ELEMENTS OF EFFECTIVE ACTION TO IMPROVE ORAL HEALTH & ACCESS TO DENTAL CARE FOR CONNECTICUT'S CHILDREN & FAMILIES

Commissioned by: Connecticut Health Foundation and Children's Fund of Connecticut

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The following Appendices may be obtained by clicking on the Connecticut Health Foundation's website, www.cthealth.org, or by contacting the Foundation at 860-409-7773 for printed copies.

The Connecticut Health Foundation and the Children's Fund want to thank the community experts who participated in the development of this document.

Note on data and data sources: Throughout this report, an effort is made to describe findings and detail various issues using available data. Information on the oral health and dental care of Connecticut residents was solicited from state agencies as well as a variety of communities of interest. We appreciate the provision of these data and have made every effort to report findings accurately and within appropriate contexts. We also recognize that much information provided to us is approximate in nature or represents the best available information despite recognized shortcoming in data collection, reporting, or analysis by source agencies. Where source information is considered to be dubious, we have made every effort to characterize the information appropriately and have consistently attempted to provide only conservative interpretations of findings.

EXECUTIVE SUMMARY

Conclusions and Recommended Strategies

Paucity Amidst Plenty

Tooth decay continues to be the single most common chronic disease among U.S. children. This problem persists despite the fact that it is overwhelmingly preventable through early and consistent family interventions. Decay is five times more common than asthma, and 80% of dental disease is found in only one-quarter of the children. Low-income children are much *more* likely to suffer this disease but are also much *less* likely to obtain dental care. Three times more U.S. children are in need of dental services than medical services, yet children with public insurance are only one-quarter as likely to see a dentist as they are to see a physician. More than twice as many children lack dental insurance as lack medical insurance. Across the country an estimated 4 to 5 million children have dental problems severe enough to wake up with a toothache—or fail to sleep because of one.

Tooth decay remains a national public health problem. But is it a problem in Connecticut?

Connecticut's citizens enjoy some of the strongest dental care resources in the United States. A small state with just over 3.4 million residents and the highest per capita income of any state, Connecticut boasts a highly regarded dental school, three dental hygiene training programs, dentist-to-population and dental hygienist-to-population ratios that are respectively 36% and 57% higher than the U.S. average, and a network of 43 safety-net dental facilities in 18 of its neediest towns.

Amidst all of these favorable conditions, the nearly one-in-three children and adolescents in Connecticut who are insured by HUSKY programs face increasing trouble obtaining dental care. Access to dental care is a chronic and growing problem for the 185,000 children and adolescents who are covered by the State's HUSKY A (Medicaid) and HUSKY B (SCHIP) programs. For many, poor oral health is consequential to their lives and the lives of their families. Pain and infection arising from poor oral health result in missed school and work, dysfunction, problems eating and sleeping, and adverse effects on normal growth. Increasing evidence supports observations that poor oral health can also instigate and exacerbate systemic conditions ranging from premature delivery to cardiac disease. Ironically, the overwhelming majority of these acute and chronic problems arise from dental and oral diseases that are highly preventable.

The Connecticut Department of Public Health's Oral Health Program, with support from federal sources, has initiated the development of multiple community integrated service system projects in recent years. State government has supported the implementation of pilot programs to expand access to dental services in underserved areas. However, Department of Social Services data indicate that despite these active state public health efforts, access to dental preventive and treatment services for Connecticut's low-income children has continued to decline over the past year. With neither adequate prevention nor available treatment, vulnerable populations across Connecticut face the daily prospect of diminished health and impaired function.

Access to dental care is a chronic and growing problem for the 185,000 children and adolescents who are covered by the State's HUSKY A (Medicaid) and HUSKY B (SCHIP) programs.

Despite active state public health efforts, access to dental services for Connecticut's low-income children has continued to decline over the past year.

Promise and Performance of HUSKY Dental Programs: Quantifying the Problem

Both HUSKY A and HUSKY B promise comprehensive dental benefits for Connecticut's low- and modest-income children. Low-income and disabled adults covered by Medicaid are also offered a reasonably comprehensive set of dental benefits. Yet coverage does not ensure access to care, and access, when it does exist, does not equate to availability of comprehensive services. Few of the State's covered children, and an even smaller percentage of covered adults, obtain the care they need for the disease they experience. For example, the Connecticut Department of Public Health reported that 40% of the State's second graders in its 1998 survey had visible, untreated tooth decay. But the Connecticut Department of Social Services reported in June 2001 that only 12% of children enrolled in HUSKY A received a visit for treatment of dental disease in FY 1999 and that 71% of HUSKY A enrolled children received no dental visit.

Under the best of circumstances—when children are enrolled in HUSKY A for a full year, giving them ample time to obtain care—levels of care are profoundly inadequate. Among these continuously enrolled children, 66% received no preventive dental service and only 20% received a treatment service. Few of those who obtained treatment experienced enough dental visits to meet their needs. Epidemiology data on dental caries (tooth decay) in low-income children suggest that multiple visits are needed to fully repair damaged teeth. However, only 40% of the HUSKY A children who received treatment services—or 8% of continuously enrolled HUSKY A children overall—received more than one treatment visit.

HUSKY promises comprehensive dental benefits, yet 71% of children enrolled in HUSKY A received no dental visit.

Only 12% of children enrolled in HUSKY A received a visit for treatment of dental disease.

The availability of dental care for these vulnerable children and adults is not only inadequate, it is declining. Between FY 1998 and FY 1999, HUSKY A visits for continuously enrolled children dropped from 41% to 34% for preventive care, from 23% to 20% for treatment services, and from 49% to 45% for any type of dental service.

Some attribute low dental service use among low-income children to poor parenting, an assertion disputed by many who provide services to low-income families. Yet even when parental attitudes and behaviors are removed from the constellation of factors that impact oral health, the problem remains. Even children in the State's protective custody, both those in foster care and those institutionalized, generally fail to obtain needed dental services.

Few dentists are registered as Medicaid providers in Connecticut and even fewer provide substantial levels of care. In 1999 (the latest year officially reported by the Department of Public Health), 27.6% or 740 of Connecticut's 2,680 dentists were registered Medicaid providers, but only 8.4% (225 dentists) provided any service under the program and only 3.7% (100 dentists) provided significant levels of care to HUSKY beneficiaries.[1] Anecdotal reports from dental

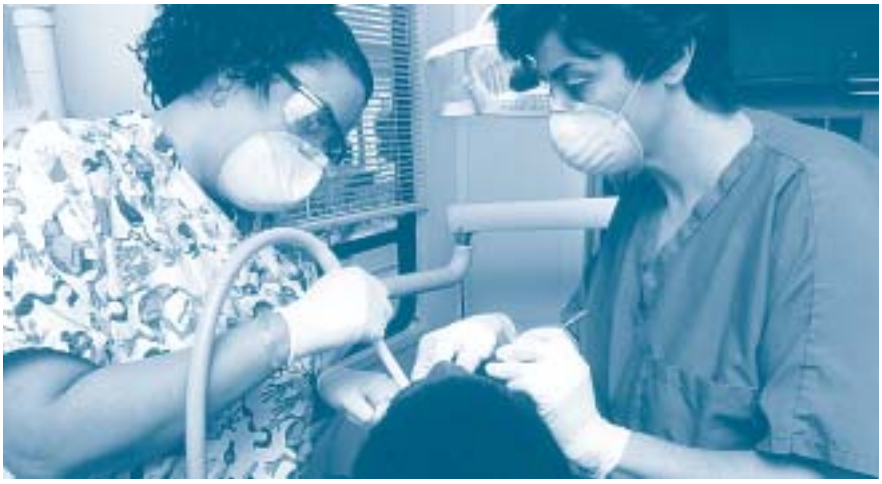
and pediatric practitioners and child advocates suggest that the decline in participating dentists is accelerating and that many of the remaining participating dentists are curtailing their Medicaid participation. Dentist participation in Medicaid across the country is related to payment levels. Connecticut's current fee schedules, established in 1993 for children and in 1989 for adults, pay at rates that are less than what 10% of the State's dentists would regard as reasonably equivalent to their customary charges. Connecticut Medicaid rates are at less than the 10th percentile of dentists' fees. Current payments by Connecticut's three dental intermediaries (dental managed care companies) approximate $4 to $7 per member per month (PMPM), only a fraction of the $17 to $20 PMPM rates suggested by actuarial studies conducted by the Reforming States Group and American Academy of Pediatrics (AAP). Given higher production costs in Connecticut, it is expected that a minimum of $17 to $20 PMPM may be necessary to provide sufficient resources to attract enough practicing dentists to meet the demand for dental and oral health services by Connecticut's children. In fact, the AAP actuarial analysis estimated that approximately $20.50 would be needed for rural areas of Connecticut and $25.50 for urban areas.

Only 100 of Connecticut's 2680 dentists provided significant levels of care to HUSKY beneficiaries.

Connecticut's fee schedules pay at rates that are less than what 10% of dentists would regard as reasonably equivalent to their customary charges.

Reaching Those In Need

Lack of access to dental care is a statewide problem, but population and dental workforce distributions suggest that different approaches will be needed to address access in major urban areas with large concentrations of low-income children versus the remainder of the state.



