c. Providing education and training for school nurses and physical education teachers on oral health, oral diseases, and injury prevention.
 - d. Encouraging all schools to limit the amount of sugary foods and candy available at schools and in vending machines.
 - e. Providing education on injury prevention.
 - f. Reviewing and revising the current sports regulations and guidelines regarding mouthguard use in contact sports to improve compliance.
- Develop and implement a statewide early childhood oral health program for the prevention and treatment of Early Childhood Caries.
 - Provide oral health education and training to perinatal and pediatric providers and health professionals and paraprofessionals working with the Women, Infants and Children Supplemental Feeding Program (WIC), Headstart, Home Visiting, Early Intervention, and daycare programs.
 - Develop an oral cancer prevention program, to include:
 - a. Public education on oral cancer, with a focus on high-risk populations.
 - b. Education and training to primary care providers, hospital personnel, nursing homes, and homeless shelters.
 - c. Development and distribution of alcohol and smoking cessation education materials.

The Massachusetts Department of Public Health should enhance its primary prevention program and increase funding for a comprehensive statewide fluoridation program. This program should include but not be limited to:

- Providing capital funds to non-fluoridated communities for equipment, supplies, and facilities to implement fluoridation.
- Providing capital funds to fluoridating communities for fluoridation equipment and facilities that need to be upgraded or expanded.
- Providing education, consultation, promotion, and technical assistance on fluoridation to communities, local boards of health, health professionals, and water engineers.
- Developing a statewide program to increase the number of fluoridated communities and to monitor those communities that are fluoridating.

All cities and towns that request bond approval for water facility upgrades should include fluoridation capability in their plan.

The Massachusetts Department of Public Health should, in collaboration with other state agencies, private and non-profit dental providers, and other dental experts, develop and implement comprehensive public oral health education programs for all ages, and especially for high risk groups, on:

- Early Childhood Caries and dental caries
- Periodontal disease
- Malocclusion
- Injury prevention
- Oral cancer
- Infectious diseases
- HIV

Promote other strategies to maintain population based oral disease prevention programs.

- Encourage physicians, nurses and other primary care providers to screen for oral diseases as part of routine health care.
- Enforce long term care facility regulations that require these facilities to provide oral examinations and initiate necessary prevention, education and treatment no later than 30 days after the patient enters the facility.
- All schools that train health care professionals in Massachusetts – including dental, medical, nursing and public health schools - should stress the importance of individual and population based oral health programs and disease preventive services in their curriculum. These schools should also include discussions of the social responsibility associated with oral health careers as well as all health care work.
- The Massachusetts Department of Public Health should provide training for dental health providers and other health professionals on identification, management, and provision of services to meet the unique needs of special populations such as persons with HIV, homebound individuals, the developmentally disabled, residents of long-term care facilities, and children or youths in the custody of the Department of Social Services and the Department of Youth Services.

4. The Department of Public Health should develop and implement an oral health data and information system to monitor oral health status as well as access and utilization of oral health preventive and treatment services for all residents of the Commonwealth.

This system should include the following:

- A comprehensive oral health survey every 10 years beginning with a baseline survey within two years.
- An oral health component in ongoing data collection activities (including Behavioral Risk Factor Survey, Cancer Registry, and birth defects monitoring system).
- A standard Oral Health Report in MassCHIP (Massachusetts Community Health Information Profile) made available electronically to all persons seeking Massachusetts' population based oral health statistics.

5. A Special Advisory Committee on Oral Health, whose primary focus will be to improve the oral health of residents of the Commonwealth, should be established as an ongoing advisory body for the Department of Public Health, the Division of Medical Assistance and other relevant state agencies.

- Current members of the Special Commission on Oral Health should be invited to serve on the Special Advisory Committee.
- The Committee should select additional members as appropriate.
- The Commissioner of the Department of Public Health should appoint the chairperson.

THE ORAL HEALTH CRISIS IN MASSACHUSETTS:

REPORT OF THE

SPECIAL LEGISLATIVE COMMISSION ON ORAL HEALTH

INTRODUCTION

CHARGE TO THE COMMISSION

The Special Legislative Commission on Oral Health was appointed by Governor Argeo Paul Cellucci and the Massachusetts Legislature, as authorized by section 42 of Chapter 170, the Health Access Act of 1997 (Appendix A). This Act authorized a Special Commission to investigate and study multiple aspects of oral health in the Commonwealth, including:

- Oral health status, effective community prevention programs, and access to dental care services for residents of the Commonwealth;
- The current status of oral health and care for high-risk populations and low-income and other residents of the Commonwealth and barriers to access for such residents;
- Options for increasing the provision of dental services to children receiving medical assistance in light of the report by the United States Department of Health and Human Services that only 34% of eligible children receive preventive dental services;
- Options for improving provider enrollment in programs of medical assistance, and for public health dental prevention and promotion programs.

The Commission is the first in thirty years to be charged specifically with assessing oral health status in the Commonwealth. In 1966, the Legislature appointed a Special Commission on the Condition of Dental Health to investigate the prevalence of dental decay in children and to recommend appropriate preventive measures, including “the possibility of fluoridating all community water supplies”. The 1967 report of this Commission found that “the dental health of our children is poor” and that fluoridation of community water supplies was an effective, safe, and practical approach to preventing tooth decay in order to improve dental health. As a result of the 1967 Commission’s work, the initial legislation regarding fluoridation was enacted.

PROCESS OF COMMISSION WORK

The Special Commission met monthly from November 1998 through September 1999. It authorized four committees to explore issues, review available literature and data, and make recommendations back to the Commission. These were the Access Committee, the Assessment Committee, the Time Sensitive Workgroup, and the Writing Committee. The Access Committee reviewed available state and national data to ascertain the extent of access problems in dental care. The Assessment Committee reviewed multiple published articles and unpublished reports to assess the available data on the current status of oral health. The Writing Committee synthesized the information and produced the draft document containing the issues addressed by the Committee.

The Commission requested in writing information on oral health status about particular populations or communities from a number of sources, and also requested information on access issues from

community-based organizations. Members of the Commission also held discussions with experts in the oral health field.

THE IMPORTANCE OF ORAL HEALTH

"You are not healthy without good oral health."

- C. Everett Koop, M.D., former U.S. Surgeon General¹

Oral health is inseparable from overall health status. Because historically the dental delivery system developed separately from that of medical care, oral health issues have often been considered as less significant than other health issues. This has persisted even as other policy issues in health status and health services delivery receive very visible attention from policy-makers and legislators.

This inattention has substantial costs for affected individuals and society, as detailed in this report. Low-income and other vulnerable populations bear the burden of poor oral health, in part because of the lack of public funding and the perceived low value of oral health. Yet most of these problems are preventable, and early treatment is both cost-effective and critical to preventing later, more serious health problems.

The consequences of poor oral health on affected individuals include:

- severe acute and chronic pain
- infections, which may become systemic and contribute to other health problems
- impaired eating ability, leading to poor diet and nutritional status
- speech difficulties
- partial or total tooth loss
- negative impact on social and financial well-being due to poor appearance
- the morbidity and mortality associated with oral cancer

There are an estimated 632,000 lost schooldays and 3.6 million lost workdays annually due to oral health problems.²

The challenges facing the U.S. health care system today are creating demands for major reforms. These demands generally deal with the broad issues of cost, quality, and access. Oral health care has lagged behind the attention given medical care in this reform process. Oral health issues must be considered as an integral part of the process of reform and expansion of access to care in Massachusetts.

The federal government has recognized the national consequences of the 'neglected epidemic'³ in oral health, which received focused attention with the publication of the U.S. Department of Health and Human Services' Inspector General's report on children's limited access to Medicaid services. Several efforts are ongoing to assist federal and state policymakers in addressing this important health area:

- The U.S. Surgeon General will release a report on the oral health status of Americans by mid-2000. This report is expected to offer a unique opportunity to focus national attention on oral health needs.
- The Health Resources Administration (HRSA) and the Health Care Financing Administration (HCFA) of the U.S. Department of Health and Human Services began a collaborative effort to address oral health issues for underserved populations in 1998. One focus of this effort has been to assist states in their dental reform efforts through technical assistance and the dissemination of effective reform models.

- The Maternal and Child Health Bureau of HRSA has focused on children’s oral health through a joint workgroup with HCFA and through a new performance measure requiring all states to report on the number of dental sealants present on third-grade children’s first molars.
- The lack of dental coverage under Medicare has been recognized as a major deficiency of this federal coverage for elderly. HCFA is currently finalizing a report that addresses this issue.
- Healthy People 2010 – the national prevention goals for the United States released in January 2000 – has a comprehensive oral health component.⁴
- The Ryan White Care Act funding includes provisions for funding dental health care for HIV(+) individuals.

ORAL DISEASES AND CONDITIONS

There are several major diseases or conditions that cause or contribute to poor oral health. These include:

Dental caries – also called tooth decay or cavities - **is the most common childhood chronic disease nationally**: it affects 53% of 6-8 year olds and 84% of 17 year olds⁵. Dental caries is a progressive disease: if untreated, the extent of decay increases and spreads. As the burden of untreated disease increases with age, caries can result in acute or chronic pain, dental abscesses, secondary infection, and partial or complete loss of teeth. The disease burden of dental caries is particularly significant because it is largely preventable through optimal use of fluoride and the use of dental sealants.

Dental caries in primary (“baby”) teeth can occur as soon as the teeth begin to erupt, before age one. Early childhood caries (ECC), or ‘baby bottle tooth decay’, is increased when infants and young children are allowed to routinely fall asleep while bottle-feeding, or when pacifiers are used with sweets during teething. The chronic presence of milk or sugary substances in infants’ mouths as they are sleeping may lead to an accelerated rate of tooth decay. Although ECC is preventable through proper feeding methods, the results of undetected or untreated ECC are severe. By age two, rampant decay may occur, leading to the need to remove multiple baby teeth, damage to developing permanent teeth, and life-threatening infections. ECC can have lifelong repercussions for an affected child.

