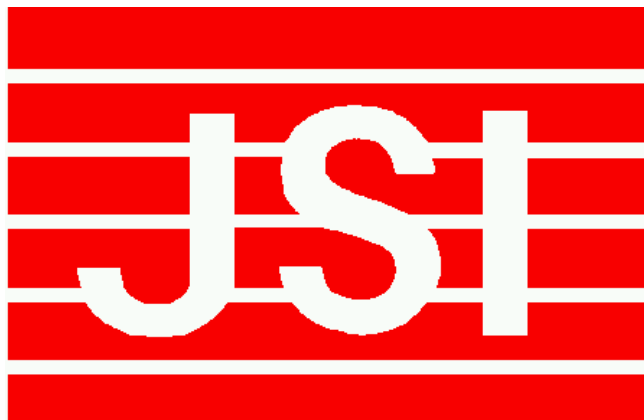


**DELAWARE HEALTH CARE COMMISSION AND THE
DELAWARE DIVISION OF PUBLIC HEALTH**

**ORAL HEALTH INFRASTRUCTURE ENHANCEMENT
FEASIBILITY ANALYSIS**

**FINAL REPORT
SPRING 2010**

**SUBMITTED BY:
JOHN SNOW, INC.**



ACKNOWLEDGEMENTS

This report was developed by John Snow, Inc. with extensive assistance from the Delaware Division of Public Health, the Delaware Health Care Commission, and a Steering Committee of stakeholders that was empanelled. Their combined expertise, knowledge of Delaware, and commitment to the project was vital and this project would not have been possible without their support and guidance. While it is important for everyone to recognize this support, please note that the JSI Project Team was responsible for implementing the project and compiling nearly all of the data as well as for developing the report and its associated appendices. Responsibility for any errors, omissions, or inaccuracies should fall squarely with staff at John Snow, Inc. A listing of the private organizations and public agencies that were represented on the multi-stakeholder Feasibility Study Steering Committee are included on the next page.

During this project the JSI Project Team interviewed dozens of individuals, including health and social service providers, dentists, medical providers, hospital representatives, educators, public officials, public policy makers, advocates, representatives from professional organizations, and consumers of care in an effort to compile the necessary information for this project. JSI would like to acknowledge this support and thank all who took the time to talk with them and/or participate in the project's Steering Committee meetings. This group's input was invaluable. A listing of those who were interviewed is included in Appendix A.

The JSI Project Team would like to thank the Delaware Division of Medicaid and Medical Assistance for providing data support and assisting with the analysis. JSI would also like to thank the senior staff at a number of health care organizations based in Sussex County for their time and support of this project. The JSI Project Team met numerous times with representatives from Beebe Medical Center, Bayhealth Medical Center, Nanticoke Memorial Hospital, La Red Health Center, and the Stockley Center. These organizations are at the heart of Sussex County's safety net and should be recognized not only for their ongoing support during the project but for their commitment to those they serve and for their efforts to expand oral health access in Sussex County.

Listing of Organizations/Agencies Involved in Feasibility Study Multi-Stakeholder Steering Committee

- Bayhealth Medical Center
- Beebe Medical Center
- Christiana Care Dental Residency Program
- Delaware Dental Hygienists' Association
- Delaware Department of Health and Social Services:
 - Division of Developmental Disabilities Services - Stockley Center
 - Division of Medicaid & Medical Assistance
 - Division of Public Health
- Delaware General Assembly (House of Representatives & State Senate)
- Delaware Head Start
- Delaware Health Care Commission
- Delaware Healthcare Association
- Delaware Institute for Dental Education & Research
- Delaware Oral Health Coalition
- Delaware State Dental Society
- Delaware Technical & Community College - Dental Hygiene Program
- Delmarva Rural Ministries, Inc. – Kent Community Health Center
- La Red Health Center
- Nanticoke Memorial Hospital
- Sussex Child Health Promotion Coalition

John Snow, Inc.

John Snow, Inc. (JSI) is a health care research and consulting organization that works primarily with public agencies, health care organization, and not-for-profit foundations whose missions are to provide health care services to low income, vulnerable, and underserved populations. JSI is experienced in policy and program development, strategic planning, community needs assessment, health care operations, health information technology, and research methods. Throughout its 30-year history, JSI has worked to address the needs of underserved populations to improve access and the quality of health care delivery systems. JSI fully shares the Delaware Health Care Commission's (DHCC) and the Delaware Division of Public Health's (DPH) mission to expand access to comprehensive, high quality health care services and to improve the health of Delaware residents.

The Project Team for this effort included two senior JSI consultants with extensive expertise conducting needs assessments and planning projects, specifically geared to expanding access and strengthening health care systems in rural areas. The Project Team also included a senior consultant with more than 20 years experience developing program operational models and detailed financial pro forma. In addition, the JSI Project Team partnered with two dentists from the Tufts University School of Dental Medicine who each have more than 20 years experience providing clinical care as well as expertise in developing educational and training programs geared to building workforce capacity, particularly for the underserved.

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SECTION I: HISTORY AND GOALS OF PROJECT

In 2006, the Delaware Division of Public Health and Delaware Oral Health Coalition facilitated a comprehensive planning process that brought together a broad range of stakeholders from the State's public health and dental communities. As part of this effort, representatives from eighteen organizations and State agencies convened to provide advice and guidance to the State's Bureau of Oral Health and Dental Services on how to expand access and enhance the State's oral health infrastructure, particularly in Sussex County, the southern-most region of Delaware. The culmination of this planning process was an Oral Health Action Plan for the State.

Since 2006, several of the initiatives called for in the Action Plan have been implemented. However, a number of the plan's most high-impact strategies for enhancing the oral health infrastructure and improving access to dental care, particularly in dental health professional shortage areas in the southern-most region of the State, have yet to be addressed. More specifically,

- Establishment of a multi-purpose dental clinic and training facility in Sussex County to improve access to care and expand training opportunities for dental professionals.
- Enhancement of dental educational opportunities for dental hygienists and dental residents in southern Delaware to strengthen the dental workforce.
- Creation of a case management program to develop a dental home for children eligible for dental services through Medicaid and the State Children's Health Insurance Program (S-CHIP) to improve the oral health status of underserved families in Delaware.

The Delaware Health Care Commission and the Division of Public Health's Bureau of Oral Health and Dental Services, both recognize the need for as well as the opportunities and challenges to improving access to dental care services. This prompted the two agencies to form a collaborative partnership in 2008 to carry out the strategic planning activities required to fully implement the State's Oral Health Action Plan. To assist them with this effort, the two entities successfully applied for an Oral Health Workforce Planning grant from the Health Resources and Services Administration (HRSA), Bureau of Health Professionals, an agency of the U.S. Department of Health and Human Services. The goal of this planning grant was to conduct the additional targeted planning and analysis activities necessary to determine the feasibility of developing programs that would implement the three strategic initiatives referred to above. These grant funds were the primary source of funding that made this project possible.

In March of 2009, John Snow, Inc, in partnership with staff from the Tufts University *School of Dental Medicine*, was hired by the Delaware Health Care Commission to assist the State to conduct this work. JSI's charge was to: 1) talk with key stakeholders in Sussex County and throughout the State to gain a better understanding of the oral health needs, service gaps, and barriers to access as well as the overall context in which these strategies would operate, 2) research exemplary practices nationally related to the strategies referred to

above, 3) identify a series of potentially viable program or policy ideas that could be applied across each of the strategy areas in question, and 4) conduct detailed feasibility studies that would assess whether the programs identified were truly viable and sustainable from a programmatic and financial perspective.

The following report is the culmination of JSI's work with the Delaware Health Care Commission, the Division of Public Health, and the Oral Health Coalition. The report provides summary background on the oral health needs and workforce issues that exist in the State, and particularly in Sussex County. It also describes JSI's approach and the methods that it applied to conduct the work. More importantly, the report summarizes the project's findings and provides detailed program plans and feasibility assessments for a series of initiatives that could be applied to address each of the targeted strategies.

SECTION II: PROJECT APPROACH AND METHODOLOGY

Overall Approach

As stated above, the goal of this planning project was to determine the operational structure and the overall feasibility of a series of programs that if implemented would address the three high-impact strategies referred to above. To achieve this goal the JSI Project Team implemented an iterative project approach that would: 1) assess the underlying issues and the context in which the strategies would function, 2) engage key stakeholders and ensure that all ideas, concerns, and perspectives were vetted, 3) compile the necessary information required to develop and assess the feasibility of effective, sustainable, evidenced-based models for each of the proposed strategies, and 4) provide detailed program plans and financial proforma for the most promising and viable models identified.

Periodic meetings and conference calls were scheduled between the JSI Project Team and the project's Steering Committee to ensure that information flowed freely and that there was general buy-in regarding the direction of each of the initiatives being explored. Once there was adequate buy-in among the Steering Committee members regarding the possible options for each initiative, the Project Team developed summary business plans and financial proforma to assess the feasibility of the options.

JSI's approach was focused on developing program recommendations that were practical and rooted in the Sussex County context. With this in mind, the Project Team, to the extent possible, identified individuals and organizations that were willing and able take the lead on developing the proposed programs and obtained their general buy-in regarding the value, general program purpose, and basic structure of the identified initiatives. This approach allowed the Project Team and the Oral Health Coalition to go beyond the theoretical and focus on the development of specific strategic options that were viable and had a reasonable chance of being implemented successfully.