Fifty-four percent of all HUSKY A children reside in Connecticut's five largest urban areas: Hartford/East Hartford, Bridgeport, New Haven (including East Haven and West Haven), Waterbury, and New Britain. However, only about 480 Connecticut dentists practice in these towns; and of these, an estimated 25% to 30% (120 to 145) are specialists other than pediatric dentists and thus do not provide primary dental care services. Therefore, at best, only 335 to 360 general dentists in these five urban areas are available to deliver comprehensive dental care services to HUSKY beneficiaries. In fact, available data indicate that only 120 dentists in these five urban areas currently provide any service to Medicaid eligible children.[2] General and pediatric dentists who do participate in the Medicaid program in these urban areas deliver services, on average, to more Medicaid beneficiaries than do their colleagues in other parts of the state.[3] Also, as might be expected, the majority (75%) of the State's 43 safety-net dental facilities are located in these cities. Yet, it is conservatively estimated that the equivalent of an additional 300 to 400 general dentists participating actively in Medicaid would be required to provide "dental homes" to all unserved, continuously eligible Medicaid children in these five areas.[4] Given the relatively small number of practicing dentists in these five urban areas, it is highly unlikely that a sufficient number of private dentists could be recruited to serve the large number of Medicaid children in these areas, particularly given the severity of the dental condition of these children.[5] Accordingly, in these areas, improving access will undoubtedly require strategies that rely heavily on expanding local safety-net capacity.

In the remaining 161 cities and towns where 82% of dentists practice and where 46% of HUSKY children reside in smaller concentrations, strategies to provide access for these children will depend upon initiatives that favor recruiting and retaining private sector dentists. Because active Medicaid dentists outside of the five major urban areas treat only half as many Medicaid children, on average, even greater numbers of participating dentists will be required to serve HUSKY A children throughout these areas across the state. Estimates indicate that the equivalent of an additional 600 to 700 general dentists actively participating in Medicaid would be necessary to provide dental homes for continuously enrolled children in these areas. Given current reimbursement rates, it is highly unlikely that a sufficient number of private practice dentists could be recruited

to provide access to the oral and dental care services needed by these children. Accordingly, access strategies in these areas of the state will undoubtedly require heavy reliance on two strategies:

1. reimbursement rate increases that engage large percentages of local dentists and
2. funding at least at levels consistent with the $17 to $20 PMPM actuarial estimates.

54% of HUSKY A children reside in Connecticut's five largest urban areas where only 18% of dentists practice.

In these large urban areas, efforts to increase dental access will require expanding the safety-net, while increasing access across the rest of the state will require engaging more private sector dentists.

Goals of Dental Systems Reform in Connecticut

The ideal long-term "fix" to inadequate dental care access is to reduce disease levels so that treatment needs are reduced. This ideal holds the greatest potential for producing positive health outcomes and lowering costs. However, equally important is the need to provide access to dental treatment to eliminate pain and infection and repair damaged teeth and supporting structures for the tens of thousands who continue to experience dental disease (i.e., those who have not benefited from prevention).

Thus, the goals of reform in Connecticut are to:

1. improve the oral health[6] of Connecticut's vulnerable populations by reducing disease levels and
2. ensure that appropriate dental care[7] is available to all.

Since tooth decay – the single most prevalent disease of childhood – is established before age two and is linked to transmission of cavity-causing bacteria from mothers to infants, meaningful preventive efforts must begin early and focus on children in the context of their families. Dental caries presents a particularly powerful example of how parents' knowledge, attitudes, and behaviors interact to affect not only their own oral health and use of dental services, but also that of their children. In particular, mothers' oral health status, oral hygiene practices, diets and eating behaviors, attitudes toward dental care, and use of preventive modalities such as fluoride have substantial impact on children's oral health and attitudes about dental services. Because many of these factors are heavily influenced by culture, efforts to improve oral health and dental care must be culturally sensitive and appropriate to families' beliefs and circumstances. Demographic trends suggest that the problem in Connecticut will likely worsen as its minority population increases disproportionately. Minority children, particularly Latinos, are important since they tend to demonstrate higher dental disease rates than their peers. African-American children are similarly important because they tend to obtain fewer visits than their Caucasian peers despite higher disease rates.

The goals of dental system reform in Connecticut are to

• improve oral health

• ensure access to dental care.

Principles of Dental System Reform

To enhance the likelihood of success, strategies to improve oral health and ensure dental care must build on best practices demonstrated in other states, yet be carefully tailored to the unique opportunities and constraints in Connecticut. For example, rural and frontier states often look to safety-net providers to staff remote facilities where care is unavailable. On the other hand, densely populated states like Connecticut can link such safety-net facilities to private-sector providers to achieve integrated systems of care.

Dental system reform should be based on approaches that:

1. Employ incentives rather than approaches that are coercive or punitive;
2. Respect the values, opportunities, and constraints of those being served and those providing service;
3. Provide care that is child- and family-centered and culturally appropriate;
4. Build upon and maximize the contributions of both private- and public-sector dental delivery systems;
5. Maximize the role of the entire dental team – including dental assistants, dental hygienists and dentists – as well as health advisors and educators who promote oral health;
6. Encourage integration of oral health into primary health care, community service, and social service systems;
7. Employ community-level assessments and program planning, and encourage integration of local public and private dental care delivery systems;
8. Ensure long-term sustainability; and
9. Involve representatives of targeted populations in designing and implementing programs.

Elements of Dental System Reform

Meaningful and sustainable dental system reform will require the personal involvement of state and local government and private sector leaders.

Resources of various types – political capital, dollars, personnel, information systems, program managers, health professionals, facilities etc. – are all required to effect meaningful reform. All structural reforms and improvements will require sufficient:

- funding of HUSKY, public health, attendant education, and social service programs;
- administrative mechanisms to ensure responsible purchasing, evaluate program performance, and effect overall quality improvement;
- workforce that is clinically and culturally competent, well distributed, diverse, and well integrated across primary care and specialty medical and dental services;
- infrastructure and physical capacity to allow for efficient care and economic sustainability; and
- authority and accountability so that policies and programs are conducted responsibly and effectively.

Allocation of essential resources to effect meaningful and sustainable dental system reform will require the personal involvement of state and local government and private sector leaders. These critical individuals include the Governor and his budget officials, Connecticut's

Commissioners of Public Health and Social Services, state legislators who authorize health programs and appropriate dollars, and leaders in the private sector. Only through high-level concern and commitment can reforms be accomplished that are sufficient in scope and sustainability to meet the acute and increasing oral health needs of Connecticut's children and their families.

Strategies

Dental reform is complex. It engages multiple systems, involves multiple agents, and impacts many communities of interest. Yet the key strategies to accomplish reform are few and straightforward.

First, reform efforts must maximize the utilization of existing public and private delivery resources.

This first strategy increases reimbursement rates for all providers to "market-based rates" that equate to the 75th percentile.[8] It thereby stems the loss of HUSKY providers and increases the number of children served by both safety-net and private providers who are already committed to serving vulnerable populations. Experience in other states suggests that raising reimbursement rates to the 75th percentile:

(a) retains existing providers,
(b) stimulates more comprehensive care for children already receiving care, and
(c) increases the number of patients seen by providers who are already "in the system."

At these rates, safety-net providers of sufficient capacity can become

financially self-sufficient even with revenues generated solely from HUSKY patients. Safety-net programs can realize sufficient revenues to pay dental professionals at competitive rates and thereby eliminate chronic professional staff retention problems. They can also be expected to have the potential to expand the scope of their programs (although in some instances, initial "start-up" capital funds from other sources – e.g., public bond funds, philanthropic organizations – may be required).

This strategy also provides for a training component that enables existing providers to better manage vulnerable patients by expanding their expertise. It calls for training that enhances general dentists' and hygienists' competencies to manage the oral health needs of very young children (under the age of four) and provides information and training that enhances cultural competency.

The first strategy

• maximizes existing public and private delivery resources by increasing fees for all providers to "market-based rates"

• entails a training component that empowers providers to better manage younger and vulnerable patients

Second, reform efforts must expand the numbers of both public and private delivery resources.

This second strategy acknowledges that the number of care providers is wholly inadequate to meet current demand for dental services by underserved populations. A range of action steps are proposed that work toward recruiting to the Medicaid program (a) at least the equivalent of an additional 400 providers in the short term and (b) a much more substantial number of providers to assure that access for Medicaid beneficiaries is equivalent to access available to non-Medicaid peers as

required by federal law. This strategy also seeks to re-engage and renew the commitment of the 640 dentists who are registered Medicaid providers but who have provided either little or no dental services to beneficiaries recently.

This strategy seeks expansion of public and private delivery systems. It calls for new and expanded safety-net facilities including community health centers, hospital-based programs, and comprehensive school-based programs wherever care is otherwise unavailable and especially in the urban areas of Bridgeport, Hartford, New Britain, New Haven, and Waterbury. It promotes integrated service delivery systems and addresses workforce requirements. It encourages provider involvement through loan repayments, scholarship, tax incentives, and social rewards. This strategy further calls for examination of and, if necessary, adjustments in dental workforce-related policies including expansion of class sizes at UCONN's dental school and regulatory changes that facilitate licensure of American-trained foreign dental school graduates and out-of-state licensed providers. This strategy also promotes instituting Expanded Function Dental Auxiliaries (EFDAs) in Connecticut. It suggests that efforts be made to pursue formal designation for all areas that qualify as federal Dental Health Profession Shortage Areas so that maximum use can be made of federal support programs. Finally, this strategy suggests that HUSKY programs adopt administrative policies and procedures consistent with those used by major commercial dental carriers.