Periodontal disease is an infectious disease of the gums and supporting bones. It is the second major cause of tooth loss in adults and elders. As inflammation from diseased gum tissue spreads, the underlying bone erodes and can’t support the teeth. Many of the same outcomes as with caries result - chronic pain, eating difficulties, and tooth loss. Periodontal disease has also recently been linked to systemic effects in the body. Studies have shown that periodontal infections are associated with heart disease and with low birth weights in newborns of affected mothers⁶. Good oral hygiene habits such as brushing, flossing, and regular dental care contribute significantly to the prevention and control of periodontal disease.

Oral cancer: Two to four percent of all cancers occur in the oral cavity, making oral cancer the 6th most common cancer in the United States. The mortality rate for oral cancer is the highest of the major cancers, in significant part due to late diagnosis. Many physicians do not routinely screen for oral cancer, and adults who do not receive regular dental care may miss the opportunity for screening.

The major risk factors for oral cancer are tobacco use and heavy alcohol use. Oral cancer is most common in people older than 45 years, and men are twice as likely as women to develop the disease.

Orofacial (mouth and face) injuries: Fractured or lost teeth due to trauma are largely preventable injuries commonly associated with sports participation. Child abuse, domestic violence and elder abuse also result in significant injuries.

Malocclusion, or poorly aligned teeth, and missing teeth are a significant problem for many children and adults. Mild malocclusion is generally considered an aesthetic issue. Moderate to severe malocclusion, left untreated, results in various functional, physiological, and psychological problems. Teeth that are not aligned properly make eating difficult. Malocclusion and missing teeth promote the drifting or leaning of teeth, making proper brushing and flossing difficult, which promotes the retention of bacterial plaque. Malocclusion may also promote the grinding and clenching of teeth, which can result in temporomandibular joint dysfunction, the wearing away of enamel, and painful facial muscles.

Cleft lip and cleft palate, the most common congenital abnormalities of the oral cavity, are caused by incomplete fusion of facial bone. The underlying cause of cleft lip and cleft palate may be a nutritional deficit of folic acid early in the mother's pregnancy. The advancement of surgical techniques has led to the ability to repair these conditions with no residual deficits in most cases.

Temporo-Mandibular Joint (TMJ) Dysfunction is a dysfunction of the jaw joint that can cause chronic and acute mouth and oro-facial pain, and difficulties in sleeping, eating and talking.

Oral implications of systemic disease: In certain systemic conditions that affect the oral cavity, poor oral health care may affect the treatment and progression of the underlying disease. These conditions include but are not limited to heart valve problems (subacute bacterial endocarditis), hematogenous (blood-related) cancers such leukemia and lymphoma, other cancers, and diabetes. Many of these conditions may be first diagnosed based upon oral manifestations, or may be complicated by existing oral disease. For example, leukemia may be first evident in the oral cavity through signs associated with bleeding; and persons with HIV/AIDS are more susceptible to infection in the oral cavity, including severe periodontitis, viral infections and fungal infections.

Treatment associated with systemic conditions may create oral complications such as xerostomia (dry mouth), damage to salivary glands, changes in the oral environment, painful inflammation of the mouth, ulceration, pain, and infection. These require regular dental care to maintain proper oral health.

For individuals with systemic disease, dentists have a unique opportunity to treat oral conditions, eliminate infection, and maintain a proper oral environment - and perhaps be the first to diagnose the underlying disease.

ORAL HEALTH STATUS IN MASSACHUSETTS

LIMITATIONS OF MASSACHUSETTS DATA

Massachusetts does not have a surveillance system to assess the oral health status of residents. As a state, we are unable to measure progress in meeting the national Healthy People 2000 and 2010 oral health objectives, to track emerging needs, or to evaluate the effectiveness of preventive measures.

Lacking a surveillance system, there are limited sources of statewide data:

- Only two statewide assessments of oral health in the Commonwealth have been conducted in the past half-century, in 1951 and in 1979-1981. These assessments both focused on the health status of school-aged children.
- Survey data are available from the 1995 and 1998 statewide Behavioral Risk Factor Surveillance System (BRFSS) on some aspects of dental health and service utilization. The BRFSS is an annual telephone survey conducted by the Massachusetts Department of Public Health (MDPH) of a sample of adults on a variety of health-related topics.
- The MDPH Cancer Registry tracks oral cancer incidence and deaths.

Some screenings and surveys of specific communities or populations have been conducted in the past decade. While their findings may not be representative of the state population due to their study designs and the small number of participants, these community-based studies do provide valuable insight into oral health status and access to oral health care for some populations. These studies are referenced in the report.

While state data are limited, current national data exist based on a 1988-1991 survey of dental health status across all age groups⁷. The profile of oral health status presented below references this study and other available national data, with reference to Massachusetts specific information where available.

CURRENT ORAL HEALTH STATUS

CHILDREN

Nationally, there has been significant improvement in overall oral health status among children in the past several decades. This is due in large part to the decreasing incidence of dental caries through exposure to fluoride.

Massachusetts' historical data support this national trend. The 1979-81 statewide study of schoolchildren found a 50% decrease in caries in permanent teeth from the 1951 study. The peak age for decay in primary (baby) teeth was also later – 9 years old in 1979 versus 5 years in 1951.⁸ Although more recent statewide data do not exist, the increased presence of community water fluoridation and other fluoride sources since 1979 has almost certainly led to further improvement.

Despite this improvement in overall oral health status, **dental caries remains the most common childhood chronic disease** nationally, affecting 84% of children by age 17⁹. Almost one-third of cavities in 6-8 year olds have not been repaired, **a higher percentage than 10 years ago**¹⁰. Early childhood caries, while completely preventable through proper infant feeding methods, also remains a significant problem for 5 – 10% of young children.

Various local studies confirm that dental caries and associated oral health problems continue to be widespread in Massachusetts:

- A 1996 screening of students at one Boston high school found that they had four times more untreated cavities than the national average. Ninety percent needed treatment, with 50% needing early treatment¹¹.
- Dental screenings of 5182 Lawrence schoolchildren in 1995-1997 found 48% needed referral for dental care and 9% were in need of immediate care. Children with the most severe dental problems generally did not have insurance.¹²
- A 1996 screening of more than 100 mostly minority and low-income second grade children at a Boston public school found that 44% had untreated tooth decay and 10% were in need of immediate

dental care. Among Vietnamese children, 23 of 24 had untreated tooth decay. Ten percent of the children had never been to a dentist.¹³

- In a 1995 study of Cambridge schoolchildren, overall caries prevalence was 50%. Forty percent of the children examined, including 69% of all first-graders, were in need of treatment. For all children examined, 6% reported pain at the time of the exam.¹⁴
- A 1997 screening of Boston public school children, grades K-5, found that 38% had unmet restorative treatment needs, of which 14% were considered urgent by the examiners. Children needed an average of 2.8 dental visits each to meet their existing tooth decay needs.¹⁵
- In a 1980 study of Boston schoolchildren, the average 17 year-old had 17 tooth surfaces affected by tooth decay, a rate 55% higher than the national average.¹⁶
- In a 1997 telephone survey of 177 participants in the state's Women's, Infants and Children Supplemental Feeding Program (WIC) living in five communities across the state, 10% of parents reported that they had been told one of their children had 'baby bottle tooth decay' (Early Childhood Caries).¹⁷
- A 1996 survey of parents at three Dorchester community health centers found that 20% reported putting their infants to bed with a bottle – the major risk factor for Early Childhood Caries. For those children using a bottle past age two, almost all took it to bed.¹⁸

In addition to the continuing high prevalence of dental caries in some populations, other factors influencing children's oral health status are:

Malocclusion: 29% of adolescents in the U.S. have severe malocclusion¹⁹. The approximate cost of orthodontic treatment in this age group is \$4500. There are no data specific to Massachusetts about the extent of malocclusion or its under-treatment, although a Boston study showed significant need for orthodontic treatment for low-income children²⁰.

Orofacial Injuries: 18% of children ages 6 – 20 in the U.S. have trauma to at least one incisal tooth²¹. A 1996 survey of students at a Boston high school found that 22% had dental trauma²².

Childhood orofacial injuries are frequently associated with sports participation. In a New England study, 38% of sports-playing children in grades 2 – 8 reported having had a tooth injury at some time²³. Mouthguards are an effective but underutilized preventive method for minimizing orofacial injury during sports participation²⁴.

Intentional injuries are another significant source of orofacial trauma. Up to 75% of all cases of child abuse involve trauma to the mouth, face, or head²⁵. Dental health workers are in a unique position to recognize child abuse and neglect.

LOW-INCOME AND MINORITY CHILDREN

“Although dental problems don't command the instant fears associated with low birth weight, fetal death or cholera, they do have the consequences of wearing down the stamina of children and defeating their ambitions. Bleeding gums, impacted teeth and rotting teeth are routine matters for the children I have interviewed in the South Bronx. Children get used to feeling constant pain. They go to sleep with it. They go to school with it. Sometimes their teachers are alarmed and try to get them to a clinic. But it's all so slow and heavily encumbered with red tape and waiting lists and missing, lost or cancelled welfare cards, that dental care is often long delayed. Children live for months with pain that grown-ups would find unendurable. The gradual attrition of accepted pain erodes their energy and aspirations. I have seen children in New York with teeth that look like brownish, broken sticks. I have also seen teenagers who were

missing half their teeth. But, to me, most shocking is to see a child with an abscess that has been inflamed for weeks and that he has simply lived with and accepts as part of the routine of life."

-Jonathan Kozol, *Savage Inequalities*, 1991²⁶

The hidden story in children's oral health statistics is that the burden of disease has shifted – while more affluent children are likely to enjoy better oral health than their parents did, untreated dental disease is a disproportionate and growing problem for low-income and minority children.

In the United States:

- *80% of caries are concentrated in just 25% of children²⁷*, disproportionately among low-income and minority children. Family income level has been linked to the proportion of children having tooth decay.²⁸
- Among children age 2 – 5 living below the federal poverty level, 80% of dental caries in primary teeth goes untreated.²⁹
- Of children with tooth decay, black children are 2.5 times more likely than white children are to have untreated tooth decay.³⁰

There are no Massachusetts-specific data comparing the oral health status of low-income or minority children to larger populations. However, the local studies discussed in the section above - which show significant disease and great unmet need for dental care - are all from communities or populations with relatively high proportions of low-income and minority children. The available information clearly indicates the need to both collect additional data and to address the poor oral health status of low-income children.