Detailed Methodology

More specifically, the JSI Project Team proposed and implemented a three-phased approach. In Phase I, the JSI Project Team conducted a detailed review of existing reports and secondary data on oral health need to ensure that they had a clear understanding of

the oral health issues in Delaware and Sussex County. They also conducted a summary inventory of the oral health service providers and other oral health resources in Sussex County. This allowed the Project Team to become rooted in the Delaware context so that they could discuss issues and possible programmatic options with stakeholders in an informed way. The primary activity in Phase I was an extensive series of key informant interviews with key stakeholders and potential collaborators with respect to the program ideas that were being explored. These interviews allowed the JSI Project Team to better understand the needs of Sussex County residents as well as the challenges and barriers related to oral health service access, particularly for the County's low income populations. More importantly, these interviews allowed the Project Team to explore specific program options and the overall feasibility of the strategies in question. These interviews also identified individuals or organizations that might be willing to play active roles in developing these initiatives.

Another major task in Phase I was to begin to identify and characterize best practices and/or exemplary programs nationally that could be drawn from and applied in Delaware. Towards the end of Phase I, the Project Team integrated its findings from the interviews and the initial review of best practices with the Project Team's own experience with relevant programs and began to flesh out the broad characteristics of a series of program models for each of the strategy areas in question. At the culmination of Phase I, the Project Team convened a multi-stakeholder Steering Committee, a group of public and private stakeholders assembled to oversee the planning grant, to present its initial findings and obtain agreement on a common vision for the three strategies being explored.

In Phase II, the JSI Project Team continued to conduct key informant interviews with various stakeholders in order to refine its preliminary assessment. However, the primary focus of Phase II was on securing basic support for the most viable of the programs being explored from potential sponsors, collaborators, and/or partners. We also began to collect the detailed information from these stakeholders so that the Project Team could begin to develop the operational program plans and financial proforma necessary to assess the feasibility of the options. During Phase II, the Project Team also continued to compile information on best practices nationally so that the initiatives that were ultimately recommended would be rooted in the national experience. At the end of Phase II, the Project Team convened the Steering Committee again to review the full range of options and present more detailed program models, including preliminary financial pro forma for each of the initiatives being considered.

In Phase III, the JSI Project Team continued to meet with key stakeholders in Sussex County and through out the State to round out its interviews and obtain buy-in for its recommendations. Its primary task was to follow-up with the main program partners for each of the recommended initiatives and ensure that it had all the necessary program and financial data to develop final detailed business plans and financial proforma. During Phase III, the Project Team also conducted sensitivity analyses to test and refine the program assumptions for each of the initiatives. These analyses allowed the project team to understand how sensitive the financial projections were to fluctuations in some of the key assumptions. The culmination of Phase III was a series of draft and final reports and presentations, including this written report and a PowerPoint Presentation that would allow

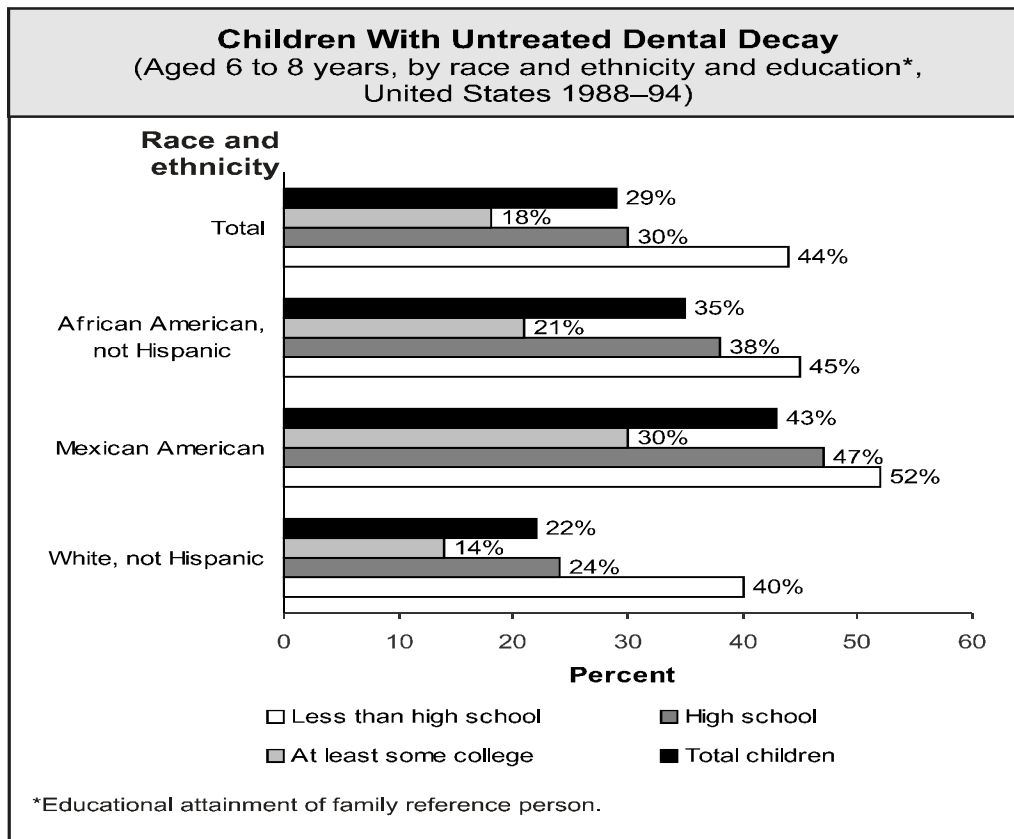
the Steering Committee, the Delaware Division of Public Health, and the Delaware Health Care Commission to present the results of its planning efforts.

SECTION III: SUMMARY OF ORAL HEALTH NEEDS AND WORKFORCE SHORTAGES

National Perspective

Dental disease is one of the nation's leading health issues and has become what many experts call "the silent epidemic." Millions of people throughout the country suffer from the impacts of dental disease, which disproportionately affects low-income families, minorities, and the elderly, as well as those in rural areas.

While the overall prevalence of dental disease is improving, recent studies show that it is still the single most common chronic childhood disease, five times more common than asthma, the second most common chronic childhood disease. Nationally, more than half of all children have caries (tooth decay) by the second grade, and, by the time students finish high school, about 80 percent have caries.¹ Moreover, even though the overall prevalence rates are improving, the rates of disease are increasing among very low-income children, young children, and among Hispanic and black children.

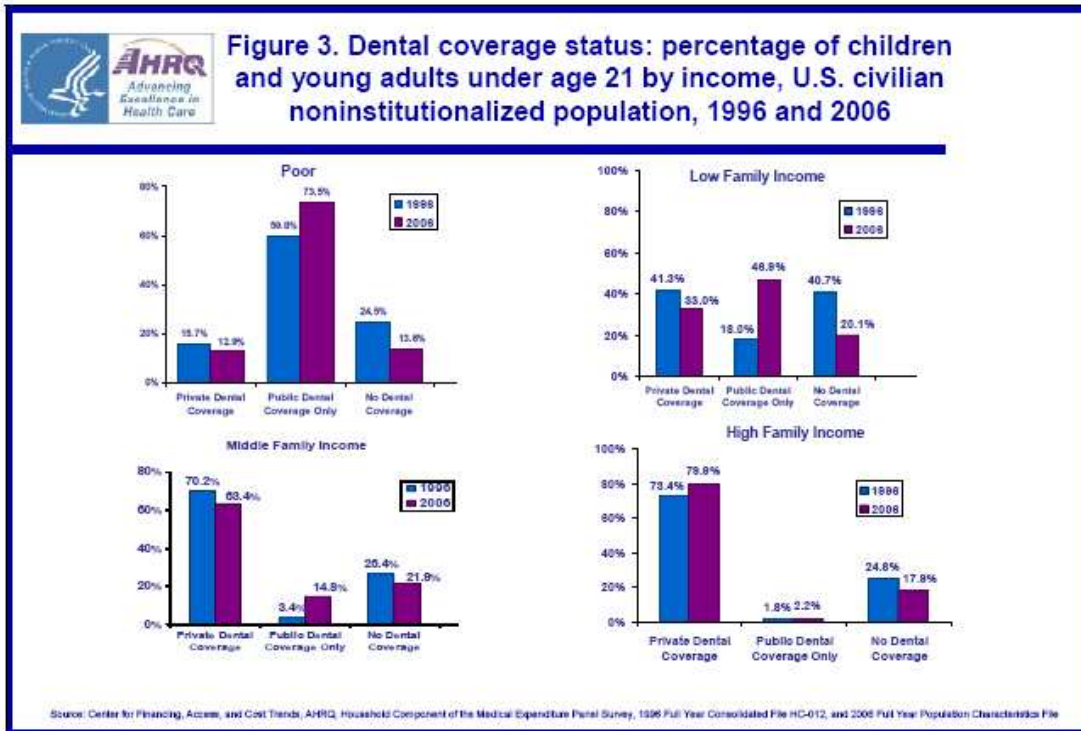


Source: CDC, NCHS. National Health and Nutrition Examination Survey (NHANES), 1988–94.