The second strategy expands the number of both public and private delivery resources through a series of activities including safety-net expansions, integrated service systems, increased workforce, and provider incentives.

Third, bridges must be built to connect families to dental services.

Once dental services are reasonably available to publicly insured children and adults in Connecticut communities, families need to be linked to the dental services they seek and need. This proactive engagement of families in oral health awareness and use of dental services requires integration across primary care medical services, educational programs, and social services systems.

Essential actions that can effectively link children to appropriate levels of dental care include screening and referral by primary care medical providers and educational and social service programs that address high-risk children. Children lacking dental care need to be identified through tracking systems. For families that have difficulty accessing services, care-coordination or case-management systems need to provide assistance. Theses approaches can help establish a "dental home," facilitate making and keeping dental appointments, and ensure availability of translation and transportation support. Care coordination efforts can also link patients in safety-net facilities to more complex services available only in the private sector.

The third strategy links families to available dental services in communities through screening, referral, and care-coordination services provided by primary care medical providers and programs that target high-risk children.

Fourth, disease burden must be reduced through prevention.

This fourth strategy recognizes that the greatest health outcome at the lowest cost can be accomplished through prevention. Because dental caries occurs so frequently and because treatment is so much more expensive than prevention, widespread prevention using proven interventions is an essential long-term strategy that yields both health and economic benefits.

Successful caries prevention among low-income families is a daunting task because it involves changing health beliefs and health behaviors that impact diet and eating patterns, personal hygiene, and use of professional preventive services. Favoring this approach, however, is a body of science that confirms tooth decay as an infectious disease with a causative bacterial agent that is transferred primarily from mothers to their infants and toddlers and evidence of substantial improvements in the oral health of more affluent children.

Approaches to reducing disease burden rely on integrating oral health promotion into as many programs and services that reach high-risk low-income children and their families as possible. Beginning with prenatal care and continuing through early childhood, every opportunity is advanced to engage mothers and their youngsters in positive oral health behaviors. Public health approaches to prevention include water fluoridation and school-based or school-linked dental sealant programs, as well as community-based integrated systems of health promotion. Individual approaches include application of topical fluorides (including fluoride varnishes) early and often by all qualified providers and meaningful integration of oral health in well-child care supervision as advanced by the Bright Futures consortium.

The fourth strategy recognizes that the greatest health outcome at the lowest cost can be accomplished through prevention and calls for multiple approaches to oral health promotion at the community and individual levels.

Fifth, data-driven systems that implement accountability and quality improvement systems must be put into place.

Maximizing the efficient use of scarce public resources to reform dental programs requires systems that enhance accountability and use ongoing surveillance and periodic reassessments to improve program performance.

Responsible program development, implementation, and improvement requires that the Departments of Public Health and Social Services work collaboratively. Since the Department of Social Services acts as a "purchaser" of care, it must cooperate closely with the Department of Public Health in obtaining services through safety-net providers and in measuring the impact of its purchasing on oral health. Responsible purchasing through managed care requires that contracts be well developed and rigorously implemented to reward positive performance and sanction poor performance.

The fifth strategy calls for accountability, efficiency, and continuous quality improvement in HUSKY and public health programs so that scarce public resources are used effectively and efficiently.

VISION:

Oral Health & Dental Care from Conception to Adulthood

If each of the proposed strategies were implemented fully, oral health and dental care for Connecticut's disadvantaged populations, particularly low-income children, would be markedly different than it is today. There would be:

- significantly less disease and therefore less need for dental repair;

- continuous and ongoing oral health promotion that would be advanced by physicians and nurses, day-care providers, and educators;
- ready access to dental services that are competent, culturally appropriate, and welcoming; and
- a "dental home" for every child.

All who interact with children and their families from birth to adulthood to promote wellness and social welfare would incorporate oral health into their programs.

Local communities would have in place well integrated local dental care systems that maximize the role of all oral health professionals while meshing seamlessly with other institutions that support the health and welfare of targeted children and their families.

There would be little distinction between safety-net and private providers because they would be effectively linked to assure that all necessary care is available.

Dental professionals would be comfortable with young children, patients with special needs, immigrant families, and others who are different from the "customary" dental patient and would be both clinically and culturally competent to deliver quality care. Many, particularly pediatric dentists, would employ EFDAs who would increase the dentists' overall productivity.

Care coordination would facilitate dental access for even the most vulnerable families. When needed, social services would help with finding a dentist, appointment making, transportation, and translation would be readily available.

Data systems would drive accountable clinical care at the individual level and would promote effective management at the program level.

Care intensity would be individualized to level of risk and clinical disease management would be promoted through evidence-based, scientifically rational, individually-tailored interventions instead of "one-size-fits-all" approaches common to dental practice today.

Culturally and technically competent public and private dental providers would be willing to treat those with the greatest needs in facilities and programs that are self-supporting and sustainable without cost-shifting from insured and self-funded patients.

Oral Health and Dental Care from Conception to Adulthood

Prenatal care: Oral health care would begin well before birth and continue throughout life. Prenatal care would attend to the mother's oral health, especially her periodontal status, since gum disease is correlated with premature delivery and low-birth weight babies. During the second trimester, when educational opportunities are the greatest, the parents' health counselors of all types would engage the family in considering the baby's oral health and in setting appropriate expectations for dental care. The second trimester is an ideal time to teach prospective parents about oral and dental development, risk for common dental diseases, and preventing transmission of caries-causing bacteria from mother to child. At this time, mothers are readily engaged in discussions about feeding, diet, and eating practices as they relate to overall dental health. They are receptive to information on fluoride supplementation, oral hygiene practices tailored to young children, and the appropriateness of an "age-one dental visit" and need for a "dental home" where continuous, quality dental care is provided. This vision requires that health providers and advisors serving prospective parents

are both well informed about oral health and committed to sharing their knowledge with their patients and that they have incorporated oral health considerations throughout their education, training, and practice.

Newborns and Infants: Oral health care would begin with parental attention to the neonate's mouth. Parents would be encouraged to become comfortable looking into and caring for their newborn's mouth. They would learn how to clean the child's oral tissues and feed the child in ways that do not promote disease. As the infant's diet expands, they would learn how to consider the decay potential of different foods and eating strategies. Appropriate fluoride supplementation, if necessary, would begin early and be adjusted with the child's growth.

Parents would be taught by their children's primary care providers about the nature and control of dental caries.

Mothers who themselves have suffered from dental caries would be instructed on how to limit transmission of cariogenic bacteria to their infants and how to reduce the bacteria's capacity to produce cavities. As soon as teeth begin to erupt into the mouth, parents would be prepared to tailor their oral hygiene practices to clean the baby's new teeth well.

At the child's first birthday, the parent(s) would be referred by the primary care provider to a local and accessible dental provider that maintains an "infant oral health program" and is well prepared to advise parents of young children in how to obtain and maintain oral health. The referral would include specific instructions regarding timing and logistics and would not be considered complete until the child had obtained a dental visit and the dental provider had reported findings back to the primary care physician or nurse. The primary care provider would be competent to assess risk and would engage care coordinators if high-risk children's families needed assistance obtaining dental care. If the child were enrolled in HUSKY, the primary care provider would have no difficulty identifying a willing safety-net or private dental provider. The infant visit could be provided primarily by a dental hygienist who was well prepared to provide technically and culturally competent care. HUSKY tracking systems would note that the child obtained timely care and would notify the primary care provider if care was not obtained within a reasonable time period.

Toddler and preschool years: As the child gains independence during the toddler and preschool years, parents are well prepared to promote their child's oral health. They have received consistent messages from their healthcare providers, WIC and Head Start advisors, visiting nurse programs, day care providers, and others who impact their child's life. They are aware of their child's risk level for caries, know how to promote oral health, daily inspect the child's mouth and teeth, and know how to identify early signs of disease. They ensure regular dental visits and are compliant with professional recommendations specific to their child. Their oral health promoting efforts are reinforced by day care providers and others who come in regular contact with their child. Ongoing primary medical care visits provide opportunities for care givers to reassess the child's oral health status and renew efforts to assure a dental visit if dental care has not already been established.

School children: School readiness assessments include dental examinations that identify any child who has

developed dental problems. Such children are again directed to the dental delivery systems in the immediate locale. Any child with visually evident tooth decay is referred for care coordination and is followed to ensure that all dental problems have been repaired so that the child is ready to learn. School snacks, meals, and food rewards are appropriate and non-cariogenic. Schools in unfluoridated areas maintain fluoride rinse programs and in areas with large numbers of underserved children maintain complete, comprehensive dental programs. When services beyond the capacity of the school-based program are needed, they readily refer to local area specialists who are active participants in HUSKY programs and welcome new patients. Similarly, children who obtain primary dental care in community health centers have ready access to private sector services that meet any special needs. School-based programs maintain service availability throughout school vacations including summers and provide for ways to engage parents in their child's care.