The reasons for the disproportionate burden of dental disease among low-income and minority children are complex and not entirely understood. For example, even in communities with fluoridated water supplies, low-income children have more tooth decay than their more affluent neighbors do. They may lack adequate information regarding good oral health habits such as regular toothbrushing and avoiding excessive sugar consumption.

It is also clear that access to preventive dental care and treatment is a significant barrier for low-income children and their families, and that lack of preventive dental care contributes to diminished oral health status. As described in more detail in the Access to Dental Care section below, the inability of MassHealth families in Massachusetts to find dental care has reached a crisis level.

"I provide routine primary care to low-income children from Dorchester and surrounding neighborhoods at a health center. I first became aware of how large a problem dental care is when I began asking children and their parents if they had ever seen a dentist as part of their routine physicals. I was amazed to find that many children and teens had never been to a dentist, and of those who had been, they received dental care only sporadically. When I examine the children's mouths, I often see black teeth rotted down to the roots, a sight we should never see in this country."

"The problem of baby bottle tooth decay really hit home last winter when a child from the health center was hospitalized in the intensive care unit with a potentially life-threatening condition attributable to poor dental care. The child developed an abscess and swelling that threatened his ability to breathe."

- Boston nurse practitioner

ADULTS

Because untreated dental caries and periodontal disease are progressive, the disease burden of poor oral health accumulates as one ages. In addition, once a tooth has become decayed, it requires a lifetime of maintenance. The risk of oral cancer for those engaging in high-risk behaviors - tobacco use and excessive alcohol use – also increases with age.

In the United States:

- 94% of adults have evidence of past or present tooth decay³¹.
- Only 31% of adults have all their teeth³².
- About 30,000 people are diagnosed with oral cancer each year and 8000 people die.³³
- The five- year survival rate for oral cancer is only 53%, among the lowest of major cancer sites.
- 90% of HIV(+) individuals have oral manifestations during the course of their disease.
- More than 90% of people aged 13 and older have some degree of periodontal problems, and 25% have at least moderate periodontal disease.³⁴

In Massachusetts:

- Only 52% of adults have all their teeth³⁵.
- 3745 cases of oral cancer were diagnosed in the period 1990-1994. The mortality rate for that period was 2.9 per 100,000, ranking the Commonwealth 22nd among states³⁶.

When oral cancer is detected early, the prognosis for survival improves greatly. However, a 1990 study of Boston residents diagnosed with oral cancer showed that they had a median of 10.5 visits to health care providers in the two years before diagnosis, which was at a late stage for 77% of them³⁷. Dental health care workers are more likely to screen for oral cancer than are medical providers.

These data suggest in general that physicians and other health care providers are not consistently screening for oral cancer and that education programs for both providers and the public are necessary in order to detect the disease in its early stages.

Minority Adults:

As with many other areas of health status, there are significant racial disparities in oral health status:

- Although whites have a higher prevalence of overall tooth decay than other racial groups, blacks are four times as likely to have untreated caries as whites³⁸.
- Blacks have more missing teeth than whites³⁹
- The largest discrepancy in cancer five-year survival rates between blacks and whites is for oral cancer⁴⁰. In Massachusetts, black males have only a 28% five-year survival rate, compared to 53% for whites⁴¹.
- Blacks are less likely than whites to get preventive dental care.⁴²

OTHER VULNERABLE POPULATIONS:

Certain groups are at higher risk for poor oral health than the general population. In addition to low-income and minority children and adults, these include the elderly, the homebound, nursing home residents, the disabled, the homeless, people with HIV/AIDS, and refugees and immigrants.

The Elderly and Homebound

The elderly are a particularly vulnerable population regarding oral health needs. They are at higher risk for specific diseases such as root caries* and oral cancer. Ill-fitting dentures can cause trauma and an inability to eat, resulting in malnutrition and other systemic problems. Medical conditions and related treatments frequently have oral manifestations, such as the 'dry mouth' that is a side effect of many medications.

The elderly need regular and preventive dental care in order to assure that their oral health status is maintained and their general health is not compromised by untreated oral conditions. However, the elderly also have one of the highest financial barriers to care: many live on fixed incomes and Medicare coverage does not include dental care.

A key indicator of elder oral health is the percentage of individuals with edentulism, or total tooth loss. Edentulism, the most extreme result of a lifetime of dental caries and periodontal disease, has decreased significantly in the past 40 years. The Healthy People 2000 objective in this area was to reduce edentulism to 20%.⁴³ In Massachusetts, 22% of residents ages 65 and over report total tooth loss, somewhat less than the national average of 24.4%.⁴⁴

Data from community studies in the Commonwealth give some indication of the extent of need among the elderly:

- A 1997 survey of Boston frail homebound elders found that:
 - ♦ 80% rated their oral health as poor.
 - ♦ 78% had no teeth.
 - ♦ 17% had no teeth *and* no dentures.
 - ♦ 28% reported painful uncomfortable oral conditions in the past three months⁴⁵.
- In a 1988 survey of Boston homebound elderly, 50% hadn't seen a dentist in the past ten years⁴⁶.
- A 1994 study of elders across New England found 52% had root caries, of which 22% was untreated.⁴⁷

Residents with Disabilities

Children and adults with disabilities frequently are at higher risk for oral disease, and typically face additional barriers in finding appropriate dental care, thus increasing the probability of poor oral health status.

Many children and adults with developmental disabilities are at high risk for enamel irregularities, gum infections, delays in tooth eruption, moderate to severe malocclusion, and oral infections.

Disabled individuals are frequently prescribed medications and other therapies, such as special diets, which have oral manifestations, including decreased saliva flow and 'dry mouth'. They may also have difficulty in maintaining proper oral hygiene with proper daily brushing and flossing, further impacting their oral health.

*Root caries is decay of the root (vs. the crowns) of teeth, which may occur when roots are exposed as gums recede, a common occurrence with aging.

Residents with HIV/AIDS

There were 14,783 cumulative cases of AIDS in Massachusetts through August, 1999⁴⁸ and an estimated 33,000 residents are living with HIV⁴⁹. For many of these individuals, the oral cavity was probably the first site in which symptoms of HIV appeared, and most will have oral complications at some time.

Persons with HIV may experience oral problems associated with HIV disease, such as specific oral lesions and increased periodontal problems. Candidiasis (fungal infection), Kaposi's Sarcoma, oral warts, herpetic lesions, and other painful conditions such as necrotizing gingivitis may be present. Over 90% of those with HIV experience an oral lesion in the course of their disease, some of which are considered an AIDS-defining condition. Dentists have a unique opportunity to diagnose and treat oral conditions related to HIV: physicians often fail to detect oral manifestations or to correctly diagnose oral lesions associated with HIV infection.

The high prevalence of common oral diseases in persons with HIV is more closely related to an inability to access dental care than to the HIV infection itself. This is due in part to the high level of discrimination that many HIV(+) individuals experience when they attempt to obtain dental care. Oral care consistently ranks high in health need surveys of patients with HIV and was the third highest priority in a series of hearings which preceded the distribution of Ryan White CARE Act funds in Boston in 1991⁵⁰.

The Homeless

“When planning the menus for our soup kitchen, we have to be sensitive our clients inability to chew certain foods due to the rampant decay and missing teeth.”

-Outreach worker, North Shore soup kitchen

Homelessness is associated with poor overall health status in general, and this holds true for oral health as well.

- Homeless individuals are twelve times more likely to have dental problems than are individuals in stable housing.⁵¹
- A 1994 study of homeless children in Boston found 7.7 times more untreated tooth decay than the New England average. Sixty-one percent needed dental care and 18% had pain or infection at the time of the survey. Among those children ages 5-9, 44% had pain or infection and 96% required dental care.⁵²
- A 1995 study of homeless adults in Boston found untreated caries in 91.4% of those examined. 88.6% were missing one or more teeth⁵³.

“One year ago I was homeless, destitute, addicted to drugs and alcohol. No insurance. No job as I couldn't keep one. As of last September, I decided to get help, at the time I thought I was a hopeless case. First step I made was to go in a halfway house for help with the drugs and alcohol. Then I went to St. Francis House Job Readiness program. I desperately needed work done to my teeth so I could even look presentable enough to even look for a job. After a search I was able to get help. I now have a job. I'm still working and I feel great about my smile, my self, and my sobriety. I can once again face people and even smile at them. Working with people would have been impossible or even an interview for a job would have been a waste of time without help for my teeth.” - C.D., a homeless individual

Refugees and Immigrants:

Although there are little quantitative data available, dentists who practice in communities of the Commonwealth with significant newcomer populations report that there is an alarming rate of tooth decay and other oral health problems among their patients. Refugees and immigrants frequently come from countries without community water fluoridation or access to preventive dental care. In this country, they frequently work in low-paying jobs without dental insurance and continue to go without dental care.

PREVENTION OF ORAL DISEASES

It is an old but true maxim in public health that 'an ounce of prevention is worth a pound of cure.' Primary prevention measures are those intended to prevent disease before it occurs, while secondary prevention measures control or minimize disease after it occurs. In oral health, effective primary prevention measures are well established, safe, and cost-effective. Yet they are only partially implemented in Massachusetts, which lags behind many other states. For example, the Commonwealth ranks 35th in the nation in fluoridation status, and there is no state-sponsored dental sealant program.

FLUORIDE

COMMUNITY WATER FLUORIDATION

"Fluoridation is the single most important commitment that a community can make to the oral health of its citizens". - C. Everett Koop, M.D., Former US Surgeon General

Fluoridation is one of the major public health advances of the 20th century.⁵⁴ Over 50 years ago, dental public health professionals found that fluoride, a naturally occurring substance in water, substantially reduces tooth decay when available in appropriate concentrations. Although all water supplies contain some fluoride naturally, it is generally not at a level that will prevent tooth decay.