¹ National Center for Health Statistics (NCHS). *National Health and Nutrition Examination Survey III, 1988–1994*. Hyattsville, MD: Centers for Disease Control and Prevention (CDC), unpublished data

Perhaps even more fundamental, according to research conducted on behalf of the Medicare Expenditure Panel in 2007, one-third of the entire U.S. population lacks dental coverage and as a result may have limited to no access to dental services (Manski and Brown, 2007). This is particularly problematic among adults, older adults and people with disabilities. Not only are these populations more likely to be uninsured and lack access to services they also often have unique challenges related to co-morbidity and access, which hinder their use of dental services and increase the risks and overall health impacts of dental disease. For example, according to a survey of 14 nursing home residents with hospital-acquired pneumonia, dental plaque was reported as the source of infection in 10 of these 14 residents. (El-Solh et al., 2004) Adults, and especially older adults, also often have chronic conditions, such as heart disease, diabetes, and depression. These chronic conditions are complicated and intensified by oral health problems. Finally, caring for the dental disease of older adults and adults with disabilities is often complicated by mental health or cognitive issues that make management of services difficult in most settings.

Due largely to efforts by State Medicaid Offices and the State Children’s Health Insurance Program (SCHIP), children, including those in low income households, are much more likely than adults to have some form of dental coverage. However, children still face major access barriers. More specifically, even though 80% of children in the United States have some form of dental coverage, less than 50% of children actually utilize dental services. Children who are uninsured or publically insured are even less likely to use service, as only 26% of uninsured children and 35% of publically insured children receive any kind of dental services. (Shelly Gehshan, M.P.P. Pew Center on the States, - The U.S. Oral Health Workforce in the Coming Decade: Workshop Summary, 2009)



There is a complex array of factors that come together to cause this oral health access issue, including a declining number of practicing dental professionals; lack of economic

incentives for dental professionals to serve low-income populations; poor coordination between providers of primary care and dental care; large numbers of people with no dental insurance; insufficient amounts of public funding for dental care; inefficient use of available resources; lack of public awareness about ways to prevent oral disease; lack of understanding of oral health issues by policymakers; and lack of effective government policy to correct these problems. (National Call To Action To Promote Oral Health, April 29, 2003).

Delaware Perspective

Delaware is not at all insulated from these issues. While there is limited data on the prevalence of dental disease or dental care access in the adult population, data on childhood disease and access certainly mirror's the national data. In 2002, the Delaware Division of Public Health initiated an oral health assessment of third grade children. At the time of the study, 56% of the children screened had dental caries (treated or untreated tooth decay), and 31% of these children had untreated decay. Only 34.1 percent of the children had a dental sealant on one or more permanent molars.

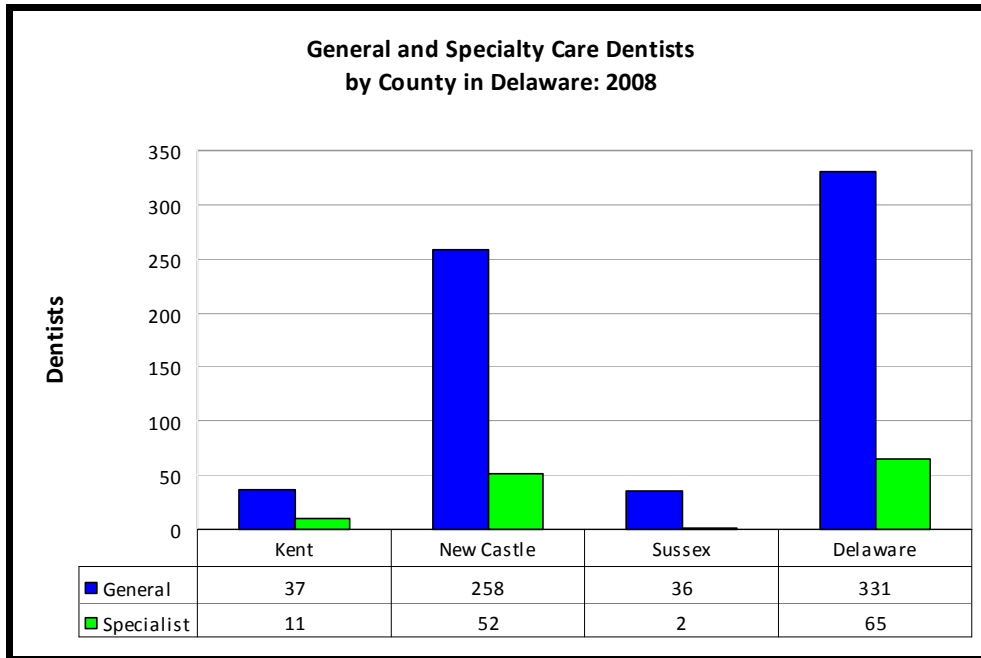
With respect to access to dental care, the issues in Delaware are even more extreme than what is seen nationally. This is particularly true in Sussex County. In Sussex County demographic and economic trends combined with limited access to public transportation, geographic misdistribution of healthcare services, and a general shortage of dentists willing to serve low income, Medicaid insured populations have hindered access to dental care services, particularly for low income populations. While there have been some signs of improvement, State Medicaid data shows there are still major shortages, particularly in many of the County's western most areas.

Delaware is a small, but rapidly growing State of 865,000 people. Between 2000 and 2008, Delaware's population grew by 11%. New Castle County in the north grew by only roughly 6% during this period, while Kent and Sussex Counties both grew by more than 20%.² This growth has been driven primarily by rapid growth in the area's vacation and retirement communities as well as modest growth in the agriculture sector. As a result, there has been growth in the agriculture, construction, and retail/service industries and a subsequent influx of older adults as well as part-time, often seasonal, immigrant/migrant, and/or low paying laborers. From a health care perspective these populations are some of the most at-risk populations and are more likely than the general population to lack health care insurance coverage and have access to care problems.

According to the 2008 *Dentists in Delaware* study conducted by researchers at the Center of Applied Demography and Survey Research (CADSR) at the University of Delaware, there were only an estimated 331 dentists practicing general dentistry in Delaware. Seventy-eight percent of these dentists (258 dentists) were practicing in New Castle County. In Kent County there were only 37 general dentists serving the entire population and in Sussex County there were only 36 general dentists. With respect to dental specialists, there were only 65 dental specialists in the State. Eleven of these specialists were practicing in Kent

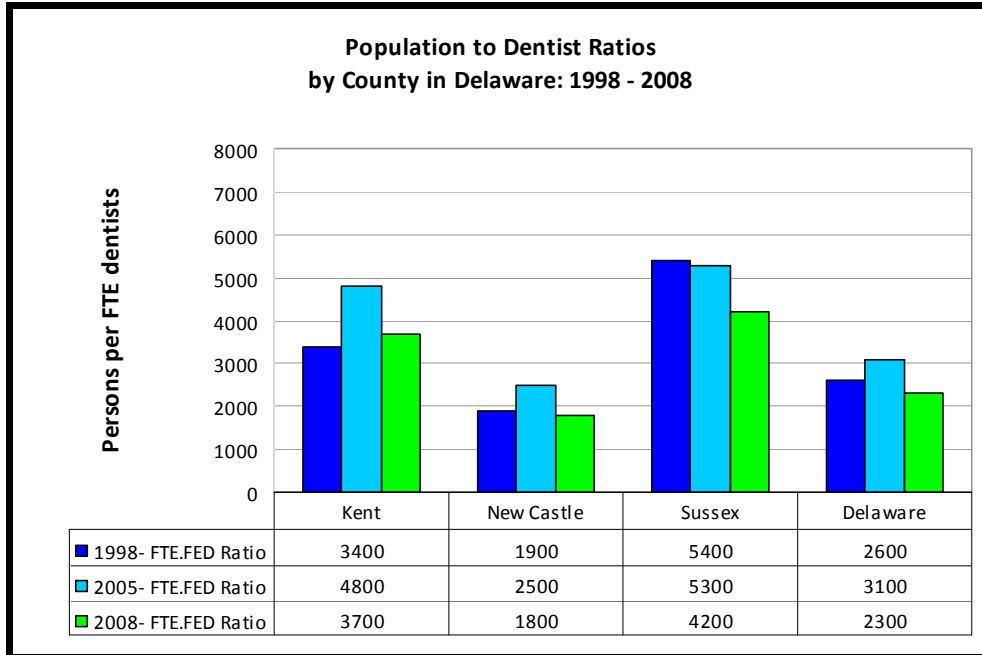
² Kent County's population grew by approximately 22% during this time and Sussex County's population grew by approximately 21%.

County and only 2 were practicing in Sussex County. Furthermore, neither of the dental specialists in Sussex County reported seeing pediatric patients, leaving a complete void for pediatric specialty care in the County.