Public and private care systems encourage the mother to obtain and maintain regular dental care and state programs assist the neediest in doing so. Care is built on principles of anticipatory guidance, disease prevention, and disease management. Preventive modalities appropriate to a child's developmental stage (including sealants) are provided in a timely way. Children covered by HUSKY are tracked to assure that they continue to obtain regular dental care. Care coordinators are engaged when families need assistance or when children fail to present for pre-arranged dental appointments in private offices and community health centers.

Adolescents and young adults: As children approach adulthood, responsibility for oral health and dental care is transferred from parent to child. Comprehensive, anticipatory, and prevention oriented dental care continues either in the public or private sector. Periodontal disease prevention is stressed as is personal responsibility for diet, hygiene, and regular use of preventive services. Schools and medical providers continue to reinforce and encourage healthy behaviors. Oral health components are well integrated into smoking, alcohol, injury prevention, automobile safety, and safe-sex programs.Responsibility for younger children's oral health either as babysitters or prospective parents is stressed. As these children mature into young adults, they are fully prepared to maintain their own health, utilize dental services appropriately, and are well prepared to engage their own children in a lifetime of oral health.

STRATEGIES

For Improving Oral Health in Connecticut

STRATEGY 1:

Provide Funding and Training to Maximize the Contributions of Current HUSKY Dental Care Providers

Goals

This first strategy is directed toward increasing the levels of services provided by current HUSKY dental care providers by (1) increasing reimbursement rates for dental and oral health services to effect true market-based purchasing and (2) providing additional education geared to the special dental treatment needs of Medicaid-eligible children.

Experience in other states suggests that an essential first step in reforming faltering Medicaid programs involves increasing funding and reimbursement to (a) effect meaningful market-based purchasing of services from private-sector dentists and (b) fortify safety-net operations. This remedy not only stops the loss of providers who often are difficult to re-engage or replace, but it also has been shown to stimulate more comprehensive care for children already receiving services and to increase the number of patients seen by dentists who already participate "in the system." For public and private programs that are efficiently managed and equipped to provide an appropriate volume of care, this "fix" promotes sustainability since revenue production can be sufficient to support all operating costs.

Increasing reimbursement rates is an essential first step to expand oral and dental health services to children and their families. Rate adjustments are the foundation on which all additional strategies are based. Without effective rate increases, other strategies will have limited impact. Likewise, while rate increases are essential, they are insufficient unless supported by other strategies. Implementing and integrating the full array of five strategies proposed herein is critical to assuring statewide equal access to oral and dental health services for children and their families under the Medicaid program.

Maximizing the contribution of existing dental care providers also requires that education and training be supplied for those who lack experience, comfort, or technical skills to appropriately manage the oral health needs of very young children or cultural competencies to deal effectively with diverse populations.

Rationale

Access to dental services for Medicaid enrollees in Connecticut is inadequate and declining. Data submitted by the Connecticut Department of Social Services to the federal Health Care Financing Administration (HCFA) indicate that fewer than 30% of Medicaid-eligible children in Connecticut received any preventive dental services over the course of the past decade. Furthermore, data from the most recent reporting period indicate percentage declines over the previous year in the numbers of children receiving preventive and treatment services.

According to the Connecticut Department of Public Health, of the 2,680 licensed dentists in Connecticut, only about 8% or 225 dentists participate in the Medicaid program at any level, with the bulk of services being provided by approximately 100 providers. Connecticut cities with the largest numbers of Medicaid enrollees typically also rely on a variety of safety-net facilities such as community health centers, school-based health centers, or hospital clinics to provide basic dental care for low-income children and adults. However, Medicaid payment rates have been stagnant since 1993 for children and 1989 for adults and are generally regarded as grossly inadequate by the vast majority of Connecticut dentists. These rates limit dentists' willingness to treat additional patients or provide the full range of services that covered children need. Failure to address this problem essentially leaves children in Connecticut's Medicaid programs with "coverage," but without adequate access to the services that they need and that Medicaid Early Periodic, Screening, Diagnostic, and Treatment (EPSDT) statutory provisions require. Close similarities between the design and funding of the HUSKY A and HUSKY B programs mean that the same general situation concerning access largely applies to children covered by Connecticut's State Child Health Insurance Program (HUSKY B).

Children (especially young children) covered by Medicaid often have treatment needs that go beyond the usual scope of care provided by many general dentists. Therefore, educational programs geared to enhancing dentists' skills in the areas of child patient management and disease management (e.g., the State of Washington's Access to Baby and Child Dental Care program) are generally viewed as useful and necessary approaches for augmenting the contributions of the existing dental care delivery system.

Key Issues

Adequate Financing and Reimbursement

The factors that dentists most commonly cite as contributing to poor access to Medicaid dental services are insufficient program funding and totally inadequate reimbursement rates. The table compares prevailing Medicaid reimbursement levels and average fees charged in 1999 by dentists throughout Connecticut as well as in selected regions for a sample of common dental procedures. Charges in 2001 are expected to be approximately 9% higher.

CURRENT HUSKY (A) PAYMENTS (ESTABLISHED 1993) COMPARED TO CURRENT MEAN FEES

PROCEDURE	DESCRIPTION	CT MEDICAID RATE	CT STATE RATE	HARTFORD MEAN ('061)	NEW HAVEN MEAN ('065,066,069)	GREENWICH MEAN ('068)
	DIAGNOSTIC					
00120	Periodic oral exam	$ 16.76	$ 32	$ 33	$ 33	$ 30
00110/00150	Initial/comp oral exam	$ 21.90	$ 52	$ 54	$ 52	$ 52
00210	Introral compl w/bwings	$ 52.00	$ 90	$ 90	$ 91	$ 99
00272	Bitewings - 2 films	$ 14.95	$ 30	$ 33	$ 31	$ 28
00330	Panoramic fils	$ 33.15	$ 83	$ 81	$ 85	$ 87
	PREVENTIVE					
01120	Prophylaxis - child	$ 21.70	$ 43	$ 45	$ 46	$ 44
01203	Topical F excl prophy	$ 15.15	$ 26	$ 29	$ 27	$ 24
01351	Sealant - per tooth	$ 17.75	$ 36	$ 36	$ 37	$ 39
	RESTORATIVE					
02150	Amalgam - 2surf-perm	$ 41.50	$ 100	$ 94	$ 105	$ 124
02331	Resin - 2surf	$ 48.55	$ 115	$ 112	$ 124	$ 133
02751	Crown - PFM Base	$ 407.50	$ 754	$ 781	$ 810	$ 813
02930	Prefab SSC - primary	$ 89.20	$ 203	$ 230	$ 206	$ 188
	ENDODONTICS					
03220	Ther pulp exc final restor	$ 46.70	$ 115	$ 119	$ 126	$ 124
03310	Anterior RCT	$ 230.25	$ 534	$ 576	$ 547	$ 588
	SURGERY					
07110	Extraction - single tooth	$ 40.10	$ 106	$ 110	$ 107	$ 116

A discussion of appropriate rates of reimbursement for the delivery of dental services has to be placed within the context of the unique facilities needed to deliver these services. Overhead operating costs of a private dental office currently consume, on average, the first 65% of charged fees, excluding any dentist compensation. As shown in the above table, Connecticut Medicaid reimbursement rates currently cover only about 40% of dentists' average charges. As a result, Connecticut dentists engaged in private practice generally incur a considerable loss when serving Medicaid clients. This is especially true for restorative and surgical procedures that can only be done by dentists and not delegated to allied dental personnel. The same low reimbursement rates limit the ability and capacity of the public safety-net health centers to meet the needs of their clients.

It is not surprising that most Connecticut private dentists choose not to participate in this program given the additional challenges of providing Medicaid dental services:

- burdensome Medicaid requirements that frequently do not conform to modern dental practice administration or commercial insurance routines,
- complex patient treatment needs,
- difficulties achieving compliance with self-care recommendations and keeping appointments, and
- reimbursement rates that fall far short of covering costs.

Indeed, the 225 dentists who have continued to serve Connecticut's Medicaid population in spite of the shortfalls of the current program should be commended. In light of the high levels of dental disease still found in Medicaid beneficiaries, it is also not surprising that the Children's Health InfoLine receives so many calls from parents searching unsuccessfully to locate a dentist who will serve the needs of their children.

Recent experiences in other states that have mounted concerted initiatives to improve access to oral health care for children on Medicaid and SCHIP suggest that the most effective and rapid way to improve access is to pay *all* providers at rates that maximally engage existing community-based practitioners (private and public). For example, Michigan recently contracted with a well-regarded commercial dental carrier to provide Medicaid benefits in 37 rural counties. Their "new" Medicaid program uses a well-funded plan with routine claims processing and payment rates designed to achieve true market-based purchasing power for upwards of 75% of area dentists (i.e., the 75th percentile of prevailing fees). Results include increased utilization by eligible children in the target counties from 18% to 34% in only eight months, delivery of more comprehensive care, and favorable health maintenance costs compared to commercially insured children. Alabama, Indiana, South Carolina, and Georgia also have pegged reimbursement rates in their state-administered Medicaid programs to levels designed to achieve true market-based purchasing power for upwards of 75% of dentists in their respective states (i.e., the 75th percentile of prevailing fees). Alternatively, Delaware has implemented a system that pays dentists 85% of submitted charges for Medicaid services (a level greater than the average dental practice overhead figure of 65%, thus providing some margin for dentist compensation or practice expansion, but less than dentists' average reported collection rates of 95% of charges). Each of these initiatives has produced significant increases in the number of services provided, the number of children utilizing services, and the number of dentists participating in Medicaid programs.