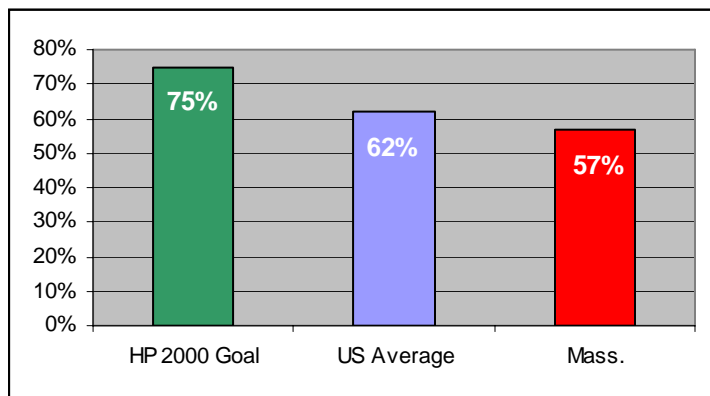
The most effective way to deliver the benefits of fluoride is through its addition to community water supplies to an adjusted optimal level. Fluoridation has both a systemic and topical* effect in preventing tooth decay. Fluoride is odorless, colorless, and tasteless at the recommended level.

- Community water fluoridation is safe, inexpensive, and practical. Each dollar spent on fluoridation results in up to \$80 savings in treatment costs.
- Living in a fluoridated community from birth reduces tooth decay as much as 40%.⁵⁵
- Community water fluoridation on average costs 51 cents per resident per year. The lifetime cost per person is less than the average \$42 cost of filling just one cavity⁵⁶.

Despite these proven benefits, **Massachusetts lags behind many states in implementing fluoridation.** Only 111 communities are completely fluoridated. 178 communities have partial or no fluoridation, while 62 have no community water supply (Appendix B). While the Healthy People 2000 goal was for 75% of people to live in communities with fluoridated water systems⁵⁷, just 57% of Massachusetts residents live in a fluoridated community, ranking the Commonwealth 35th in the nation for this basic public health measure (see chart).⁵⁸

* Ingested fluoride strengthens developing teeth systemically before they erupt in the mouth and, through its presence in saliva, acts topically to protect teeth from decay by inhibiting demineralization and increasing remineralization of exposed tooth surfaces.

Percentage of Residents with Fluoridated Water



One reason for variable state implementation rates is the difference in state laws. Nine states – but not Massachusetts - mandate fluoridation.⁵⁹ Massachusetts' fluoridation law is modeled on the recommendations of the 1967 Special Legislative Commission. It allows local Boards of Health to evaluate, order and implement fluoridation after a 90-day public notice period. During the notice period, a petition may be filed with the city or town clerk by 10% of registered voters requesting that the question be placed on the ballot for the next election or annual town meeting. A majority of voters must then vote in its favor for fluoridation to be implemented (M.G.L. Chapter 11, section 8. Appendix C). Since 1969, fluoridation has been voted on in 79 communities in the Commonwealth: 36 have voted favorably, and 43 voted against its implementation⁶⁰.

Most Massachusetts community fluoridation activity occurred between 1968 and 1987 when 78 cities or towns fluoridated. Only eleven have fluoridated since 1988. Among those still not fluoridated are the second and third largest cities in the Commonwealth.

Fluoride's safety has been extensively researched and confirmed in multiple studies. Numerous national and international health care organizations endorse fluoridation of public water supplies (Appendix D). However, fluoridation continues to face opposition from some individuals and groups who make unsubstantiated claims against fluoride.

MDPH provides technical assistance to communities regarding community water fluoridation, and also monitors fluoridated water supplies to assure concentration is in the appropriate range.

OTHER FLUORIDE PROGRAMS

In communities that don't or can't fluoridate their water supplies, it is important that children in particular receive fluoride through other means, such as fluoride tablets or mouthrinse. Schools and pre-schools are effective locations to reach high-risk children. The MDPH Office of Oral Health provides assistance for school-based programs.

Fluoride mouthrinse programs

For children living in non-fluoridated communities, a school-based program of weekly fluoride mouthrinse is recommended. This typically takes only five minutes per week for a class, can be supervised by teachers or parents with minimal training, and is well-accepted by participants.

The Office of Oral Health supports programs in grades one through six with supplies, training and technical assistance. This program serves approximately 55,000 students in 246 schools in 141 communities (Appendix E). This program is funded in part through a public-private partnership with Delta Dental Plan of Massachusetts, which supports the program in seven of these communities.

However, not all eligible schools in these communities participate, and school systems in 90 non-fluoridated communities do not participate at all. An estimated 188,000 elementary schoolchildren attend schools in non-fluoridated communities that do not offer a fluoride mouthrinse program.

Fluoride mouthrinse programs cost only 78 cents per child per school year and decrease the amount of tooth decay in children using it by up to 35%⁶¹.

Fluoride tablets

Fluoride tablets are indicated for young children because they have both a systemic effect on developing teeth and a topical effect on newly erupted teeth. The Office of Oral Health administers a supplemental fluoride tablet program in six Head Start agencies covering 53 non-fluoridated communities statewide. In 1998, 1,373 children participated in this program, which is also funded by Delta Dental Plan of Massachusetts.

Other methods

Fluoride may be applied topically in a dental office. The widespread use of fluoridated toothpastes also contributes to fluoride's overall beneficial effect. These methods account for a reduction in tooth decay of 20-40%.

DENTAL SEALANTS

Although fluoride is highly effective in preventing cavities, its action is most effective on the smooth side surfaces of teeth. Molar teeth have deep grooves (pits and fissures) on their chewing surfaces, which are more susceptible to caries. More than 80% of tooth decay in schoolchildren in recent years is found on these tooth surfaces.⁶²

The application of dental sealants - thin resin coatings applied to teeth by a dental health care worker - is a cost effective means to protect the vulnerable chewing surfaces. Sealants are most effective when applied soon after the molars erupt. For first molars, this is at ages 6-8 years, and for second molars, at ages 12-14 years.

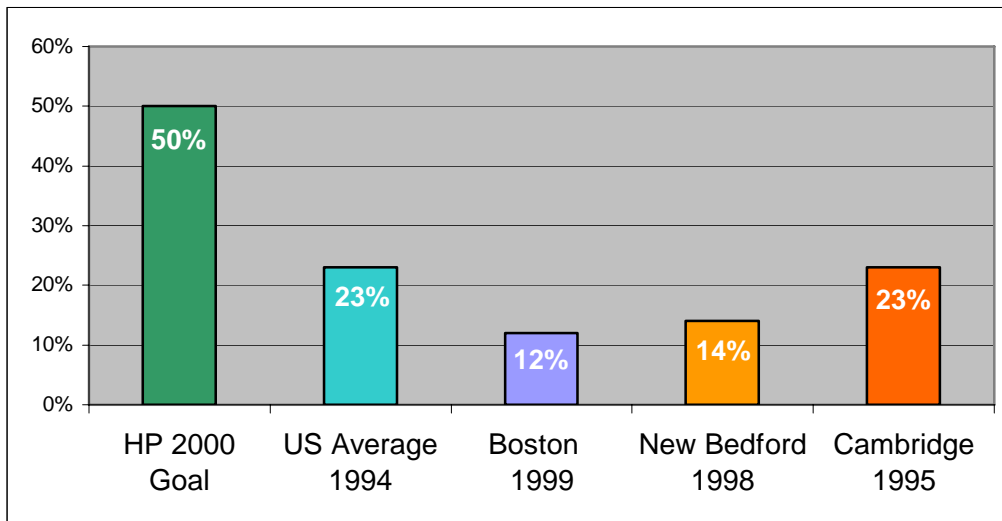
Nationally, approximately 23% of 8 year olds have at least one sealed permanent tooth, far short of the Healthy People (HP) 2000 goal of 50%⁶³. Massachusetts cannot assess its sealant status because there is no statewide surveillance system to monitor the number of schoolchildren who have received dental sealants, although the federal government recommends such programs. (The federal Maternal and Child Health Bureau has established the percentage of third-graders with dental sealants as a core performance measure for its state block grants.) Such data are critical in order to monitor progress for this important preventive measure and to target resources and programs appropriately.

Several community-based surveys have been conducted, which have uniformly found inadequate rates of sealant application (see chart): 13.6% of New Bedford third graders had sealants in a 1998 study⁶⁴.

- 23% of Cambridge schoolchildren had sealants in a 1995 study⁶⁵.

- 12% of Boston high school students had sealants in a 1999 study. Those without sealants had almost ten times the amount of tooth decay as those with sealants⁶⁶.

Percentage of Children with Dental Sealants



Nationally, state laws and regulations vary regarding who can order and apply sealants. In Massachusetts, registered dental hygienists or certified dental assistants may apply sealants to tooth surfaces when prescribed by a dentist.

Because sealant application is most effective for certain age groups, and is particularly important for high-risk children – those living in non-fluoridated communities and low-income and minority children – school-based sealant programs targeted to these populations are a very cost-effective method to prevent tooth decay.

However, Massachusetts has no state-sponsored dental sealant program. One community in the Commonwealth, Beverly, applies sealants as part of a comprehensive school-based dental program. A recent pilot sealant program was also developed in the dental hygiene program at Quinsigamond Community College in Worcester with the support of Delta Dental Plan of Massachusetts.

INDIVIDUAL ORAL HEALTH BEHAVIOR

Individual preventive behavior remains an important component of oral health, particularly in the absence of community fluoridation. Regular toothbrushing with a fluoride toothpaste; flossing; limiting the intake of sugary foods—especially among children; and receiving regular preventive dental exams and cleanings are all necessary for good oral health.

Public education regarding the need for this preventive behavior is also necessary. Not all school health education curricula in the state contain an oral health component. Some children report not having their own toothbrushes. Many adults are not aware that preventive dental exams are recommended. In a 1998 survey of oral health of Massachusetts adults, the most common response given by those who did not have a dental visit in the past year was that they ‘had no reason to go’⁶⁷.

TOBACCO AND ALCOHOL USE

Tobacco use is a known risk factor for many diseases, including oral cancer and periodontal disease. **Seventy-five percent of all oral cancers are attributable to tobacco** – smoked, chewed or spit. Tobacco use is also associated with an increase in noncancerous oral lesions and increased risk of periodontal disease.

Heavy alcohol use in itself is also a risk factor for oral cancer and in combination with tobacco use contributes to increased risk.

INJURY PREVENTION

Protective mouthguard use during contact sports is an effective method to prevent unintentional injuries to the mouth, teeth and other facial areas. Athletes not wearing mouthguards are 60 times more likely to sustain dental damage than those who wear them⁶⁸. The cost of tooth repair can be substantial, including crowns and bridges for young people with otherwise healthy teeth.