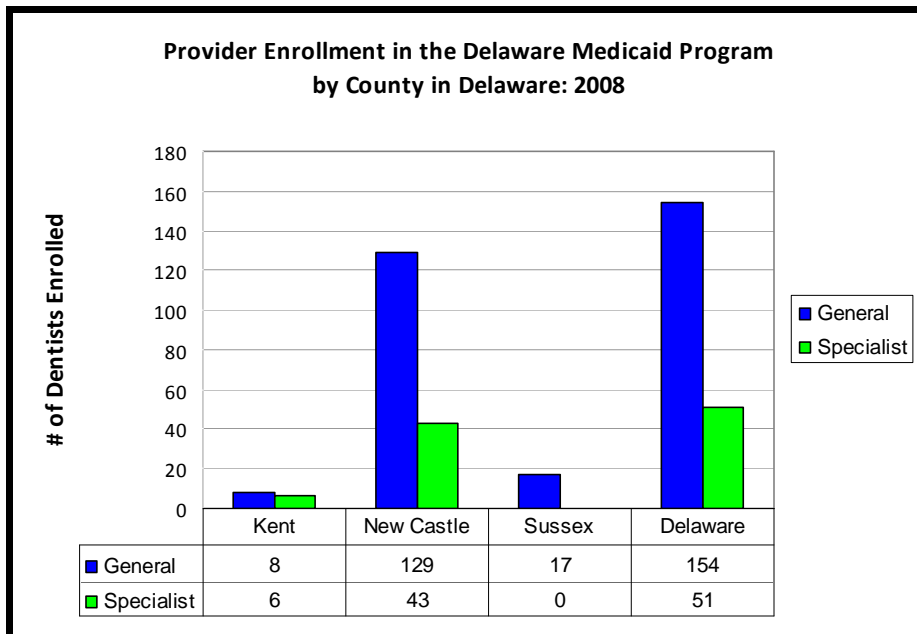


Based on the 2005 Dentists in Delaware Study, also conducted by CADSR, Sussex County was a dentally underserved area according to the federal guideline of 1 or less FTE dentist per 5,000 persons. Kent County at this time was teetering on the border of the underserved designation, while New Castle County did not meet the designation. In 2005, the statewide ratio was 1 FTE dentist per 3,100 persons (1:3,100). New Castle County’s ratio was 1 FTE dentist per 2,500 persons (1:2,500), Kent County’s ratio was 1 FTE dentist per 4,800 population (1:4,800), and Sussex County’s ratio was 1 FTE Dentist per 5,300 population (1:5,300). In 2008, researchers at CADSR repeated the *Dentists in Delaware* study. The study showed improvements and had the State’s designations been up for renewal it is possible that none of the State’s County’s would have met the federal guideline as a dentally underserved area. The statewide ratio of dentists to population dropped from 1 FTE dentist per 3,100 population to 1 FTE per 2,300 population. New Castle County dropped from 1:2,500 to 1:800. Kent County’s ratio dropped from 1:4,800 to 1:3,700, and Sussex County’s ratio dropped from 1:5,300 to 1:4,200.

The 2008 CADSR Report also showed improvements in the number of dentists reporting that they accepted Medicaid patients. In 2008, 46% of general dentists statewide and 42% of dentists in Sussex County reported that they accepted Medicaid. This was up from 33% of dentists reporting that they accepted Medicaid when the study was done in 2005.



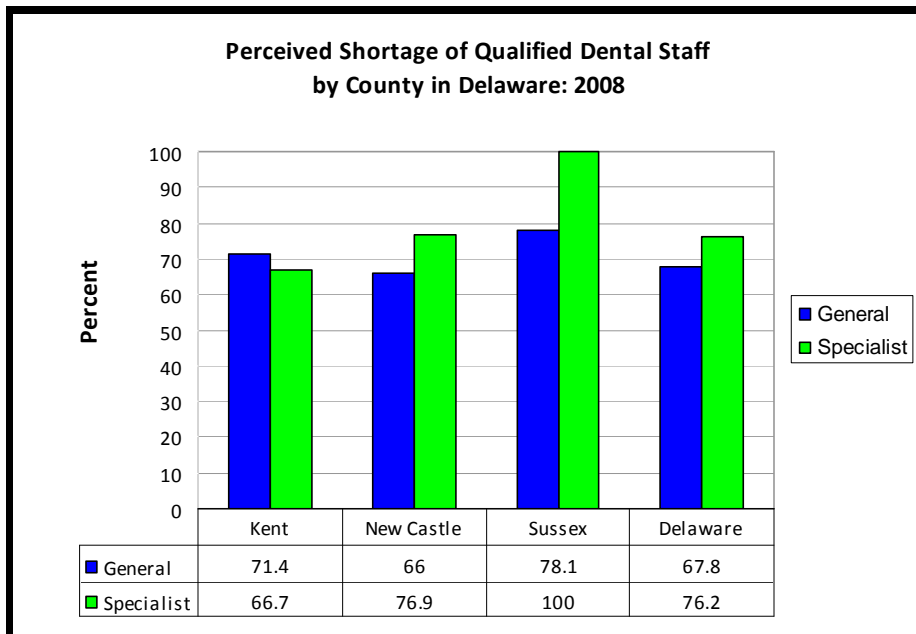
While these data do suggest considerable improvement, it should also be noted that the 2008 report showed an uneven distribution of dentists, particularly in the more rural areas in the western parts of these counties. For example, in Sussex County there were large portions of the county that reported having no dentists and even though the County at this time may not have met the federal guideline of 1 FTE dentist per 5,000 persons, the ratio in the areas around Bridgeton to Laurel exceeded the guideline. If you consider the transportation barriers that exist for many people in the County, the shortages and access issues become even more extreme. Quantitative and qualitative data shows that low income, Medicaid insured children and families are particularly at-risk and often have an extremely difficult time accessing timely, well coordinated services.

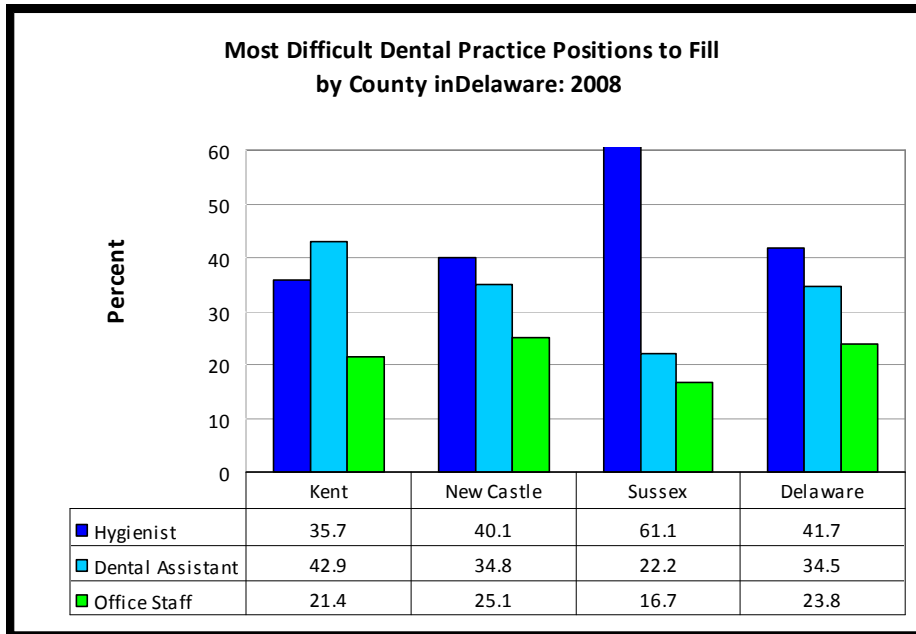


Furthermore, it should be noted that data provided by the Delaware Division of Medicaid and Medical Assistance does not portray as positive a picture. In 2008, there were 103,536 children aged 0 – 20 who were living in low income families and eligible to receive Medicaid dental services. Of these eligible children, only 29% or 30,427 children actually received any dental services. In Sussex County, there were 25,460 children eligible to receive Medicaid dental services and only 22% or 5,638 actually received any services. While these penetration rates are comparable to rates in other states, it still shows the great need for services and the potential impact that could be achieved by expanding capacity, reducing barriers to access, and investing in oral health education and prevention.

This is particularly evident when you explore provider enrollment more fully, in calendar year 2008, State data shows that there were only 14 dental locations in Sussex County, including the two public health dental clinics, enrolled in the Delaware Medicaid program and approximately 19 dentists providing services at these locations. These 19 dentists served the 5,638 patients reported above and made approximately 13,777 Medicaid claims (10,577 were made by the 17 private dentists and the remaining 3,200 is the estimated figure made by the 2 dentists working at the Public Health Clinics in Sussex County.)

Another important aspect that has a major bearing on access is the availability of hygienists and dental assistants that allow dentists to maximize their capacity. The 2008 Dentists in Delaware Study revealed that 32% of dental practices in the State perceived themselves to not be fully staffed with the appropriate dental hygienists, dental assistants, and other office staff. In New Castle County 34% of practices believed they were understaffed. In Kent County 28% of practices held this belief and in Sussex County 22% of practices felt that they were understaffed. These shortages impact access as they reduce the productivity of the existing dentists. The provider type that practices thought was most difficult to fill was dental hygienists, with 42% of dentists statewide and 61% of dentists in Sussex County reporting difficulty in recruiting dental hygienists. Thirty-four percent of dentists statewide and 22% of dentists in Sussex reported difficulties in recruiting dental assistants.





SECTION IV: REVIEW OF BEST PRACTICES

One of the major objectives of this project was to review the existing body of publically available literature related to each of the initiatives. The intent was to make sure that the Project Team understood the full breadth of program options and best practices that could be applied in Delaware to address oral health access and strengthen the State’s oral health workforce, particularly in rural areas downstate. Given the lack of peer reviewed research presenting empirical information related to oral health services access and workforce training, the research team relied heavily upon information published by professional membership organizations, philanthropies and other entities concerned with improvement of the public’s health. A listing of the white papers, policy briefs, manuals, and other hard-copy or web-based resources that were included in the review is provided in Appendix B.