There have been instances in some states where upward rate adjust-

ments have not been as effective in increasing Medicaid participation as the examples noted above; however reimbursement rate increases in those states generally have not reached critical market-based purchasing levels. Some have suggested that a rate increase to the 50th percentile should be adequate to extend services to the underserved Medicaid population. In fact, the HCFA has stated that any rate below 50% would create a presumption of non-compliance with federal requirements. Being on the edge of a presumption of non-compliance is neither a worthy, nor effective, public policy response to a public health crisis. Nor is it likely to adequately engage enough dentists given the additional challenges of treating Medicaid beneficiaries. Thus, enhancement of program funding and reimbursement rates to levels sufficient to produce increased access and program performance should be a paramount consideration for responding to the health needs of Connecticut's children and families. Available data suggest that 75th percentile fees in Connecticut for the services shown in the Table above would range from 7% to 32% higher, depending on the procedure, than the mean rates shown, which are roughly equivalent to the 50th percentile for Connecticut.

Ensuring that Dental Providers Have Sufficient Training

A second key issue addressed by this strategy involves ensuring that appropriate services are available from technically and culturally competent dentists, dental hygienists, and other dental support staff. General dentists comprise the vast majority of dental practitioners and thereby have the greatest potential to provide reasonably accessible dental services to broad segments of the population. General dentists, often with relatively limited experience, also are engaged by safety-net operations to provide care for under-served populations of children. However, mounting evidence suggests that many general dentists need additional training in contemporary caries management and treatment modalities for preschool-age children, especially those less than three years of age, and for children with special health care needs. For future practitioners, this step can be realized by providing appropriate instruction and clinical experiences during their professional education. However, for those dental practitioners already in practice, targeted professional continuing education tied to attainment of basic knowledge and skills is a preferred approach. One such program, the Access to Baby and Child Dentistry (ABCD) program now operating in the State of Washington, has demonstrated success in engaging and educating practicing community-based general dentists to provide services for preschoolers. Other features of the ABCD program include coupling completion of training to eligibility for enhanced reimbursement rates and community-based care coordination services that facilitate appointment scheduling and reduce broken appointments.

Recommendations

1. Take immediate steps to raise reimbursement levels for all categories of dental services covered under HUSKY A and HUSKY B programs to levels that are sufficient to engage and maximize services provided by Medicaid registered dentists and public safety-net operations for children and families now in urgent need of care. The level generally targeted in other exemplary states is the 75th percentile of fees charged by dentists currently practicing in the state.

2. Implement educational programs for practicing general dentists and office/clinic staff members that enable them to meet a broader range of treatment needs for children covered by HUSKY dental programs.

STRATEGY 2:

Expand the Number of HUSKY Dental Providers through Plan Improvements, Community-Centered Action, and Workforce Policies

Goals

This second strategy is designed to expand the numbers of both public and private HUSKY dental care providers by at least the equivalent of 400 general dentists who will provide a full range of care to ensure state-wide access for vulnerable populations. Improvements in funding and reimbursement outlined in Strategy 1 are essential to sustaining providers and maximizing their contributions. Funding and reimbursement improvements are equally essential to an expansion of the number of HUSKY providers. Strategy 2 also recognizes the importance of using credible third-party intermediaries and favorable plan design and administration to engage additional private-sector providers to broaden access throughout the state. At the same time, this strategy recognizes the need for targeted public-sector expansion to overcome workforce and delivery system imbalances in a relatively small number of Connecticut areas that possess high concentrations of HUSKY beneficiaries and relatively few available providers. Finally, this strategy seeks to ensure that Connecticut's dental workforce policies provide a favorable environment for securing an adequate supply of providers to address the needs of all Connecticut residents now and in the future.

Rationale

Although Connecticut enjoys among the highest dentist-to-population and dental hygienist-to-population ratios in the country, dental practices in Connecticut generally are busy. This can be attributed to the strong link between residents' income levels and private insurance, which, in turn, expands the demand for dental services. To recruit and retain dentists in this environment as active Medicaid providers in publicly funded programs, one must engage those insurance plans and intermediaries that are regarded as favorable in terms of their reputation, working relationships with dental practices, and administrative policies and procedures. In Michigan, for example, two significant factors that influenced a dentists' willingness to participate in the state-sponsored rural demonstration program were contracting with a well-regarded commercial dental intermediary and using a robust plan structure similar to that used for private-sector benefits. These conditions also increase the likelihood of support from organized dental organizations for programs to recruit new program participants.

Lack of access to dental care is a state-wide problem.

However, population and dental workforce distributions suggest that two different approaches will be needed. One would rely primarily on increasing safety-net provider operations in major urban areas with large concentrations of low-income children. The other would rely primarily on increasing private dentists' participation in the remainder of the state. Fifty-four percent of all HUSKY A children reside in Connecticut's five largest urban areas: Hartford/East Hartford, Bridgeport, New Haven (including East Haven and West Haven), Waterbury, and New Britain. However, only about 18% (482) of Connecticut dentists practice in these towns; and, of those, an estimated 25% to 30% (120 to 145) are specialists other than pediatric dentists and thus do not provide

primary dental care services. Only about 120 private dentists in these urban areas participate in the Medicaid program. General and pediatric dentists who do participate in the Medicaid program in these urban areas deliver services, on average, to twice as many continuously enrolled HUSKY child beneficiaries than their colleagues in other parts of the state. In addition to private providers, three-quarters of the State's 43 safety-net dental facilities are located in these urban areas. These facts suggest that although additional private-sector provider recruitment should be pursued as part of a general strategy, expansion of the small number of safety-net facilities in these areas will be required to achieve sufficient access.

Providing access for the other 46% of HUSKY children who are distributed across Connecticut's remaining 161 cities and towns where 82% of dentists practice will in all likelihood depend primarily on strategies geared toward greater involvement of the private dental sector. Where eligible children are widely disbursed geographically, safety-net facilities are less effective and strategies need to be focused on providing access wherever practitioners exist. Given current reimbursement rates, it is highly unlikely that a sufficient number of private practice dentists could be recruited to provide access to the oral and dental care services needed by these children. This again emphasizes the necessity of increasing the reimbursement rates for dental services if private sector recruitment and retention efforts are to be successful.

The implementation of this strategy in urban, suburban, and rural areas calls for targeted action to expand the number of providers in these different circumstances based on community-level assessments and action plans geared to community needs and resources. The State's 103 community health departments would seem to be an appropriate vehicle for developing and implementing community-centered action.[9]

Even with favorable overall ratios of dental providers, adequate distribution of dental health professionals to serve HUSKY and other vulnerable populations cannot be taken for granted, either in the private or public sector. Accordingly, it behooves Connecticut policy makers to examine current dental workforce production and distribution trends in light of current workforce policies and to take whatever steps are deemed necessary to provide incentives and eliminate barriers to increase provider availability in underserved areas.

Key Issues

Expanding the Number of Private-Sector HUSKY Dentists

This second strategy acknowledges that the current number of dental care providers participating in the HUSKY program is wholly inadequate to meet current demand for dental services by eligible populations. It is conservatively estimated that the equivalent of at least an additional 600-700 general dentists participating actively in Medicaid would be required to provide "dental homes" to *all* unserved continuously enrolled Medicaid-eligible children in the 161 towns outside the five urban areas noted above.[10] Given an estimated 1,600 general and pediatric dentists currently practicing in those towns, recruiting 600 to 700 or more dentists to participate in the HUSKY program appears to be a preferred approach, one that could likely achieve its goal, especially if improvements in program funding and financing are combined with plans administered by well-regarded third-party intermediaries.

Expanding Dental Safety-Net Operations in Acute Service Shortage Areas

The equivalent of 300 to 400 additional general dentists participating in the HUSKY program would be required to provide dental homes to all Medicaid-eligible children in the remaining five urban areas.[11] Data indicate that there are currently approximately 480 dentists practicing in those cities and that only 120 filed at least one Medicaid claim in the most recent year for which data were available. Although recommended program improvements would likely attract some new private participating dentists in these areas, it seems unlikely that an adequate number of new private-sector participants will become available through this mechanism. Accordingly, an approach that relies on the development of new safety-net facilities is expected to be required to augment the array of dental facilities currently operating in these areas (see Table).[12] In most instances, this approach will require additional properly equipped facilities and recruitment of trained personnel.

Locale	Number of HUSKY A Children	Number of Community Health Center Dental Clinics	Number of School-Based Health Center Dental Clinics	Number of Hospital Dental Clinics
Bridgeport	19,597	2	9	0
Hartford	28,613	3	9	3
New Britain	8,579	1	0	2
New Haven	23,738	1	1	2
Waterbury	13,019	1	0	2

Shown below are data obtained from the Connecticut Children's Health Council for 3- to 19-year old children who resided in the five urban areas and who were continuously eligible for HUSKY A during 1999-2000. The percentages of children receiving at least one preventive service or at least one treatment service (i.e., something other than diagnostic or preventive care) varied little across the five urban areas and were similar to state-wide averages.