The Massachusetts Interscholastic Athletic Association (MIAA) recently added soccer to the list of sports played under its jurisdiction that require mouthguards, along with football, lacrosse, ice hockey, and field hockey. The Massachusetts Dental Society has been collaborating with the MIAA in identifying dentists who will make mouthguards available for a nominal fee.

Mouthguard use is still low in many other levels of sports and informal sports participation. A recent New England study of dentists' reports of sports injuries found that 62% of the injuries occurred to players in unorganized sports, and 59% of all injuries were to children ages 7 – 13⁶⁹. Effective school-based and public education, as well as the active support of coaches, referees, and families, is required to encourage increased use of protective mouthguards in contact sports.

ACCESS TO DENTAL CARE

While primary prevention must be the leading approach to maintaining oral health, even individuals with good oral health status need regular preventive dental care. For those with untreated oral diseases or conditions, lack of timely dental care can result in escalating oral problems, which may be more costly and difficult to treat. Ready availability of affordable dental care is thus a necessary component of good oral health status.

PAYING FOR DENTAL CARE

The dental health care system differs from the medical care system in its financing and reimbursement mechanisms. Most dental care is still provided on a private fee-for-service basis, with the dentist establishing a fee schedule - known in the dental industry as 'usual, customary, and reasonable' or UCR fees - and directly charging the patient this fee for the service rendered.

Dental insurance has been increasing as an employer-offered benefit in recent years, and today in Massachusetts approximately 62% of residents have dental insurance⁷⁰, as compared to approximately 90% who have medical insurance.⁷¹ Dental insurance is *only* available as an employer-offered benefit and dental plans typically have steep deductible and co-payment requirements, so considerable out-of-

pocket payments are still required. The average annual out-of-pocket payment for adults who receive dental care (including both insured and uninsured adults) is \$300.⁷²

Many vulnerable populations still remain uncovered by dental insurance:

- Medicare does not cover dental care, except in cases of trauma, giving elders one of the highest rates of uninsurance for dental care. As more elders benefit from preventive services, the percentage with significant or total tooth loss has decreased, thus increasing the need for ongoing restorative care and contributing to a critical access situation.
- Children's Medical Security Program (CMSP), the Massachusetts primary health care insurance program available to all uninsured children not eligible for MassHealth, has had dental coverage as an option in its legislative enabling language, but is only now implementing it as a covered benefit. There are more than 18,000 children enrolled in CMSP, of whom one-third are in families with incomes below 200% of the poverty level.
- Although MassHealth, the Massachusetts Medicaid program, covers dental care, an increasing number of dentists in the Commonwealth are leaving the program, contributing to a crisis in access to care for MassHealth members. This is discussed extensively in the next section.

Cost of care is one of the most significant barriers reported of why people do not seek dental care when they believe they have a need:

- A survey of 877 children enrolled in Children's Medical Security Plan found that of 145 whose parents reported that their children hadn't received needed care in a timely manner (in the six months prior to enrollment), 36% *never* received the needed care. Of these, 90% reported that the reason the care was never received was cost⁷³.
- A survey of 177 adult WIC participants living in predominately rural areas of the Commonwealth found that cost of care was the reason most reported by those who hadn't received any dental care in the prior 12 months⁷⁴.

"I am appalled by the lack of access to dental care for the families and children in our area. There is not currently one dentist in the area who will accept Medicaid patients in their practice. At our free health care clinic, located in our high school, we see patients regularly for dental problems so severe as to require acute treatment. I have personally known people who have pulled their own permanent teeth because they could not afford to seek quality dental care. Currently approximately 23% of our students are without health insurance. While we actively work to enroll these students in the Children's Medical Security Plan, they continue to go without dental care."

– School health coordinator in western Massachusetts

THE DENTAL HEALTH CARE DELIVERY SYSTEM

The dental health care delivery system differs significantly from that of medical care. Most dentists in the Commonwealth are self-employed solo providers, practicing in an office that they have established or purchased from another dentist. They may assume considerable financial risk in establishing their practices.

Dentists in individual practice almost universally utilize dental assistants and/or dental hygienists to help meet their patients' needs. States vary in their regulations regarding scope of practice for these professionals. In Massachusetts:

- **Dental hygienists** are qualified to deliver specified dental care procedures under the direct or indirect supervision of a dentist. These include dental prophylaxis, taking x-rays, administering topical fluoride, and placement of dental sealants. Oral health education by hygienists is also an important component of dental health care. In Massachusetts, the Board of Registration in Dentistry registers dental hygienists.
- **Dental assistants** assist the dentist as he or she delivers patient care, and also may maintain the supplies and equipment in the operatory. They may be trained on the job or through a formal training program. In order to perform the broadest range of procedures, a dental assistant must be certified by the Dental Assisting National Board, which requires completion of a formal training program and passing an examination.

AVAILABILITY OF DENTAL HEALTH PROFESSIONALS

DENTISTS

Although data on dental providers has certain limitations, it does not appear that there is an overall shortage of dentists in the Commonwealth. An estimated 4,692 dentists have clinical practices in 6,065 dental office locations in the Commonwealth⁷⁵. (Some dentists maintain more than one office in order to serve multiple communities.) The overall ratio of one dentist for every 1304 residents is higher than the national average. Table 1 presents the estimated number of dentists by specialty and practice site.

TABLE 1. Estimated number of practicing dentists, by specialty, March 1999

Dental Specialty	Number of Practice Sites	Number of Dentists	Group Practices
General Dentists (GP)	3,939	3,410	64
Pediatric Dentists (PED)	229	151	4
Orthodontists (OR)	531	321	2
Oral Surgeons (OS)	394	228	8
Periodontists (PER)	525	285	8
Prosthodontists (PRO)	162	124	2
Endodontists (EN)	276	173	3
TOTALS	6,056	4,692	91

Approximately 72% of dentists in the Commonwealth are in solo practice, the setting in which most state residents receive their dental care. General and pediatric dentists are considered the ‘primary care providers’ of dentistry. They provide most routine dental health care and refer patients to the other specialists as indicated.

Tables 2 and 3 display the distribution of dental practice sites by specialty in each of the fourteen counties in Massachusetts and the dental practice-to-population ratio for both primary care dentists and specialists.

In Table 3 below, Ratio 1 represents the number of county residents for every primary care (general or pediatric dentistry) practice site. The counties in bold type have ratios at least 10% worse than the statewide average ratio of 1468. Ratio 2 represents the number of county residents for all dental practice sites, including specialist services. (See Appendix F for a map of dentists by region of the state.)

TABLE 2. Number of Practice Sites by County, by specialty, March 1999

County	General Dentists	Pediatric Dentists	SUBTOTAL Primary Care	Orthodontists	Oral Surgeons	Periodontists	Prosthodontists	Endodontists	TOTAL
Barnstable	129	7	136	10	12	8	1	3	170
Berkshire	68	3	71	6	3	3	0	1	84
Bristol	246	4	250	42	20	26	4	23	365
Dukes	9	0	9	1	1	0	0	0	11
Essex	425	31	456	59	36	53	21	29	654
Franklin	36	1	37	1	5	2	0	0	45
Hampden	265	6	271	25	18	14	0	9	337
Hampshire	86	6	92	12	10	0	0	3	117
Middlesex	998	79	1077	156	107	177	33	94	1644
Nantucket	3	0	3	1	0	0	0	0	4
Norfolk	537	40	577	75	52	85	43	52	884
Plymouth	239	7	246	38	26	25	4	18	357
Suffolk	510	31	541	52	62	93	54	21	823
Worcester	388	14	402	53	42	39	2	23	561
TOTALS	3939	229	4168	531	394	525	162	276	6056

TABLE 3. Ratio of Population to Primary Care and All Dental Practice Sites by County, March 1999

County	County Population (1997)	SUBTOTAL Primary Care Practice Sites	Ratio 1	TOTAL Practice Sites	Ratio 2
Barnstable	205,128	136	1,508	170	1,207
Berkshire	134,244	71	1,891	84	1,598
Bristol	515,501	250	2,062	365	1,412
Dukes	13,578	9	1,509	11	1,234
Essex	691,400	456	1,516	654	1,057
Franklin	71,341	37	1,928	45	1,585
Hampden	440,974	271	1,627	337	1,309
Hampshire	150,136	92	1,632	117	1,283
Middlesex	1,417,868	1,077	1,316	1,644	862
Nantucket	7,508	3	2,503	4	1,877
Norfolk	639,243	577	1,108	884	723
Plymouth	462,159	246	1,879	357	1,295
Suffolk	642,900	541	1,188	823	781
Worcester	725,540	402	1,805	561	1,293
TOTALS	6,117,520	4,168	1,468	6,056	1,010

Although within given counties, overall dentist availability may appear to be adequate, there are many smaller areas with limited dental provider capacity. There are an estimated thirty communities that lack any dentist, particularly in the western part of the state, although some are too small to sustain a dental practice.

There are also many local areas, particularly low-income urban neighborhoods, with acute shortages of dentists. The U.S. Department of Health and Human Services designates areas as Dental “Health Professional Shortage Areas” (Dental HPSAs) based on severe shortages of dentists (less than one dentist per 5000 residents).⁷⁶ Within Boston, there are federally designated Dental HPSAs in Dorchester, Roxbury, South End, and Allston-Brighton. There are also low-income dental HPSAs in Springfield, Worcester, and seven communities in the Hilltowns region of western Massachusetts.⁷⁷ It is possible that

additional communities in the Commonwealth are eligible to receive Dental HPSA designation based on localized need. This designation carries potential benefits in efforts to recruit dentists to these areas, including the possibility of offering repayment of educational loans in exchange for service in a HPSA.

At the current time, there is no recommended standard ratio of population-to-dentist or dental practice. The numbers presented above can, however, serve as a baseline for analysis of future trends across the Commonwealth.

ALLIED HEALTH PROFESSIONALS

There are 5,596 registered dental hygienists in the Commonwealth. The majority of these are employed in private dental practices, with many employed in more than one practice. The number of dental assistants is difficult to ascertain because they are not registered or licensed.