The following is a summary of the review of best practices by strategic area. With respect to the multi-purpose clinic and the workforce training initiatives, the range of options are relatively clear and discrete and the following summary should be viewed as the full range of possible programmatic or policy options that could applied in Delaware. With respect to the case management initiative, the policy and programmatic options are much more variable and complex. Moreover, they are dependent on the resources and policy context in which they are applied. In this case, the JSI Project Team has presented a more general framework that outlines the major types of case management programs that have been implemented nationally, including brief examples of how certain agencies or organizations have applied these program types.

A. Establishment of a Multi-purpose Dental Clinic and training facility in Sussex County

The following is the range of options that have been applied in the United States to develop new oral health access points, specifically geared to low income uninsured or Medicaid insured individuals. JSI has focused on the development of public, private, or quasi-public clinics that either by mission or public mandate are dedicated to serve the target population. It should be noted that the JSI Project Team has not included discussions of initiatives that work to either promote greater participation of existing private sector dentists in the State's Medicaid program or to encourage private sector dentists to serve a greater number of patients on a discounted or sliding fee scale basis. We view this as the policy option that is currently underway, and would encourage the Division of Public Health, the Health Care Commission, and other stakeholders to continue to support these efforts regardless of whether a new, dedicated oral health access point is created or not. Any capacity that is generated through these efforts is likely to be incremental and would serve to optimize access by generating dispersed capacity more geographically proximal to where the population works or resides.

Federally Qualified Health Centers

One of the most viable and frequently applied options to generate capacity and enhance oral health access for the target populations is the development of oral health operations within an existing federally qualified health center (FQHC). An FQHC is an independent, not-for-profit primary care clinic that has applied for and successfully gained a unique federal designation granted by the Health Resources Services Administration's (HRSA), Bureau of Primary Care (BPHC), called FQHC status. Clinics with this status must reside in a designated medically underserved area (MUA) or serve a specific medically underserved population (MUP) that has demonstrated high medical need and a significant lack of primary care capacity. In order to be designated as an FQHC, a clinic must also agree to: 1) provide comprehensive primary care services including an array of preventive, enabling and supportive services, 2) serve communities in need without respect to their ability to pay, 3) provide primary care services to those across the full age spectrum, and 4) provide access to obstetric, mental health, substance abuse, and oral health services either directly or via an arrangement with an existing provider. In exchange for fulfilling these programmatic requirements FQHCs are granted a number of benefits that greatly enhance their viability and subsidize care to low income, uninsured, and otherwise vulnerable populations. Specifically, FQHCs receive enhanced, cost-based Medicaid and Medicare reimbursement, free malpractice coverage for many of its providers under the Federal Tort Claims Act (FTCA), access to discounted drugs through the federal 340 B Drug Program, and access to specific federal grant funds to support organizational infrastructure enhancements or service expansion. A clinic can apply for FQHC status through Section 330 of the Public Health Service Act or through the FQHC Look-Alike Program. Applications that are submitted through the Section 330 program face stiff competition and a rigorous review and scoring process. If FQHC status is awarded these centers receive up to \$650,000 in base annual funding in addition to the benefits described above to support uncompensated services and their efforts to serve the target population. Applications that are submitted through the Look-Alike program receive all the benefits mentioned above but do not receive 330 base

funding, although they are eligible to apply for the base funding through the 330 program at a later date.

At a minimum, federally qualified clinics must show how they will facilitate oral health access for their primary care medical patients. In doing so they must articulate the current oral health service system in place for the target population, characterize the specific barriers to oral health access and show how they will assist their medical patients to access these services. Clinics are not required as part of their base FQHC program status to provide oral health services directly or even to absolutely ensure access to their target population. They must merely show how they will link their medical patients to the oral health system in place and describe what they will do to enhance the likelihood that they will access oral health services. For clinics that are funded under the 330 Program, once they are granted FQHC status, the clinics may apply for additional grant funds under the Oral Health Expansion Program, which will allow them to develop and sustain oral health services provided in an integrated way either at the same location as their medical care operations or at a satellite site within their service area. If a site applies for and is successful at this grant process then the clinic will receive up to \$250,000 in additional funds on top of their base amount to support services to their low income target population.

A number of challenges still remain for those who apply this option. First, FQHC status provides enhanced Medicaid and Medicare reimbursement for medical services but does not provide enhanced reimbursement for dental services. Enhanced reimbursement for medical services provides a great deal of financial support which is supportive of a clinic's broader operations but the cost-based rate does not apply to the dental services provided at the clinic. In addition, the federal Medicare program does not cover dental services and most state Medicaid programs do not cover dental services for their entire Medicaid-eligible population much less all low income segments of their general population. In Delaware, the Medicaid program covers oral health services only for children up to the age of 20. Adults are not covered at all. Another challenge is that depending on the culture of dental care and dental service reimbursement in the State, FQHCs can be seen as competition to the private sector if the private sector relies upon Medicaid enrolled patients in their practice.

Spotlight on FQHCs: Choptank Community Health System

Choptank Community Health System (Choptank) provides comprehensive services at seven locations around the mid-shore region of Maryland; in addition Choptank operates Migrant Health and School Based Wellness programs. Each of the Choptank sites adapts their services to the particular needs of the community which they are serving. Over time they have developed numerous programs to meet the primary care, social, mental health, health education and dental services needed by their constituents.

Over its long history, Choptank has continued to grow and mature as an integral part of the health care service delivery network on Maryland's Eastern Shore. During calendar year 2007 Choptank provided services to more than 24,000 individuals generating in excess of 92,000 patient visits. As an FQHC, Choptank receives significant funding from the Federal government to help support its mission of providing quality health care for all. Base federal funding for all Choptank sites is approximately \$3 million per year or 30% of its annual

operating budget. Federal funds are critical to support the provision of care to uninsured and underinsured patients as well as to provide enabling services and programs. The School Based Wellness Program provides comprehensive primary care, mental health and dental services within the school environment. Currently the Program is operated at 5 schools. The Migrant Health Project utilizes an outreach model to augment the services offered at each of the Choptank sites. Through outreach they are able to engage migrant farm worker families in their home sites using bilingual clinical outreach teams who visit the migrant farm worker camps. This program operates for approximately 10 months per year with heaviest utilization during summer months.

Rural Health Clinics

Rural communities have had a longstanding difficulty recruiting and retaining health care professionals. For many rural areas the lack of health care professionals is tied to the fact that there is often a disproportionate representation of Medicare and Medicaid beneficiaries. In some of these communities Medicare and Medicaid payments can account for 60% of practice revenue. Consequently the provision of adequate Medicare and Medicaid payments is important to assuring the availability of health care in rural underserved areas.

In 1977, Congress passed the Rural Health Clinic (RHC) Services Act to enable the development of RHCs as a means to improving access to primary care in underserved rural areas. Federal certification as an RHC requires that the area in which the RHC is to be developed is classified as rural and is designated as either a Health Professional Shortage Area or a Medically Underserved Area. An RHC is a clinic certified to receive special Medicare and Medicaid reimbursement. Under this model they are required to use a team approach of physicians and midlevels with a minimum staffing of midlevels 50% of the clinic time. In subsequent legislation Congress included nurse midwives, psychologists and clinical social workers as part of the RHC benefit model. Dental services are often provided by an RHC, however, federal legislation does not mandate the provision of enhanced payments for those services.

There are approximately 3,000 RHCs throughout the United States which have a variety of governance and ownership models. Approximately half of all RHCs are independent clinics and half are integral parts of hospitals (provider-based). Of the independent clinics approximately half are owned by physicians and half are owned by hospitals. RHCs can be for-profit or not-for-profit, public or private.

Similar to the not-for-profit subsidized model (described below) difficulties encountered by these types of clinics include obtaining the up front costs to purchase and fit a property and the development of a long range business plan which not only is designed to keep the organization financially sound while serving the target population but also plans on the future needs of the facility (upkeep, repairs and other capitol expenditures) and creates a significant amount of reserves for such purposes. The payor mix and State policies regarding which populations are covered by Medicaid are also considerable drivers in the success of this model. Rural Assistance Center. <http://www.raconline.org/>

Spotlight on Rural Health Clinics: Alachua County Organization for Rural Needs

The Alachua County Organization for Rural Needs, Inc. (ACORN) is a not-for-profit 501 (c)(3) Rural Health Clinic serving residents of Alachua, Bradford, Columbia, Union and other counties in North Central Florida. ACORN Clinic was founded in 1974 initially focused on home visits and social service referrals. In 1976, ACORN established a medical clinic to meet the area's growing healthcare needs, and later expanded its services by starting a dental clinic in 1987. Ninety-eight percent of patients are at or below 180% of the Federal Poverty Guidelines, 67% Caucasian, 25% African American, 8% Hispanic; 13% of patients are children and 30% are elderly. In 2008 ACORN had approximately 19,000 patient encounters in all programs including 7,883 medical clinic visits; 3,948 outreach education contacts in elementary schools in an eight county area of rural north central Florida; 653 pediatric dental visits for routine oral health maintenance and treatment of dental caries; 4,016 comprehensive dental visits for exams, fillings, x-rays, crowns and denture; 1,287 visits for dental hygiene and 220 visits for oral surgery for extractions and minor oral surgery.