Locale	Number of HUSKY A Children	Percent of Children with a Prevention Visit	Percent of Children with a Treatment Visit
Bridgeport	12,048	29	18
Hartford	18,415	34	23
New Britain	5,302	36	22
New Haven	15,071	34	18
Waterbury	7,896	33	18
State	105,102	34	20

Positive Dental Workforce Policies

Connecticut currently has relatively favorable numbers of practicing dentists and dental hygienists. However, for the past decade, there has been a nation-wide decline in the dentist-to-population ratio, a trend that is expected to accelerate over the next two decades due to the combination of an increasing U.S. population and reductions in the number of practicing dentists. In light of the strong historic demand for dental services among Connecticut residents, the presence of several dental service shortage areas across the state, and the lead time necessary to effect workforce dynamics, state policy makers need to be proactive to address workforce adequacy and distribution.

Determining an appropriate overall supply of dentists is a complex but critical challenge subject to the influence of changes in population, demography, disease trends, economic conditions, and technological innovations. Attempts to develop precise prediction models for forecasting future workforce levels have not been successful. Nevertheless, state policy makers need to attend to actual trends in the number of graduates from state-supported dental education programs, the retention of those graduates, and the net census of practicing dentists in the state to assess whether class sizes and composition are appropriate to meet the State's future needs.

Influencing the distribution of dentists, especially as it relates to dental service shortage areas, requires a different set of policy options. One set of policies being pursued by a number of states is to offer loan repayments, loan forgiveness, scholarships, and/or tax incentives for dentists who locate in or provide services to underserved populations. State dental licensing requirements also frequently serve as substantial barriers to the influx of qualified dentists, many of whom either hold licenses in other states or are foreign-trained dentists who have successfully graduated from accredited American advanced education programs. Policies related to both incentives and barriers should be assessed and modified as part of a comprehensive workforce strategy. An important parallel activity for dealing with dental service shortage areas is to ensure that steps are taken to designate all dental health professions shortage areas.

The potential contributions of Expanded Function Dental Auxiliaries (EFDAs) for expanding the treatment capacity of practicing dentists also merits consideration. Given the relatively short training period and favorable infrastructure costs, the supply of EFDAs can be adjusted more readily than the supply of dentists. Several states currently allow EFDA practice; and others, faced with impending reductions in the overall U.S. dentist-to-population ratio, are exploring policy changes to expand the traditional dental care delivery team.

Recommendations

1. Contract with well-regarded commercial dental carriers to administer HUSKY dental benefits using commercial dental plans whose benefits design, plan administration, and reimbursement features serve to attract additional participating dentists.

2. In partnership with the Connecticut State Dental Association and Connecticut Society of Pediatric Dentistry, develop and implement a HUSKY dentist recruitment initiative linked to program enhancements (reimbursement increases and contracting with well-regarded dental plans to administer HUSKY programs), with special emphasis on acute service shortage areas.

3. Develop and implement community-centered action plans for strengthening safety-net operations and collaborative public-private access solutions in the five urban areas with the largest concentra-

tions of HUSKY enrollees. Identify the specific increases needed in public facilities (chairs, staff, etc.) to assure that half the children currently not receiving appropriate care would have access to care.

4. Develop a comprehensive set of incentives for dentists to practice in underserved areas or provide care to underserved populations.

5. Assure all communities eligible for designation as Dental Professional Shortage Areas in the state are so designated and recognized and that all appropriate clinics are recognized as Federally Qualified Clinics.

6. Conduct a comprehensive analysis of Connecticut dental workforce trends and workforce needs for the next two decades and use legislative and regulatory authority to (a) remove barriers to the relocation of qualified dentists entering the state and (b) ensure that there are an adequate numbers of dentists and allied dental personnel to meet the oral health needs of all Connecticut residents.

STRATEGY 3:

Connect Families to Dental Care

Goals

This strategy establishes a series of approaches that effectively link children and their families to dental services that are made increasingly available through Strategies 1 and 2.

Rationale

This strategy recognizes that making care available is often not enough to link high-risk and high-needs children and families to the care they need. Multiple barriers, including logistic and cultural impediments, stand between families and available care. This strategy calls for the proactive engagement of families in oral health awareness and the encouragement of families to use dental services that meet their unique needs and those of their children.

A successful local system of care is one which makes it easy for a medical provider to identify a willing dental provider or for a parent to directly obtain dental care for their child. Ideally, parents will obtain information on dental care from a variety of support sources whom they trust and interact with regularly. These sources may include medical providers, schools and teachers, social workers, home health visitors, day-care providers, WIC and Head Start programs, churches, and community organizations. In some Connecticut communities such a system will be contained within safety-net facilities that offer comprehensive health and social services under one roof. In the majority of communities, it will be a "system without walls" and will coordinate various service components that exist independently.

This strategy supports the belief that low- and modest-income HUSKY families will benefit from a system that

- informs families early and periodically about oral health and appropriate dental care;
- empowers children's primary medical care providers (pediatricians, family physicians, and nurse practitioners) to identify children at risk for early dental disease and make successful and timely dental referrals;
- engages educational and social service agencies that interact with the family to reinforce the importance of oral health and dental care;

- provides care coordination services ("case management") when necessary to assist parents in establishing a "dental home" and in obtaining Medicaid-mandated appointment making, transportation, and translation services; and
- relies on integrated systems of care within communities that make it possible for individual children to receive the level of care they need and move efficiently between their primary medical care provider, dental care provider, and dental specialist as needed.

Successful implementation of this strategy puts meaning into the Medicaid "EPSDT" program. It envisions a system in which mothers are first informed about their children's oral health and dental care needs during pregnancy by obstetrical and primary care providers. It relies on the child's primary medical care providers to deliver Early and Periodic Screening for oral health status and then refer the child to a dentist for essential dental Diagnostic and Treatment services.

Because access to dental care for HUSKY-enrolled children is currently so limited, primary medical care providers now complain that they "have no place to send children for dental care." Therefore, they often make a general recommendation to seek care rather than make a specific referral to a particular dentist. This third strategy builds on the first two strategies that increase the availability of care in communities. It requires that a reliable and accountable referral and tracking system be put into place and that families be provided with the support services they need to connect with comprehensive dental care.

Key Issues

Preparing primary medical care providers for an oral health role

In order to provide EPSDT services, primary medical care providers need to be committed to oral health promotion and need to be skilled at

- assessing a child's risk for dental/oral diseases,
- informing patients about dental care,
- making appropriate and successful referrals to dental providers, and
- identifying children who have not obtained timely care and renewing efforts to encourage appropriate use of dental services.

Medical and nursing education programs currently do not provide sufficient information and adequate experience on oral health in their curricula for primary care providers to assume these responsibilities. This failure in education is reinforced during clinical training which provides few, if any, opportunities for interdisciplinary practice. *Bright Futures Oral Health*[13] and the American Academy of Pediatric Dentistry periodicity schedule provide guidelines for interdisciplinary approaches to oral care and standards for oral health supervision. The Federal Department of Health and Human Services[14] is currently funding a variety of pilot programs to develop oral health supervision protocols for medical primary care providers.

Preparing educational, social service, and other community support resources to promote appropriate use of dental services (WIC, HS, and day care)

All who provide services to families with high-risk children or regularly interact with at-risk families are well positioned to promote appropriate use of dental services. In particular, low- and modest-income children are likely to attend "WIC" nutritional programs, Head Start and Early Head Start comprehensive

child development programs, and day care programs. They may already be well served by home health visitors who do not currently promote oral health as part of their missions. For many of Connecticut's families, the church functions as a reliable source of information on health and health care. Each community has its own unique mix of organizations and leaders that work with targeted families. These public and private agencies can help connect children to timely, quality, accessible dental care. This requires training as well as regular reinforcement of their oral health work.

WIC, Head Start, and Early Head Start programs already include oral health components that are supported by national resource offices, guidelines, readily available materials, and technical experts. But few of these agencies actively engage the opportunity to promote dental care at the local level. Effective local leadership and staff development hold potential to engage these resources in promoting oral health and dental care.

Some low-income populations in Connecticut, particularly minority populations, rely heavily on their churches or local peer leaders (e.g. promotores in many Latino communities) as primary sources of reliable health and child-care information. Other families obtain health information primarily from social service systems. Each of these sources can also become well informed about facilitating dental care and can assist families obtain dental services.

Creating an effective care-coordination system

A dental care-coordination system comes into play whenever health care providers or families need assistance linking children to care within a community. Some support services are required of Medicaid programs but frequently are not provided effectively. These state-supported services for HUSKY A beneficiaries include appointment making, transportation, and translation services. In some locales support services are provided by local community organizations, health centers, help lines, churches, or volunteers.

In addition to helping families obtain services, care coordination programs can address "broken appointments"—a major obstacle to dentists' participation in Medicaid. Dentists cite children's failure to present to pre-arranged appointments as the second most important reason for not participating in Medicaid (after fees). Care-coordination programs help prevent missed appointments by raising parental awareness that the appointment time has been specifically set aside for only their child and by addressing logistic barriers to appointment keeping. When appointments are missed, care-coordination follows up with the family and the dental provider. It works to assure that subsequent appointments are kept. For those who chronically fail to keep appointments, care coordinators can work with families and dentists in both the safety-net and private systems of care to "fill cancellations" on short notice.