OTHER ISSUES IN DENTAL CARE DELIVERY

Very few minorities enter dentistry, and private dental practices do not generally have bi-lingual staff or access to translation services. Linguistic and cultural barriers to access may therefore be high. Other issues may be the reluctance of dentists to care for disabled individuals and those with special health care needs and HIV.

ACCESS TO DENTAL CARE FOR MASSHEALTH MEMBERS

THE MASSHEALTH PROGRAM

The Division of Medical Assistance (DMA) manages the MassHealth Program, which provides comprehensive health insurance and premium assistance to low and moderate-income children, families, elders and people with disabilities and the CommonHealth plan, which provides benefits to employed disabled adults and disabled children.

The largest population MassHealth serves is the traditional Medicaid population, as defined by federal regulation. Beginning in fiscal year 1998, DMA expanded and simplified eligibility criteria for the MassHealth Program so that additional uninsured and underinsured families and individuals would be able to receive coverage. In fiscal year 1999, DMA began implementation of Family Assistance as part of the federal Children's Health Insurance Program (CHIP) and of the Premium Assistance program, which funds coverage for families with access to private health insurance.

MassHealth now provides assistance through these programs to families with incomes up to 200% of the federal poverty level - approximately \$32,000 for a family of four - and to long-term unemployed individuals with incomes up to 133% of the federal poverty level.

These MassHealth eligibility expansions, accompanied by aggressive outreach and enrollment initiatives, have resulted in a 41% increase in overall enrollment over the past two years to a current level of approximately 950,000 members.

U. S. DEPARTMENT OF HEALTH AND HUMAN SERVICES REPORT

By federal law, state Medicaid agencies are mandated to provide a comprehensive set of preventive health services to children and adolescents under a program known as Early and Periodic Screening, Diagnosis and Treatment (EPSDT). (The recent MassHealth expansions discussed above incorporate EPSDT for all children except those covered through the Premium Assistance Program). EPSDT requirements include a yearly preventive dental exam for children ages 3 and over, as well as any necessary follow-up dental services.

A 1996 report by the Office of the Inspector General (OIG) of the U.S. Department of Health and Human Services examined states' compliance with this requirement using data reported from the states.⁷⁸ While the Healthy People 2000 objective was that 90% of children have annual dental visits⁷⁹, the OIG found that nationally just 19.7% of children in the Medicaid program received services in 1993. Massachusetts data showed that 34% of 404,857 eligible children received the required preventive dental services*, ranking the Commonwealth the 7th highest state.

OIG identified three major barriers to higher rates of preventive dental care:

- **Shortage of Participating Dentists:** Eighty percent of states identified severe shortages in dentists willing to participate in the Medicaid program. Quantitative national data on dentists' actual participation levels and the reasons why it is so low are poor. However, states reported to OIG that "inadequate reimbursement is the most significant reason why dentists don't accept Medicaid patients. Respondents in some states report that Medicaid fees do not even cover overhead costs, and dentists lose money on each patient served."

Other reasons commonly identified by states for poor provider participation are "complex claims processing, slow payments, arbitrary denials, and prior authorization requirements for routine services". Lastly, many dentists report that they "have difficulty treating Medicaid families" due in part to high no-show rates, and are unwilling to treat young children if they are not pediatric specialists.

- **Issues with Medicaid families:** OIG reported that "Medicaid families give dental services a low priority" and identified competing family priorities and lack of understanding of the importance of good oral health as factors. This can lead to an increased rate of missed appointments, which in turn increases dentists' unwillingness to treat Medicaid children. At the time of the report, some states were increasing their efforts to educate families about the importance of regular preventive dental care.
- **Screening for youngest children:** Screening rates for infants (<one year) are less than 1% nationally. This is in part because many pediatric medical providers and families do not place emphasis on dental screening for infants. There are also very few pediatric dentists, and general dentists are frequently unwilling to see infants and toddlers. Massachusetts does not require that the first dental screening occur until age three.

* DHHS used data based on unadjusted counts of enrolled children for the denominator. If the denominator is adjusted for the amount of time during the year that a child is enrolled, Massachusetts' compliance rises to 55%.

DENTAL CARE UTILIZATION IN THE MASSHEALTH PROGRAM

Along with the OIG report data that only 34% of children enrolled in MassHealth received preventive dental services, other DMA data show only 42% of all MassHealth members - including adults - received any billed dental services in fiscal year 1998, down from 47% in fiscal year 1996. By contrast, national data show that on average, 57% of the general population and 70% of those covered by private dental insurance utilize at least one dental service each year.⁸⁰

The primary reason for this poor utilization is the same one identified nationally by the OIG - a shortage of dentists willing to participate in the Medicaid program. This problem has been recognized in Massachusetts by MassHealth members, health care advocates, the dental community, and DMA for a number of years. The major factors identified in Massachusetts as contributing to this shortage are inadequate reimbursement rates; dentists' inability to control the size of their MassHealth caseload; and administrative issues in the program's operation. These are discussed in more detail below.

Inadequate reimbursement rates

DMA reimbursement rates for dental procedures were last raised in 1994, but only for 30 preventive procedures of the total 300 dental procedure codes. In the subsequent five years through 1999, the dental consumer price index has risen by 25%. Overall dental rates were last raised in 1988, by 4.3%. The dental consumer price index for 1988 through 1999 has risen by 80%.⁸¹ This lag in reimbursement rates has left MassHealth significantly behind the current average fees charged by dentists and the reimbursement levels of other dental insurance programs.

The Commission estimates that current DMA rates average only 50% of the median fees that dentists charge and do not cover even the fixed practice costs for a patient visit. This estimate is based on analyzing aggregate data on dentist UCR fees available through the database of Delta Dental Plan of Massachusetts, which has 95% billing participation of Massachusetts dentists. The median dentist UCR fees for MassHealth-covered procedures were linked to procedure frequency and reimbursement rates for billed services to MassHealth, which were provided by DMA. The resulting analysis showed that DMA reimburses dentists on average at approximately 50% of the statewide median fee.

Dentists report in national surveys of practice costs that 66% of gross practice revenue is used to support expenses⁸² (The remaining 34% represents dentists' gross personal earnings). On average, therefore, dentists need to collect 66% of their fee in order to cover the fixed cost of operating their practices. Since DMA is on average paying only 50% of fees, **the Commission concludes that many dentists do not cover their costs in providing dental care to MassHealth members at current reimbursement rates.**

Inability to limit MassHealth caseloads

MassHealth providers are required by statute to treat MassHealth members equally with other patients. If their practices are open for any new patients, they must also be open for new MassHealth members.

In areas of the state with few MassHealth providers, some participating dentists receive requests for services from MassHealth members in numbers that overwhelm their practices. Some of these dentists then choose to drop out, leaving even fewer providers for the same number of members, and increasing caseloads for those that remain. Since reimbursement is low, this creates an additional financial burden on practices.

Since MassHealth membership is expanding significantly and new members are also seeking dental care, the pressure on these practices is escalating. **In many parts of the Commonwealth, this has caused a rapid downward trend in the participation of dentists in MassHealth.**

“I am one of the few dentists still in the program in this area. My office gets twenty to thirty calls a day from patients looking for a MassHealth dentist. My name is still on the list, but I can't do this anymore. I feel bad for the patients, but I can't run my practice like this. I'm overwhelmed.”

-Leominster dentist

Other identified problems

Other issues frequently cited by dentists include the rate of missed appointments by MassHealth members, lack of billing assistance from DMA, and unique claim forms for MassHealth billing. These were not specifically addressed by the Commission since DMA has begun to address them through its internal dental reform initiatives, described elsewhere in this report.

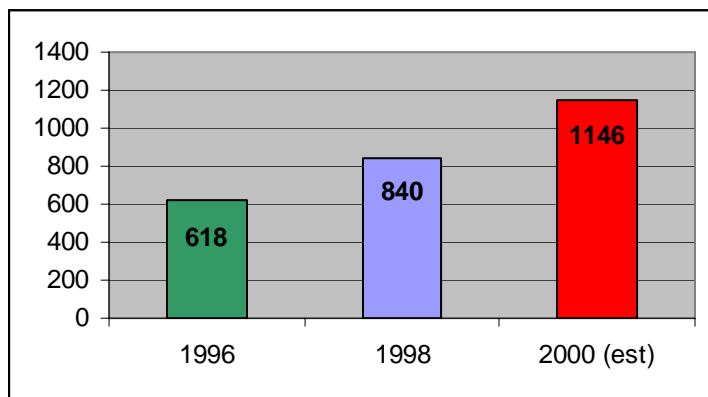
EXTENT OF MASSHEALTH DENTIST SHORTAGE

The Division of Medical Assistance receives 4000 calls per month from MassHealth members unable to find dental care, more than for any other service. The next most requested service, mental health, receives 700 calls per month.

There are an estimated 4692 practicing dentists in the Commonwealth. Yet in 1999, just 971 dentists, 20% of all practicing dentists, submitted billing claims to MassHealth. This represented a decline from 1192 dentists submitting claims in 1996, a 19% decline in just three years. However, even these figures overstate participation, because about 30% of these dentists bill less than \$5000 per year to DMA, which is a small fraction of a typical practice's annual billing. The number of actively participating dentists is closer to 680, or 14% of all practicing dentists.

Dental expenditures in MassHealth – measured by amount spent per member per month - are declining due to lack of dentist participation. Only 1.5% of DMA's budget is now spent on dental care compared to 10.5% when the program began. The dollar expenditures in FY98 were *less* than in FY96. Yet in the past two years, the number of MassHealth members has increased 41% and the program continues to grow. As the accompanying chart shows, the ratio of MassHealth members to available dentists will almost double from fiscal year 1996 through fiscal year 2000, even assuming no further dentist decline in FY 2000.

Ratio of MassHealth Members per Participating Provider



The Commission estimates that the population-based ratio of MassHealth members to participating dentists should be no greater than 500:1. This ratio, which assumes only a minimum capacity of

participating providers to serve MassHealth members, is still less than half the projected FY 2000 statewide ratio of 1146:1.