Not-for-profit Subsidized Clinic or Quasi-Public Authority

Another possible option is the development of a not-for-profit clinic or quasi-public authority dedicated to serving the low income target population that is neither an FQHC nor a RHC. In terms of promoting access, this option would have many of the same benefits of an RHC-or FQHC-option but would not come with many of the financial benefits associated with RHC- or FQHC-status. It could be a full service primary care clinic that also provides Oral Health Services or it could be a standalone dental clinic.

A clinic of this nature would gear its operations, outreach/recruitment efforts, and overall business model on serving the low income population. Typically, clinics of this nature rely heavily on reimbursement from the State Medicaid Program in which they are operating. The scope of services and target population for this type of clinic would therefore be geared carefully to the eligibility standard of the State's program and would serve others outside of the eligibility requirements on a controlled and likely limited basis. Most State Medicaid program's cover oral health services for children but some cover services for both children and adults. In Delaware, a clinic of this nature would likely serve anywhere between 70 – 80% Medicaid insured children.

These programs generate some revenues through co-pays and patient payments based on a sliding fee scale adjusted to a patient's annual household income. Typically, they also rely on significant amounts of support from other private and public sector sources such as grants or subsidies from state/local government entities or from private philanthropies. Their ability to sustain their efforts at all or to serve uninsured patients that are not eligible for Medicaid are usually entirely reliant on these outside funding sources unless they are able to operate very efficiently and generate large, sustained revenues from the State's Medicaid program.

These models are predicated on the identification of an existing organization or individual that is willing to dedicate itself to developing new or to re-organizing its current operations geared to this purpose. These models are based upon a lowered overhead structure that is

typically achieved by reducing the clinics occupancy costs and/or initial capital expenditures. These clinics also often use volunteer dentists either in part or in full, which lowers their operating expense. By reducing these overhead and operating costs, the clinics are able to serve individuals whose insurance does not reimburse well (which is typical of Medicaid Programs) and to some degree provide sliding fee and free care, depending on the characteristics of their patient population. Often these clinics are operated as part of larger health services organizations and therefore operational losses are obscured in an organization's larger balance sheet.

Difficulties encountered by these types of clinics include obtaining the up front costs to purchase and fit a property and the development of a long range business plan which not only is designed to keep the organization financially sound while serving the target population but also plans on the future needs of the facility (upkeep, repairs and other capitol expenditures) and creates a significant amount of reserves for such purposes. The models with the most success are those associated with funding entities and philanthropic organizations which provide ongoing support to subsidize the provision of care. The payor mix and State policies regarding which populations are covered by Medicaid are also considerable drivers in the success of this model.

Spotlight on Not-for-profit Subsidized Dental Clinics: Northwest Colorado Dental Coalition

Northwest Colorado Dental Coalition identified the need to address the dental service access problems in a five county region of the state. In this region they were not able to identify any private practice dentists who would accept Medicaid insurance or institute a sliding fee scale for low income insured or uninsured. Their estimates indicated that there were over 4,000 children in the region who would benefit from the establishment of a not-for-profit clinic or quasi-public authority. Based upon information available to them it was of their opinion that the majority of these children had never been examined by a dentist and that there was a high rate of dental caries.

Planning for the clinic occurred during 2003 with subsequent efforts focused on the pursuit of funding to obtain and renovate space, purchase major dental equipment and hire a preliminary dental team. It became evident early in the planning and development that collaboration with community leaders was critical to the success of their efforts. Throughout the process, State and local social service and public health agencies were involved along with the areas Early Childhood Centers, Head Start, United Way, hospitals, and preschools. The Dental Hygiene School and several private practice and retired hygienists and dentists were also involved. The clinic opened in 2005 to provide comprehensive dental services to the target population. Approximately \$570,000 from public and private sources was obtained to plan, secure, renovate and fit the resulting dental clinic.

Free Clinic

Free clinics are typically volunteer-based, safety-net health care organizations that provide a full range of medical, dental, pharmacy, and/or behavioral health services. The free clinic model is a variation of the subsidized not-for-profit option with the distinction that most free clinics do not do any third party billing and only serve individuals or families who are

uninsured and ineligible for public assistance programs such as Medicaid. The target population for free clinics is typically a community's most vulnerable populations who face major barriers to access and have limited to no ability to pay for services. Free clinics are usually 501(c)(3) tax-exempt organizations, or operate as a program component or affiliate of a 501(c)(3) organization. Entities that otherwise meet the above definition, but charge a nominal fee to patients, may still be considered free clinics provided essential services are delivered regardless of the patient's ability to pay. Free clinics rely upon either ongoing fundraising and philanthropic support or a combination of fundraising and use of volunteer clinicians.

Sustainability of free clinics, regardless of whether it is a free standing or integrated model is extremely challenging. Just as much time can be spent on fundraising and grant writing as on the actual delivery of service as there really is no good "business case" for a free clinic model. Staffing, regardless of whether paid or volunteer is difficult because of the narrow scope of patients seen and the perceived or real challenges to serving this population.

Spotlight on Free Clinics: I.M. Sulzbacher Dental Center

(Starting a Dental Project Using the Clinic Model: I.M. Sulzbacher Clinic

http://www.freeclinics.us/downloads/Dental_clinic_startup_model.pdf?phpMyAdmin=278r0yk9yJgzQ6eBpEM4NJ5Xid)

Located in Jacksonville, Florida the I.M. Sulzbacher Dental Center provides comprehensive dental care including exams, x-rays, cleanings, extractions, root canals, crowns and bridges and dentures. This community wide collaboration staffs 3 operatories within the Salvation Army Senior Center using four full time staff and over 50 volunteer dentists. While the initial target population was homeless men, women and children there are currently forty area agencies which refer a spectrum of patients to the Dental Center. Referring agencies screen patients for financial eligibility and refer those who are below 150% of the federal poverty level for services.

A ten dollar payment is requested from patients who are homeless and a twenty five dollar payment for indigent but not homeless individuals is requested per visit. Costs of lab work and dentures are also charged to the patient, however, at the request of referring agencies or at the discretion of the Dental Center fees are waived and/or paid for from grants from supporting organizations.

Public Health Clinics

(www.health.gov/phfunctions/)

In 1994, as part of the Public Health Functions Project a framework for describing the Essential Public Health Services was developed. The Essential Services provide a working definition of public health and a guiding framework for the responsibilities of local public health systems. According to this framework, Essential Service #7 is: "Link people to needed personal health services and assure the provision of health care when otherwise unavailable."

Public health departments have always played a major role in addressing access issues for the most vulnerable segments of the population. Historically, this has often meant providing direct services across the full continuum of primary care services, including preventive, medical, mental health, substance abuse, communicable disease, and oral health services. Public health departments in rural areas have been particularly active participants in their area's safety nets as they are often one of the few providers in their areas. Over the past 20 years, public health departments have been moving away from providing direct services themselves, particularly with respect to primary care medical operations.³ Health departments have opted to privatize direct service operations in this area and have cited issues related to managed care contracting, recruitment/retention of providers, and fluctuating public budgets as the major reason for this change. This trend has not been quite as clear with respect to mental health, substance abuse, communicable disease, and oral health care. Nationally, there are tremendous service gaps and shortages of primary care specialty providers (i.e., behavioral health, communicable disease, and oral health providers). The shortages are especially extreme for providers who are willing to serve Medicaid insured patients or low income uninsured patients on a sliding fee scale basis. As a result, public health departments have had no choice but to provide services directly.

This is certainly true in Delaware. With respect to oral health services, the State operates six public health dental clinics that operate throughout the State, two of which are in Sussex County (Georgetown and Seaford). These clinics provide preventive and restorative services and serve exclusively Medicaid eligible children. These clinics generate substantial revenue from the State's Medicaid program but also receive a great deal of financial support from the State through the Division of Public Health who pays the salaries of all the dental clinic staff.

Similar to other programs nationwide, the State's public health dental clinics have built strong partnerships with the State's elementary and middle schools, other community agencies serving children, and local private dentists. Many of the State dental clinics are situated in the State service centers, which provide a wide array of public services to low income children, families, and individuals. These clinics in partnership with other community organizations have made great efforts to reach out to their communities, promote participation among private sector dentists, and enhance access to oral health services for children. Despite these efforts there is still great need and demand for services especially among low income children and families in Delaware's most rural areas. It should be noted that in Delaware the public health clinics do not address the service gaps and access barriers for the low income adult population. The service demand and lack of capacity for serving this population is extreme and growing.

In 2008, the Sussex County Public Health Dental Clinics in Georgetown and Seaford served 1,299 children. One possible option to expand oral health capacity in Sussex County would be to strengthen and expand the capacity of these public health clinics. There are numerous ways that this option could be implemented, some would require limited policy,

³ The future of the public's health in the 21st century. Institute of Medicine (U.S.). Committee on Assuring the Health of the Public in the 21st Century. 2002.

strategic, operational or management changes while others would require substantial changes. Most simply, the sites could take steps to hire more dentists and expand the hours of operation at its existing clinic sites. While there is not unlimited capacity to expand at the current locations, substantial gains could be made by maximizing utility of the existing space and potentially scheduling evening and weekend clinic sessions. This would allow the clinics to serve greater numbers of Medicaid insured children. Other scenarios could include developing new satellite clinics, renovating and expanding physical space at the existing clinic locations, and changing the scope of services to include uninsured adults. Some of these options would not be sustainable unless there were major policy changes related to financing and perhaps governance. More specifically, the programs would need to retain the revenues generated by the clinics to offset operational expenses related to expansion and/or covering adults. The revenue generating potential for the public health clinics is substantial given the State's relatively high Medicaid reimbursement rates. If the clinics' could retain their program income then they could use it to justify and offset expenses incurred by serving uninsured adults with limited ability to pay. These policy and programmatic issues would likely be very challenging given the State's current budget context.