To be effective, care coordinators must understand both the family's needs and those of the dental care systems and thereby bridge the multiple cultural, linguistic, and logistic issues that can stand between patients and dentists.

Care coordination should also seek to reduce family dependency on its services and promote independent and appropriate use of services.

Community integrated systems of care

Each of Connecticut's regional communities has its own unique constellation of resources that can be integrated into systems of care. These systems may be formal or informal but all seek to competently meet the oral health needs of area children and their families. Resources may include safety-net and private-sector medical and dental providers, dental specialists, hospitals, and outpatient surgical facilities. They may also include dental society referral and "on-call" programs, school-based oral health programs, visiting nurses, or other home-health visitor programs. Some locales also have school health-readiness programs, programs for day-care providers, or other unique programs.

Connecticut's Department of Public Health has promoted community integrated systems of care in several locales including New Haven, East Hartford, Groton, Manchester, Stamford, Vernon, and the northeast region of Connecticut. Other public and private organizations including, notably, the Washington Dental Service in Washington State under the banner of "Access to Babies and Children's Dentistry" (ABCD) program, have developed integrated community-based systems of care. The American Academy of Pediatric Dentistry is cataloging these efforts and developing guidance for implementing integrated care systems that target young high-risk children.

Recommendations

1. Implement effective care-coordination mechanisms throughout the state by (a) maximizing and coordinating DSS and DPH care-coordination resources (i.e. Medicaid and MCH Title V Block Grant), (b) informing medical and dental providers of these services and how to make them available to families, and (c) developing and replicating supplemental model programs for local implementation that involve non-DSS/DPH programs.

2. Establish and disseminate uniform recommendations on dental care for children including voluntary performance standards and implementation protocols for primary medical providers and HMOs, Head Start sites, WIC programs, day care facilities, social service programs, schools, and others who interact with high risk families. Engage the press in promoting these dental care recommendations throughout Connecticut communities.

3.Develop additional community integrated service systems in Connecticut towns and regions that integrate and coordinate private and public medical and dental primary care providers, dental specialists, public health programs, and resources that serve low-income children and their families.

STRATEGY 4:

Reduce Disease Burden in the HUSKY Population

Goals

This strategy seeks to improve the oral health of underserved populations by reducing their disease experience. This strategy recognizes that the greatest health outcome at the lowest cost can be accomplished through effective disease prevention.

Rationale

Disease prevention is always the most desirable approach to securing health. For many diseases and conditions, however, the cost of widespread screening and prevention is greater than the savings that prevention yields from avoided treatment. This, however, is not true of dental caries in low-income child populations.[15] For this reason, widespread prevention holds the promise of *both* improving health *and* reducing costs.

Oral health is determined by a number of factors other than dental care. Dentistry's three most prevalent concerns–caries, periodontal disease, and oral cancer—are all largely dependent on individual's health beliefs and associated behaviors. Tooth decay, the most common chronic disease of children, can be understood as an infectious and transmissible disease that depends upon poor diets and eating patterns and on insufficient oral hygiene and fluoride use.

Effective prevention is a daunting task because it requires consistently positive health behaviors starting at an early age.

The bacteria that cause caries are acquired by infants and toddlers most frequently from their mothers, as the primary teeth first appear in the mouth. Thus, true primary prevention must be instituted before a child's second birthday. This is the scientific basis for the American Academy of Pediatric Dentistry's recommendation that all children obtain their first dental visit for oral health supervision at age one year. This recommendation is also supported by Bright Futures, but is not consistent with the American Academy of Pediatrics' (AAP) recommendation that children begin dental care at age three. According to the AAP guidelines, primary medical providers are responsible for oral health until age three.

Approaches to reducing disease burden rely on integrating oral health promotion into as many programs and services that reach high-risk low-income children and their families as possible. Preventive interventions that reduce disease burden can be targeted to either high-risk individuals or high-risk populations.

Public health approaches to prevention at the population level include community water fluoridation and oral health education campaigns. Public health interventions that target individuals include school-based or school-linked dental sealant programs and school-based fluoride "swish" programs. Individual approaches include application of topical fluorides (including fluoride varnishes) early and often for high risk children by all available health care providers and meaningful integration of oral health in well child care supervision as advanced by the Bright Futures consortium.

Key Issues

Preparing, and providing incentives for, medical providers to assume responsibility for oral health promotion and guidance.

Effective and timely prevention requires that oral health promotion and disease prevention begin during pregnancy. Considerations include the impact of the mother's oral health on her pregnancy and on her child's future oral health. Periodontal disease in pregnant women is increasingly suspected to cause pre-term and underweight babies. A mother's past decay experience and current oral bacteria are highly correlated with a child's risk of early-onset dental caries.

Pediatricians, nurse practitioners, and family physicians must either assume responsibility for oral health supervision of very young children starting at age one to age three (AAP recommendation) or make arrangements for such supervision by a dental professional (AAPD recommendation). Children identified to be at high risk for early childhood caries will be referred early and successfully regardless of which recommendations are being followed. Primary medical care providers need to be competent to assess children's oral health status and risk for developing early disease and, where appropriate, provide counseling and apply fluoride varnishes following clinical protocols. They need to provide sound advice on caries prevention including recommendations about appropriate diets and

feeding/eating patterns, effective approaches to oral hygiene, and proper use of topical and systemic fluorides. They must be able to identify early signs of oral pathologies and make appropriate referrals.

All of these responsibilities require adequate education and training. For doctors and nurses in residencies and formal training programs, there should also be enough supervised oral health counseling experience to secure the physician's competence and comfort. For doctors already in practice, continuing medical education is needed. For all, formalized curricula and clinical protocols will guide learning and practice.

Some states have developed financial incentives to engage primary care providers in oral health supervision and counseling. For example, in both Washington and North Carolina, pediatricians are paid by Medicaid to deliver a constellation of oral health services after completing training programs to develop their competencies.

Integrating oral health promotion throughout programs that engage high-risk children.

Beginning with prenatal care and continuing through early childhood, every opportunity needs to be advanced to engage mothers and their youngsters in positive oral health behaviors. As with efforts to promote the appropriate use of dental services (see Strategy 3), the full range of programs and services that address low-income, high-risk children need to be engaged in promoting oral health. Appropriate settings to implement oral health promotion include WIC, Head Start, Early Head Start, and day care programs.

Preparing dental professionals to manage the oral health of very young children at high risk of dental disease.

Just as medical providers need to extend their efforts to include oral health counseling, so, too, do dental providers need to acquire the knowledge and skills needed to reduce caries onset and progression. Currently, neither dentists nor hygienists are well prepared to delivery anticipatory guidance, primary prevention, and disease management services for very young high-risk children, especially those for whom cultural and language barriers exist. Few public or private dental practitioners see children under the age of five years or tailor care to the individual child's level of risk. Few consider the status of mothers' oral health as a risk indicator for young children or counsel parents about how to limit the transmission of cariogenic bacteria. Few dentists currently employ fluoride varnishes or other means of treating incipient cavities in very young children. For

children who already manifest early childhood caries, few dental practitioners utilize the "atraumatic restorative technique." And few adjust their preventive message to a child's dental growth and developmental status. In short, current dental practice focuses on hygiene and repair with little consideration of active disease management.

Recommendations

1. Incorporate oral health into the education and practice of medical providers in Connecticut through curriculum development at UCONN, faculty training and residency experience, and continuing medical education (both "real time" and "asynchronous web-based" programs) for obstetricians, pediatricians, family physicians, nurse practitioners, nurses, and medical office staff. Emphasize the roles of maternal oral health and health behaviors in their children's oral health and use of dental services.

2. Provide incentives for oral health "certification," e.g. enhanced Medicaid fees for medical providers who incorporate oral health counseling and referral in their practices.

3. Develop and deliver oral health promotion materials, in-service training programs, and child-care guidelines for non-medical professionals who interact with young high-risk children and their families.

4. Enhance the curriculum of dental and dental hygiene students, develop continuing dental education programs, and develop and disseminate clinical protocols on caries transmission and management by dental professionals.

STRATEGY 5:

Implement Accountability and Quality Improvement Systems

Goals

The fifth strategy calls for the development of effective data-driven systems to define priorities, enhance accountability, and continuously improve the performance of Connecticut's public oral health programs. Periodic, systematic collection of data on the oral health status of target populations is essential to identify the magnitude and distribution of oral health problems throughout the State over time and to assess the impact and value of public health or health benefits (e.g., HUSKY) programs. Effective mechanisms for tracking key processes (e.g., the use of services following periodic assessments or referrals) are not only indispensable for evaluating the performance of public programs or private contractors, but they also help ensure better health outcomes. Furthermore, monitoring data on processes and outcomes is necessary to understand which programs or program elements are (or are not) working effectively and efficiently and to effect ongoing program changes that lead to improved oral health status and better value for public expenditures.

Rationale

Simply put, Connecticut's public oral health programs are essentially operating blindly, without the aid of effective information systems and administrative infrastructure. The results are:

- a vague awareness of the magnitude and distribution of oral health problems throughout the state, but little in the way of targeted strategic action based on data reflecting timely surveillance of oral health status in target populations;
- programs that operate on the basis of historical expenditures and (often poor) performance, not on beneficiary needs and modern purchasing standards; and
- programs that operate without specific objective goals and effective quality improvement principles that have become the hallmark of successful business and public program operations.