Significant regional maldistribution of participating dentists exists within this critical overall shortage. Only five of DMA's 40 sub-regions currently have a sufficient number of participating providers to achieve a ratio less than 500:1 (see map in Appendix G). In some areas, capacity is so low that even if all participating providers *only* saw MassHealth members, they could not meet the need. **Most of the sub-regions need 3 to 7 times the number of currently participating dentists to establish minimally adequate MassHealth provider capacity.**

Without rapid and significant changes, the Commission anticipates that these poor participation rates will further deteriorate, creating a deepening crisis in dental care access for MassHealth members.

"I'm just waiting to see what happens with the fee schedule and the program changes. If there isn't a significant increase in fees soon, I'm resigning. There hasn't been an increase in over 10 years. I'll keep my long-term patients. I don't mind treating them at no charge, but unless there are drastic changes soon and a reason for me to stay in the program, I'm gone."
-Lynn dentist

"All too often I am witness to the results of the failure of the current system. Children with the most serious dental problems who have difficulty finding dental care and often have in addition significant medical, emotional, and /or physical disabilities are referred to us...these dental problems often result in significant orofacial infections, but frequently affect their general health and well being as well. In most cases the costs associated with proper care of these complex cases can run into the thousands of dollars if work must be performed under sedation or general anesthesia. -Howard Needleman, D.M.D., Children's Hospital.

EXAMPLES OF COMMUNITY-SPECIFIC ACCESS PROBLEMS

In the eight towns on the lower and outer Cape, there are about 7000 low-income residents, but only 3 of 63 dentists in the area accept MassHealth. On the entire Cape, only 4 MassHealth providers are accepting new patients.

"The situation is so acute on the Outer Cape that many community-based organizations transport their clients to Boston for dental appointments – a five hour road trip for a single dental appointment. Those individuals who require follow-up or multiple appointments to complete the dental work face a daunting transportation nightmare to finish their treatment in Boston."
– Cape Cod health advocate

There are 21 dentists practicing on Martha's Vineyard. None accept MassHealth, leaving more than 2000 year-round low-income residents with no choice but to leave the island to seek care.

There are no pediatric dentists accepting MassHealth in the Worcester area, and only six general dentists other than the two community health centers, Great Brook Valley CHC and Family Health Center, that accept MassHealth.

"Our office provided total comprehensive pediatric dental care for children on MassHealth for twenty years. Unfortunately there are very few dental offices treating MassHealth patients at this time. [The]main reasons for this problem are primarily an enormous complexity of paperwork and very low reimbursement for services provided. The pediatric

population is in desperate need of dental providers. Our office treats a few patients on an emergency basis without any charge. Children on MassHealth plan deserve better and regular dental treatment. Hopefully the 'powers that be' will have enough compassion to see that these children receive what they deserve." – Pediatric dentist in Worcester area

"Over the last two years, one issue that has come up repeatedly that we have been unable to solve has been the large need for access to dental services in populations across the Western part of Massachusetts. In each of our communities, individuals, families and children have all come forward who have had essentially no dental care for years and we have been very frustrated in being unable to access virtually any dental resources for them."

– Western Massachusetts health advocate

DIVISION OF MEDICAL ASSISTANCE INITIATIVES

In 1997, DMA began a dental initiative to address these access problems. The goals of the MassHealth Dental Reform are improved access to care for MassHealth members, fair treatment of providers, quality services, and long-lasting reform.

The Division has formulated a multi-year, multi-component reform plan and has begun its implementation. A key component of the plan is to establish a mechanism for dental providers to set caseload capacity. This activity responds to the request of the dental community to limit practice size.

The benefit package for children remains the same, consistent with EPSDT requirements, while the adult benefit package has been adapted to include most procedures included in the ADA Level II of Care, to maintain chewing function.

DMA recognizes that fees are inadequate. The Administration requested an increase in the fiscal year 2000 budget by an annualized \$30 million in order to be able to raise reimbursement rates, which was not adopted by the Legislature. DMA, in conjunction with the Division of Health Care Finance and Policy, has also committed to review the dental fee schedule on a regular periodic basis.

DMA is also proceeding with administrative improvements, such as advances in electronic billing and more responsive billing assistance. Significant changes have been made to the criteria for prior authorization, including elimination of some procedures from the requirement, and streamlining the process. A long-term objective is to use the same claim forms and billing codes as the dental insurance industry.

In addition, DMA plans to create more user-friendly materials for both providers and members, and to educate members on their responsibilities in using the dental service.

DMA is sponsoring special infrastructure-building projects in six low dental access areas of the Commonwealth to enhance the delivery of dental care and increase utilization through community health centers and alternative community sites. Under this initiative, DMA has committed one million dollars to fund for capital and other expenses associated with creating new dental capacity in Cape Cod, Springfield, Franklin County, Holyoke, Fall River and Martha's Vineyard, and for increasing capacity at an existing site in Worcester.

The Division is also developing special outreach initiatives to educate primary care physicians and MassHealth members on the importance of oral health. Curriculum to inform physicians on integrating oral health issues for children into their primary care practices has also been developed.

OPTIONS FOR REFORM

There is a range of possible options to improve dentist participation in MassHealth. **First and foremost, reimbursement must be raised immediately to at least meet the cost of providing care.** Funding should be appropriated so that DMA may proceed with rate increases.

In conjunction with a rate increase and implementation of DMA's reform plan, the Commission also discussed the following options as additional possible methods to improve provider participation and more equitably distribute the MassHealth member caseload, while improving access statewide. The options listed below have not been researched by the Commission and would require further study before implementation.

- Rotating assignment process: Create a system with MassHealth to ensure that members are equitably assigned to participating dentists in a variety of practice settings.
- MassHealth dental groups: Seek commitments from dentists in high need areas to join MassHealth in groups to alleviate pressure on any one provider.
- Dental school outreach: To emphasize the responsibility of and need for new dentists to participate, dental students should be targeted.
- Increase the number of community health centers that contract for dentists to work part time, limiting individual dentists' risk while providing more care.

The following possible reforms were also discussed. After much discussion and debate, Commission members could not reach consensus about these options:

- Minimum caseloads: To ensure coverage in high need areas, set a floor that establishes a minimum number of MassHealth patients per dentist.
- Defined caseload capacities: Allow dentists to set maximum MassHealth caseload capacities.
- Linkages to other government insurance programs: For dentists to participate as providers in state or federal dental insurance programs, they would be required to also accept MassHealth.

MASSHEALTH SUMMARY

Today MassHealth provides health care coverage, including oral health care, to about one out of six residents of the Commonwealth. DMA has an excellent opportunity to improve access to oral health services for Massachusetts citizens by making its program more effective, and has already taken positive steps in this direction.

In order to succeed, MassHealth must interest more dentists in serving its members, and to do this, it must pay them equitably. The requested fee increase represents an essential feature of its reform.

Since MassHealth relies on legislative appropriations for its budget, the Legislature has a key role to play. To implement an increase in dental reimbursement fees, DMA must receive legislative support for its budget requests.

SAFETY NET PROVIDERS

Massachusetts has a wide array of agencies and programs that offer dental services to those unable to find care through the traditional dental office. These 'safety net' dental providers are specifically willing to

take clients who have barriers to care, such as low-income clients who are unable to pay the usual fee, MassHealth members who cannot find a participating dentist, individuals with special health care needs, or those who require interpreter services.

While these safety-net providers are invaluable resources in filling gaps in care in many areas of the Commonwealth, they do not and cannot replace an effective private dental delivery system. They are not uniformly distributed throughout the state and they serve only a small portion of the Commonwealth's needy residents. Additionally, most safety-net providers also serve many MassHealth members and are struggling under the same inadequate reimbursement rates as are dentists in private practice. One community health center closed its dental practice in the past year. Other safety net providers report that they are uncertain of their future ability to continue offering dental services to underserved populations if the reimbursement structure does not improve.

COMMUNITY HEALTH CENTERS

In Massachusetts, 46 community health centers (CHCs) offer services in 100 practice locations. They provide comprehensive primary care and support services to residents of the community and include consumer input into their governance. Twenty-three CHCs have dental facilities (Appendix H). Advantages of the community health center model for dental care typically include: professional or interpreter staff who speak their communities' languages; outreach to underserved populations; and a culturally competent approach to service delivery. Since dental services are usually at the same site as medical services, the CHC model also allows oral health providers to easily interact with other health professionals, thereby integrating oral health into overall health services. All CHCs are MassHealth providers and offer a sliding fee scale for low-income clients. Many also participate in other programs that increase access for underserved populations, such as the HIV Dental Ombudsperson Program and the uncompensated care pool.

A 1999 phone survey of CHCs with dental programs identified three major problems: inadequate space, lack of manpower, and lack of financial resources. These constraints make it difficult for CHCs to fully meet the dental needs of their communities, resulting in long waiting times for appointments and limitations in their capacity to take new patients.

The Division of Medical Assistance recently funded several CHCs in low-access areas to develop programs to serve more MassHealth patients in their communities. Additional funding from other sources, such as MDPH, would also assist CHCs in improving their capacity.

HOSPITAL BASED CLINICS

Eight hospitals in the Commonwealth offer dental services at reduced fees (Appendix I). These hospitals, including three operated by the Massachusetts Department of Public Health, are important regional resources as a source of care for individuals unable to find care within the private sector and for those with complex medical conditions.

DENTAL EDUCATION INSTITUTIONS

Massachusetts has three dental schools, seven dental hygiene schools, eight accredited dental assisting programs, and eight additional dental assisting training programs in vocational high schools. These schools offer comprehensive dental care to the public at reduced fees as a means for their students to gain clinical experience and to become competent in treating diverse populations under appropriate supervision. All schools participate in the MassHealth Dental Program and the Ryan White Care Act Dental Reimbursement Program. The latter program both facilitates access to care for persons with HIV

and plays a role in assuring that future dentists receive training in providing appropriate care for persons with HIV.

The three dental schools – Boston University, Harvard and Tufts – are located in Boston. However, because they offer reduced fees, they serve as regional resources for individuals unable to afford care in the private sector. The three schools have a combined total of 451 dental chairs and provide approximately 250,000 visits per year. The majority of their patients are adults, ages 22 – 64.