The major challenge to implementing this option, are the bureaucratic, political, and financial barriers related to operating a clinic within the government setting. This is particularly true given the State's budget crisis. The State has been in a hiring freeze for nearly a year, which has hindered the program's ability to hire new staff and/or to fill existing slots. The program also relies solely on financial support provided by the State to sustain itself. The uncertainty of this support makes it difficult for the program to do mid- or long-term strategic planning. Differentials between private sector salaries and public sector salaries and the stigma that often comes from working for the government can also challenge recruitment and retention of oral health providers.

Spotlight on Public Health Clinics: Virginia Public Health Clinics

Since 1921 Virginia has had a strong history of providing dental care services on the local level in numerous communities. Preventive and restorative care for preschool and school aged children is the primary focus of the public health clinics. The program is not mandatory for local health departments, however 75 of the 135 city or county health departments operate a dental clinic. Dental care is provided by 47 full time dentists, 60 dental assistants and 4 dental hygienists in these care programs in either fixed or mobile clinics. The programs accept Medicaid as a payer and offer a sliding fee schedule based upon income for uninsured patients.

The statewide system provides over 270,000 services in almost 50,000 visits to over 30,000 children. While services are overseen at the local level, the Division of Dental Health in the Office of Family Health Services provides consultation, advice, technical assistance and quality assurance. The Division engages a Dental Advisory Committee which provides input and oversight on issues of concern with representatives from local health departments and local dental clinic programs participating. The dental care programs have build excellent partnerships with communities by enhancing relationships with schools, Head Start, social services and local dental societies through the services offered.

School Based Dental Clinics

Findings from a variety of studies indicate that school based oral health and dental services programs can be effective in serving children and reducing the oral health burden. According to the Centers for Disease Control and Prevention the implementation of school-based dental programs and school based dental sealant programs could decrease or eliminate racial and income oral health disparities among children.⁴

The effectiveness of school based programs is directly linked to the types of barriers which are overcome by their implementation. Many families are not aware of the importance of oral health care and thus the integration of oral health into school programming can increase awareness both among students and their parents. Furthermore, transportation and difficulty taking time off from work (including limited time off and uncompensated time off) are both important barriers to accessing dental services as cited by parents. These barriers are particularly strong for parents in low wage earning positions.

Physically locating a dental clinic within a school directly addresses these barriers and increases the likelihood that children will access vital oral health services. Furthermore, school based dental clinics can be paired with other classroom preventive services such as fluoride mouthwash programs. These models can often be implemented in collaboration with private dentists, FQHCs or other not-for-profit agencies and can be supported through billing, fundraising and other funding mechanisms such as Early Periodic Screening, Diagnosis and Treatment (EPSDT).

Economies of scale need to be considered when establishing a school based dental clinic, smaller schools may not have the student population to support a business model and may need to consider a regional or collaborative approach to establishing the clinic. Capitol expenditures are also often difficult to obtain, the costs of fitting operatories in a school is a very expensive venture and would require funding from non-traditional school funding sources. The costs can be quite significant given many schools currently have poor physical infrastructure and space limitations. Finally, while many schools have expanded their missions to include the provision of supportive services and direct care, the operation of such dental programs may not be well matched to the culture or administrative infrastructures of schools.

Spotlight on School Dental Programs: Minnesota Children's Dental Services

Since 1919, Children's Dental Services (CDS) has been working to improve access to dental services to low income families in Minnesota. CDS is a not-for-profit 501c3 which is overseen by a board of directors. Children from birth to 18 and pregnant women can receive services regardless of insurance status or income while persons 18 to 21 can

⁴ 5Centers for Disease Control and Prevention. Impact of Targeted, School-Based Dental Sealant Programs in Reducing Racial and Economic Disparities in Sealant Prevalence Among Schoolchildren. Ohio, 1998-1999.MMWR. 2001;45(34);736-8. <http://www.healthinschools.org/Health-in-Schools/Health-Services/School-Based-Dental-Health/Dental-Health-Background.aspx>

receive care only if they are insured. CDS operates over one-hundred satellite clinics with one or two operatories each. Fifty percent are located in schools or Head Start centers and fifty percent are mobile units. All sites have intraoral x-ray machines and CDS has the capability to produce digital x-rays. Routine dental treatment is provided in satellite clinics with staffing by a dentist or dental hygienists and one or two dental assistants. Assistance is provided in applying for public insurance programs.

During business hours services are performed in school clinics, or after school at CDS headquarters. Children with painful emergency problems are often able to be seen the same day without waiting to determine if they are financially eligible. In addition to providing dental services CDS hosts an internship program, an oral health screening program and outreach to Native American, Somali, Oromo and Hispanic populations. CDS is expected to launch additional clinics in six school districts in the fall of 2009.

B. Enhancement of dental educational opportunities for dental hygienists and dental residents in southern Delaware

The following section outlines the options for enhancing dental education opportunities for both dentists in southern Delaware as well as dental hygienists. Regarding training opportunities for dentists and, more specifically, a dental residency program, the project has outlined all of the possible options even though some of the options are not feasible or are not legally possible due to State licensure requirements or specific legal statutes. Regarding dental hygienist training opportunities, the project has outlined and discussed the realm of options focusing particularly on those that are most feasible.

Dental Residency Programs

Dental residency programs provide advanced education for dentists who wish to become dental specialists or acquire additional training in general dentistry. Dental residency programs also are a way to increase access to oral health care for underserved populations, and address workforce shortages more broadly, specifically within the region where the residency is located. The residents, and the clinics and hospitals in which the residents do their work, often serve as safety net providers in underserved areas. As such, they are more likely to provide care to low income publically insured or uninsured patients who often have limited access to care. National experience also shows that those completing a dental residency program are more likely to end up serving in the underserved areas where their residency program operated. A review of graduates of Bureau of the Health Professions general practice of dentistry programs showed that dentists that have completed a dental residency are five times more likely to practice in underserved areas than dentists that have not completed a residency program (2). In 2007, roughly 80% of the residents that completed the General Practice Residency program at Christiana Care/ Wilmington Hospital stayed in the Wilmington area to practice dentistry. (JSI Staff is looking for data on where graduates go after graduation from the residency program.)

Based on 2004 data, the percentage of dental school graduates seeking further education was approximately 48%, (1) and this number has been increasing in recent years. Residency training is required to practice in any of the nine recognized specialties of dentistry. In

Delaware, it is also required for non-specialists (general dentists), the predominant mode of practice that has the broadest potential scope of services. As alluded to above, Delaware, until recently, was the only state in the nation that required graduation from a dental residency as a prerequisite for licensure. Recently New York has required dentists to complete a postdoctoral general practice or specialty dental residency program. In New York, all applicants for initial licensure (new graduates or dentists from other states), have to complete a Commission on Dental Accreditation (CODA) approved residency of at least 1-2 years duration. Dentists seeking licensure in New York who are already licensed in another state are not required to complete a residency or clinical board examination.

There are two types of advanced training for general dentistry; the general practice residency program (GPR) and the Advanced Education in General Dentistry Program (AEGD). Only the GPR satisfies the requirement for advanced training required for a Delaware dental license. We present a description of both types of program here for completeness.

AEGD programs are educational programs designed to provide training beyond the pre-doctoral education in clinical dentistry and applied basic sciences. The goals of the AEGD program are to expand the scope and depth of the graduate's knowledge and skills to enable them to provide comprehensive oral health care to a wide range of population groups. AEGDs are a minimum of 1-year in length. Many programs offer an optional second year with a primary objective of training academicians. While a GPR is a hospital-based program, an AEGD is usually not, although they may be associated with a GPR program that has such an affiliation. The differences between the two types of programs are generally a result of this distinction. The major distinction between the two programs is the emphasis the AEGD program places on clinical dentistry in contrast to medical management in the GPR program. AEGD programs must provide training in medical emergencies; implants; oral mucosal diseases; temporomandibular disorders and orofacial pain; and occlusal disorders. Graduate training in AEGD programs is available at 44 dental school affiliated and 50 non-dental school affiliated programs in this country. A total of 590 dentists graduated from AEGD programs in the United States in 2003.

The GPR program is designed for advanced clinical and didactic training in general dentistry with intensive hospital experience. GPR programs provide instruction and experience in the delivery of care to a wide range of ambulatory and hospitalized patients. All GPR programs are sponsored by either a hospital or a hospital affiliated institution such as a dental school or Veterans Administration facility. GPR programs can be one or two years in length, the majority being one year and award a post-graduate certificate upon completion. GPR residents rotate through a variety of services including general medicine, general surgery and anesthesiology. Each program also includes advanced training and clinical experience in preventive dentistry, periodontics, restorative dentistry, endodontics, and oral surgery. Training in orthodontics and pediatric dentistry is desirable but not mandatory. A minimum of 60% of the resident's experience must be in the direct delivery of oral health care to ambulatory patients. The remaining time may be spent in the operating room involved with inpatient services, as well as the emergency room.