Conceptually, the rationale for developing effective systems to monitor and improve the performance of public oral health problems is straightforward—policy makers, program officials, other interested parties and the public need to know:

- the magnitude and scope of oral health problems across Connecticut and over time in order to establish program priorities and effectively allocate resources;
- where progress is being made over time and where persistent problems require innovative approaches;
- whether public expenditures are being used effectively; and
- what needs to be done to improve program performance and, ultimately, the oral health of the State's residents.

Traditionally, surveillance has been considered to be an optional public health activity rather than an essential requirement for guiding and evaluating policy development and program operations.

Key Issues

Oral Health Surveillance

Periodic assessments (surveillance) of the population's oral health status, especially for groups known or suspected of being at elevated risk for certain diseases and conditions, is essential to effective program planning, resource allocation and outcomes assessment. And yet, this vital function has not been a prominent feature of program operations in many states, including Connecticut. State-wide oral health surveys are not conducted on a regular, periodic basis and systems for collecting data on the oral health of vulnerable target populations (children, low-income mothers, the medically or emotionally compromised, the elderly) are virtually non-existent.

Resources need to be allocated and steps must be taken in the near term to develop an effective infrastructure for mounting periodic state-wide oral health surveys and establishing ongoing data collection systems that capitalize on existing care systems (e.g., nursing home intakes, foster care) and programs (e.g., school readiness, Head Start and WIC, school-health programs, and community-based screenings).

Performance Monitoring

Historically, assessments of the performance of Medicaid programs have been based on a single rudimentary measure—the percentage of eligible children receiving at least one "preventive" dental procedure in the previous 12 months. This measure served as a crude indicator of whether eligible children who collectively are at high-risk for tooth decay had any contact with the dental care delivery system. However, it provided no information on whether children's overall dental needs were fully addressed. More recently, the Health Care Financing Administration has modified the reporting requirements, first to assess whether eligible children were receiving annual dental examinations and, most recently, what percentage of eligible children are receiving any care, any preventive services, and any treatment for disease or dental abnormalities. Although an improvement over prior indicators, these measures still fail to address the question of whether eligible children's dental needs are being fully or adequately met through existing programs. The issue has been given further attention recently through a HCFA contract with the National Committee on Quality Assurance (NCQA) that led to the identification of a set of measures that could more fully reflect on pediatric oral health program performance.[16] Many of these measures also should be applied to Connecticut's managed care contracting to address what is widely recognized as inadequate monitoring of performance requirements in current contracts.

Quality Improvement

Data deficiencies hamper any efforts to improve the performance of HUSKY programs. Data for HUSKY A programs are often of poor quality and contain huge gaps that stifle meaningful analyses or program assessments. For example, data supplied to the Children's Health Council for continuously enrolled HUSKY A children for 1999 - 2000 had invalid provider identification data for 37% of claims. Provider identification also generally masks assessments of whether services are being provided by private sector dentists or public safety-net operations. Consequently, it remains a frustrating challenge to determine with any precision or reliability what services are being provided to whom in what areas, let alone whether programs are operating effectively, efficiently or

differentially in different parts of the state. Thus, to facilitate meaningful program assessments and quality improvement, concerted efforts must be made to develop more reliable data collection and reporting systems and to link program performance data to oral health surveillance data and assessments derived from surveys of beneficiaries.

Collaborative Program Planning and Evaluation

The Department of Public Health (DPH) has primary responsibility for community-based programs aimed at reducing the burden of oral diseases, while the Department of Social Services (DSS) has primary responsibility for administering benefit programs that facilitate access to appropriate dental diagnostic, preventive, and treatment services for Medicaid and SCHIP (HUSKY) populations. Historically, these two agencies have largely administered and operated their programs independently. Collaborative program planning and implementation across these two agencies, with input as necessary for workforce-related recommendations from the UCONN Health Center, is encouraged as a more effective and more efficient use of public resources. Monitoring and evaluation of progress toward established performance goals should be conducted by a credible independent (external) organization.

Recommendations

1. Develop a system for collecting, compiling, and disseminating community-level data on oral disease burden and available oral health care resources for all cities and towns in Connecticut to be used for priority setting, program planning, and evaluation.

2. Develop an effective management information system that, in addition to monitoring services provided, can monitor the status and disposition of individuals who receive oral health assessments and/or treatment services and facilitate system-level program performance measurement and quality improvement.

3. Implement effective consumer assessment surveys for HUSKY programs.

4. Ensure that future contractual arrangements with managed care organizations or other entities to whom responsibility for oral health program administration is delegated contain adequate provisions (performance standards, reporting requirements, incentives, sanctions, and resources) to carry out the related recommendations and action steps and that performance provisions are enforced.

5. Establish a Governor's Oral Health Task Force comprised of the Commissioner of DPH, Commissioner of DSS, Vice-President of the UCONN Health Center, and Director of the Children's Health Council and charge the task force with implementing, evaluating, and maintaining an effective state-wide oral health initiative focused on the recommendations outlined in this report.

References

[1] Significant providers are here defined as those who bill more than $10,000 to Medicaid. Reported data were obtained from the Department of Public Health and by the National Conference of State Legislatures.

[2] Connecticut state data listing FY 1999 - 2000 Medicaid providers by name, numbers of Medicaid eligible children seen, and number of encounters were obtained from the Children's Health Council. Individual providers listed more than once were consolidated prior to counting the number of dentists who provided services. Data sources reflect submitted claims with valid provider identification information for care provided to continuously enrolled children.

[3] On average, private dentists in the five urban areas each delivered care to 99 children in FY 1999 - 2000 while dentists in all other areas of the state delivered care to 55 children.

[4] This illustrative estimate is calculated by considering the number of continuously enrolled HUSKY A children in these urban areas who did not receive any dental care in FY 1999 - 2000 and dividing that number by the number of HUSKY A child patients that an actively participating dentist might be expected to treat (100 - 150). This model does not incorporate an estimate of the percentage of HUSKY children who might seek dental care.

[5] Data from other states (e.g., CA) indicate that approximately 20% of Medicaid-eligible children have dental disease levels that require advanced treatment—i.e., more advanced care than usually is provided by general dentists.

[6] Oral health is broadly defined to include the health and function of dental, oral, and cranio-facial tissues.

[7] Appropriate dental care is characterized at the individual level as being reasonably accessible in terms of travel time and geographic location, comprehensive in scope, of reasonable cost, sensitive to cultural differences and of high quality. At the system level, appropriate dental care is characterized as being cost-effective, accountable, and risk-based. The concept of risk-based care implies that resources need to be applied proportionate to need and suggests that "one-size-fits-all" approaches are inadequate and/or inefficient.

[8] The 75th percentile is the fee level at which 75% of dentists regard the fee as equal to or greater than their customary fee. This level becomes the maximum allowable rate payable by the program. Under this strategy, providers whose normal charges are less than the maximum allowable rate receive their customary fee, while dentists whose normal charges are greater than the maximum rate receive a discounted fee that is the maximum allowable rate.

[9] Currently, Connecticut has 103 health departments serving the State's entire population, 47 of which are full-time and 56 of which are part-time. The full-time departments include 29 individual municipal health departments and 18 health district departments (containing from two to 17 towns). Full-time health departments serve approximately 2,776,000 people or 85% of the State's population (Source: CT Dept. of Public Health).

[10] Modeling assumptions used to estimate the number of additional dentists needed include (a) 70% of enrolled children currently not receiving services, and (b) an assumption that a general dentist can care for about 300 children each year. Pediatric dentists generally serve been 2,000 to 3,000 patients of record, a factor that would proportionately offset the need for general dentists if additional pediatric dentists were to participate.

[11] Data from other states (e.g., CA) indicate that approximately 20% of Medicaid-eligible children have dental disease levels that require advanced treatment—i.e., more advanced care than usually is provided by general dentists. Thus, some care will need to be provided by pediatric dentists or general dentists with advanced training in treating children with advanced needs.

[12] Classification of dental safety net facilities based on CT Dept. of Public Health data. Some facilities listed as Hospital Clinics are community-based ambulatory care center sites.

[13] *Bright Futures Oral Health*, a publication of the National Center for Education in Maternal and Child Health with support from the Maternal and Child Health Bureau, is a consensus document on pediatric health supervision that has been endorsed by nearly 20 child health professional groups including the American Academies of Pediatrics and Pediatric Dentistry.

[14] The Bureau of Health Professions in the Health Services and Resources Administration (HRSA) has recently issued a collaborative agreement proposal for interdisciplinary oral health training targeting pediatricians and family practitioners.

A variety of Federal health agencies including the Center for Medicaid and Medicare Services (formerly HCFA), National Institutes of Health, Indian Health Service, and HRSA are now sponsoring interdisciplinary programs targeting high risk infants and toddlers.

[15] Because tooth decay occurs so frequently in low-income child populations and because dental treatment is so much more expensive than prevention, caries is one of the few diseases where widespread prevention is believed to be cost-effective.

[16] See Crall JJ, Szlyk CI, Schneider DA, et al. "Pediatric oral health performance measurement: current capabilities and future directions." *J Public Health Dent* 1999;59:136-141.

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