Most dental hygiene schools offer preventive services but are unable to offer restorative services because they are beyond the scope of practice for hygienists. They may refer patients to dental schools, community health centers, or dentists in the community. A new model has been made possible through the collaboration between Tufts Dental School and Middlesex Community College Dental Hygiene and Dental Assisting Programs: dental students rotate through the dental hygiene clinics and provide on-site restorative services.

DENTISTRY FOR ALL

The Massachusetts Dental Society administers Dentistry for All, a program in which dentists voluntarily participate in offering reduced-fee services to qualified low-income uninsured patients. A 1998 survey of dentists participating in the program found that the 245 responding providers saw 11,000 patients in 1997 through the program, for a total value of donated care of approximately one million dollars.

HIV OMBUDSPERSON PROGRAM

The HIV Dental Ombudsperson Program (HIV DOP) is a comprehensive oral health access program for persons living with HIV. The HIV DOP was established in 1991 through funding from the federal Ryan White CARE Act, and is administered by the Boston Public Health Commission. It funds and coordinates dental services to persons with HIV in seven Massachusetts counties (Bristol, Essex, Middlesex, Norfolk, Plymouth, Suffolk, and Worcester) as well three New Hampshire counties.

Prior to this program, the ability of persons with HIV to access dental care was limited by financial constraints, concerns about disclosure of their HIV status and discrimination. While these issues limited access to dental care, this population requires significantly more dental care than the general population due to oral manifestations of HIV disease.

The major components of HIV DOP are referral, reimbursement to dental providers for eligible patients who are uninsured or underinsured, education and advocacy in regard to discrimination. About 3400 clients are enrolled in the program, ranging in age from 3 to 60. For all clients enrolled, 56% report no source for payment for oral health care, about 35% have MassHealth, and 9% have private insurance.

HIV DOP has 124 participating facilities, a network established with much effort over 9 years. Fees are higher than MassHealth but still substantially less than dentists' UCR fees. Given this, and concerns many dentists have about providing care to this population, many dentists were initially reluctant to participate in HIV DOP. A key factor in the success of the program has been the administrative technical assistance and billing ease which HIV DOP program staff have developed. Staff is available to facilitate specialty consults, and to answer infection-control and other HIV-related questions.

Discrimination against persons with HIV still remains at an unacceptable level and is a major barrier to care. Access can be further improved by educating dental healthcare workers and through legislation that protects the rights of persons with HIV.

Services provided through the Ryan White Care Act (RWCA) have been a critical resource in assuring adequate dental care for HIV(+) individuals. After Medicaid, the TWCA represents the single largest federal investment in the care and treatment of persons with HIV.

Because federal funding covers the Boston Eligible Metropolitan Area only, persons with HIV residing in Cape Cod, the Islands, and the western half of the state have continued to face substantial barriers to care. However, MDPH recently awarded HIV DOP funding to expand the program statewide.

“A patient called the HIV DOP from a payphone in Stoneham in tears. He had called 5-6 dentists for dentures and told each he was HIV positive: none had appointments available. He lost 25 pounds waiting to find a dentist.” – Helene Bednarsh, Director, HIV DOP

“A woman called three dentists to ask if they took HIV (+) patients, and all said no. She was in a lot of pain and when she finally saw a dentist and told him she had seroconverted in the last year, he looked at her, didn’t take any x-rays, and told her she didn’t have a cavity that she just had food stuck between her teeth and should floss more often. He told her he would see her again in several weeks. She came in for her appointment and was told it was the day before and she had missed it, although her appointment card had that day’s date and time. She was in so much pain, she went home and pried her cap off with a fork.”

– Helene Bednarsh, Director, HIV DOP

HEALTH CARE FOR THE HOMELESS PROGRAMS

Boston was one of the original cities to receive funding from the Robert Wood Johnson Foundation to provide health care for homeless individuals during the mid -1980’s. Those original funded programs became the models for the McKinney funding that is available today to many cities across the U.S. Oral health care is considered an important part of the health care that is supported by these funds.

In Massachusetts, Boston, Worcester, and Springfield have health care for the homeless programs that include oral health care. Each city has a program unique to individual circumstances.

- The Boston program, by far the largest, maintains a two-chair clinic at the Barbara McInnis House with screening outreach visits to multiple shelters in the Boston area. Comprehensive dental care is provided free of charge. Homeless individuals have rapid access to dental care through shelter sites. During 1998 the Boston program provided care to approximately 1100 individuals.
- The Springfield program is managed by the city’s Board of Health and has clinical sites in a shelter in Springfield and at the Western Massachusetts hospital in Westfield.
- The Worcester program works closely with the Worcester CHCs, Great Brook Valley Health Center and Family Health and Social Services.
- ♦ There are also volunteer organizations that provide care for homeless individuals. Bridge Over Troubled Water provides care to runaway adolescents in Boston. The Alliance for the Homeless provides care to homeless veterans in Boston. Lazarus House is available in Lawrence.

SPECIAL NEEDS DENTAL PROGRAM

The Tufts Special Needs Dental Program serves developmentally disabled (DD) children and adults. The program is a component of the Tufts Dental Facilities that provide oral health care services to individuals with developmental disabilities. The Massachusetts Department of Public Health contracts for those

services with Tufts University. The contract is the result of a consent decree resulting from a suit against the Department of Mental Retardation brought by families of DD clients in 1972.

The program offers case management services including oral screenings (by a dental hygienist), referral assistance, coordination of service needs (such as transportation) and ongoing oral health education and training programs to patients, families and staff working with DD clients. Patients are referred for care to the 7 Tufts Dental facilities across the Commonwealth or to other provider sites. The program is not able, however, to offer services to all parts of the state at current funding levels.

Due to cognitive and behavioral issues, DD individuals often require intravenous sedation or general anesthesia in the operating room for treatment or other specialized management techniques. In FY99 the Special Needs Dental Program served 4700 individuals, 75% of who were MassHealth recipients. The combination of lack of dentist participation in MassHealth and the particular needs of these clients makes community based dental referrals difficult: 64% of clients who needed dental care were successfully referred to a dentist for treatment in FY99.

PROGRAMS FOR OTHER STATE AGENCY CLIENTS

The Massachusetts Department of Public Health provides dental care for clients of the Division of Youth Services through a contract agreement with a private dental vendor. Care is provided via mobile equipment at a number of DYS sites. During FY 1998, 1,189 clients received dental care during 1,637 visits. Emergency treatment was also provided for 214 youths.

The Department of Corrections and the Department of Mental Health provide or arrange for dental care for their populations.

OTHER SAFETY NET MODELS

School Based Clinics

Another practice setting is the school-based dental clinic. Advantages to this setting include convenience, the ability to collect data on school aged children, and the opportunity for dental professionals to interact with students, teachers and parents on a regular basis. The major benefit of this type of program is that students are reached at an early age when preventive measures are most effective.

There is only one comprehensive school-based dental program in the Commonwealth. The City of Beverly operates a comprehensive dental service at its middle school and offers dental care at this site for all students in grades 1 – 8 whose parents cannot afford the cost of private dental care. Of the 3,959 students enrolled in both public and parochial schools, 463 receive comprehensive dental care. This program is funded in full by the City and private donations and employs part-time dental staff.

Mobile or Portable Dentistry

Several programs around the country use mobile and portable dental equipment to increase access to dental care. Many dental schools, governmental agencies and private clinicians use mobile or portable dental equipment to reach their underserved communities. These programs usually focus on a certain segment of the population and equip clinicians with the appropriate equipment to meet the needs of that specific group.

Converted vans and buses are suitable for children and ambulatory adults who are able to enter these units without assistance. The use of portable equipment is more appropriate to treat those with physical

disabilities and those confined to their homes or who are institutionalized. Quality portable equipment that provides the same reliability as that available in the traditional office setting is available

Portable equipment is used by providers to provide care to elders in nursing homes, assisted living facilities and to those who are homebound. Most of the nursing homes in the Commonwealth have contracts with dental providers to provide care to their residents, although the amount of care provided is unknown. In a 1984 Boston study, 80% of nursing homes reported a need for dental treatment for their residents.⁸³ There is also a great need to improve access for homebound frail elders and handicapped residents, as there are only a few clinicians providing care in the home setting.

Project Stretch

This not-for-profit organization uses volunteer dental professionals to provide dental care and oral health education to children without the financial resources to secure treatment in the private sector. In Massachusetts, Project Stretch provides volunteer dental staff for the Health Van for Kids in Lawrence and offers preventive dental care to the children of migrant farmworkers in the Fall River area who are enrolled in the Massachusetts Educational Collaborative's summer school program. Although many of the Fall River area children have MassHealth, few of them are able to find local participating MassHealth providers. Project Stretch provides screenings, cleanings, fluoride treatments, x-rays, and sealants to hundreds of children each year in this setting. Many of those in critical need of care are then referred to the Tufts Facility in Taunton for comprehensive treatment paid for by Project Stretch.

Project Stretch is supported by private donations and fundraising.

Health Van for Kids

Since November 1995, a mobile Health Van for Kids has provided medical and dental screenings to schoolchildren in Lawrence (This van was formerly operated by Blue Cross/Blue Shield through its Caring for Children Foundation, and is now operated by the Greater Lawrence Family Health Center.) From November 1995 through January 1997, 5182 children received dental screenings, with 48% identified as needing follow-up care. The van recently began providing restorative care in collaboration with Project Stretch and also uses Dentistry for All to locate providers for follow-up services.

CONCLUSIONS

Overall oral health has improved nationally in the past four decades, in large part due the role of fluoride in reducing tooth decay. While Massachusetts residents undoubtedly have benefited from the same trends, the Commission was unable to evaluate the full extent of need among our residents, because of the lack of an adequate oral health surveillance system.

Continuing public health prevention efforts to implement community water fluoridation and school-based fluoride mouthrinse programs and the widespread application of dental sealants in age-appropriate schoolchildren are needed to further reduce the prevalence of dental caries.

Regular preventive dental care is necessary even for those with good oral health status, and critically important for those with untreated oral diseases or other conditions. Low-income and other vulnerable population groups continue to experience higher levels of dental disease than the general population. Community studies in Massachusetts confirm the high level of disease found in national studies for these

populations. Yet these populations have even less access to care in today than do those with lesser oral health needs.

Adequate public funding for MassHealth and CMSP dental programs and for public health prevention programs is a necessary investment for good oral health.

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