The majority of GPR programs are not affiliated with dental schools. This is important to note since Delaware does not have a dental school. Graduate training in GPR programs is

available at 25 dental school affiliated and 167 non-dental school affiliated programs in this country. A total of 952 dentists graduated from GPR programs in the United States in 2007.

In both programs, the basic skills learned in dental school are expanded significantly, preparing the dentist for a career in private practice or for a specialty residency program. Both AEGD and GPR programs will devote time to non-dental services, such as lectures, conferences and seminars.

Residents in GPR and AEGD programs

The programs may be one and/or two calendar years in length. Part-time residents may be enrolled, provided the educational experiences are the same as those acquired by full-time residents and the total time spent is the same. Developing a GPR in Sussex County may help in meeting the goal of increasing the supply of oral health care services to underserved areas and to increase the likelihood that dentists may choose to practice in Delaware. This option would allow second year residents to be sent to areas in Delaware that are suffering a severe shortage of dentists. In order to develop this model, rural dentists and dentists in shortage areas would be recruited as faculty to help provide training using their offices as a clinical site. Second year residents would be very efficient and able to work independently, requiring only a minimal level of supervision.

Faculty & Staff

The **Program Director** is responsible for all aspects of the program including:

- Program administration
- Development, implementation, and supervision of the curriculum plan
- Ongoing evaluation of program content, faculty teaching, and resident performance
- Evaluation of resident training and supervision in affiliated institutions and off-site rotations
- Maintenance of records related to the educational program
- Student/resident selection

The program director is not required to be full time however, the process of seeking accreditation, recruiting clinical faculty and residents, applying for sources of federal funding, and developing a curriculum is very time consuming in the first few years.

The program director must have completed an accredited General Practice Residency program or Advanced Education in General Dentistry program. The program must be staffed by faculty who are qualified by education and/or clinical experience in the curriculum areas for which they are responsible and have collective competence in all areas of dentistry included in the program. The program is expected to develop criteria and qualifications that would enable a faculty member to be responsible for a particular specialty teaching area if that faculty member is not a specialist in that area (3, 4).

General dentists must have a significant role in program development and instruction and are expected to be actively involved in developing curriculum and clinical rotations, as well as in the instruction of the residents. A faculty member must be present in the dental clinic

for consultation, supervision and active teaching when residents are treating patients in clinic sessions.

The absolute minimum faculty that is needed for initial program accreditation would be a full-time director with appropriate education and clinical experience and a combination of general dental faculty equivalent to 1.0 FTE, recognizing that it is essential for qualified faculty to be present for all clinic sessions.

If possible, qualified specialists such as Periodontists and Endodontists should be used as trained consultants. These specialists could have a minor program commitment (once a month). Additional part-time faculty specializing in oral and maxillofacial surgery and prosthodontics would strengthen the program. Specialists in pediatric dentistry and orthodontics are generally not as important to overall faculty qualifications.

Training in the placement and restoration of implants is very advantageous. This type of training is important to advanced dental qualifications and can be very important to a good clinical revenue stream. A residency program would be at a disadvantage in the recruitment of residents without providing training in implant dentistry.

Faculty must be qualified for appointments in the sponsoring institutions(s). They will also have to be licensed to practice dentistry in Delaware.

Additional Staff

Adequate support staff, including allied dental personnel and clerical staff, must be consistently available to allow for resident training and experience in scheduling, insurance, “four handed dentistry” dental hygiene and lab procedures.

Experience with “four handed dentistry” must be included in the residency; therefore there must be at least one qualified dental assistant at each site when clinical procedures are being performed. Residents should be introduced to and educated in the utilization of four handed dentistry from the initial stages of the residency program. The closer one could come to one assistant for every resident operating in the clinic at any given time, the greater a recruitment and revenue advantage for the program. It would also be beneficial from both training and revenue perspectives to have at least one dental hygienist.

Academic Sponsorship

A GPR program must be sponsored or co-sponsored by either a United States-based hospital, or an educational institution or health care organization that is affiliated with an accredited hospital. An AEGD program must be sponsored or co-sponsored by a United States-based educational institution, hospital or health care organization. Sponsoring and co-sponsoring institutions must be accredited by an agency recognized by the United States Department of Education or accredited by The Joint Commission or its equivalent.

Accreditation of the Program

Accreditation for a GPR or AEGD program would come from the Commission on Dental Accreditation (CODA) of the American Dental Association (ADA). It is the only dental accrediting agency recognized by the U.S. Department of Education. Accreditation is based on five standards: institutional and program effectiveness, educational program, faculty and staff, educational support services, and patient care services. The application fee for initial accreditation is \$4,550 (2010).

Initial accreditation requirements include a staffing and facility plan and a curriculum outline. The accreditation application can be completed while site preparation is still incomplete. Initial approval from CODA must be in place before the enrollment of the first class.

Didactic and Practical Requirements for Residents

In order for the program to become accredited and to function, it must comply with CODA requirements and arrange for residents to be exposed and/or participate in clinical and didactic activities to ensure that upon completion of training the resident is able to provide the following at an advanced level of skill and complexity beyond that accomplished in pre-doctoral training:

- Operative dentistry
- Replacement of teeth using fixed and removable prosthodontics;
- Periodontal therapy;
- Endodontic therapy;
- Oral surgery;
- Evaluation and treatment of dental emergencies;
- Pain and anxiety control utilizing behavioral and pharmacological techniques;
- Medical emergencies;
 - Implants;
 - Oral mucosal diseases;
 - Temporomandibular disorder and orofacial pain
 - Occlusal disorders

In addition, the residents must be assigned to an anesthesia rotation with supervised practical experience. A minimum of 70 hours is considered necessary to provide the appropriate practical experience. Residents must be assigned to a rotation in medicine that has supervised practical experiences for a minimum of 70 hours. The program must provide formal instruction in physical evaluation, medical assessment, and practice management. Information about hospital organization, functioning, and credentialing process must be included in the curriculum. Residents must also receive training and experience in the management of inpatients or same-day surgery patients. And, residents must be given assignments that require critical review of relevant scientific literature.

Facilities

There must be at least one completely equipped dental clinic which must include one operator (chair, unit for handpieces, water, compressed air and high speed suction, cabinetry, light, radiograph and viewbox for radiographs) for every resident working in the clinic at any given time. A dental laboratory equipped for pouring and trimming models is also required. Radiographic equipment must be available, with processing equipment for radiographs unless the machine is completely digital. Equipment for medical emergencies must be on hand. Access to a library with dental reference material is required in support of the training program.

A “front desk” with record storage capacity, computer, telephone, facsimile, photocopy and other usual business equipment will be needed. Each site should have sufficient storage space for miscellaneous equipment and an inventory of supplies.

Revenue

There are four sources of revenue for residency programs: income from clinical operations, graduate medical education (GME) funds available from federal sources, ongoing public appropriations for operations from either State or local funding sources, and grants by non-profit funders.

Clinical income is essential for financing this type of program on an ongoing basis. An efficiently run clinical program that includes dental implants should generate \$100,000 to \$150,000 gross revenue per annum per resident. Total overhead for most dental practices is in the 60-70% range for solo practitioners. A multi-resident clinic should do better than that because of the sharing of some overhead items (i.e., basic facility costs, staff sharing). The figures above are for a program that has a relatively low census of Medicaid or indigent patients. If the program has a high proportion of Medicaid patients, or those unable to pay full fees, the clinical revenues will be correspondingly lower.

Because this would be a new program, it can take advantage of GME support by establishing an enabling contract with a hospital. There is no cap on dental residency numbers as there is for medical residents, meaning that you could have as many residents in the program as the sponsor wanted. The federal Center for Medicaid and Medicare Services (CMMS) in the Department of Health and Human Services will pay the hospital actual documented costs for resident stipends and faculty supervision of clinical services rendered, plus indirect costs at the hospital’s established GME rate through Medicare. An initial contract or memorandum of understanding to assure the amount of GME revenue the hospital dedicated to the program would be advisable (5).

GME funding follows a three-year “rolling average” format, where the hospital will receive one third of the eligible funding in Year One, two-thirds in Year Two and all in Year Three. Therefore, additional funds beyond GME will be needed to supplement operations during Years One and Two, either from outside sources or support from the hospital.

Costs

Assuming a suitable structure including plumbing, etc were present, one could expect to spend up to \$7,100 per operatory, depending on the amount of discount the program may be able to negotiate with suppliers or manufacturers for the basic equipment. Additional miscellaneous equipment would probably come to another \$10,000 per operatory. More complete details on costs are included in Section VI of this report below as part of the business planning and financial pro forma analysis.

Competitive salary and fringe benefits would be needed for the program director and all faculty and staff who are greater than 0.5 FTE. Full time salary for the residency director at \$120,000-\$150,000 plus fringe. A usual fringe benefit package will be in the range of 20-35% of salary. Mandated FICA/Medicare employer shares, health insurance and retirement plans should be the minimal inclusions. An annual compensation of \$5,000 per half day week is the estimated compensation for part-time faculty (6).

Timeliness

Many of the key activities described are time-sensitive. For example, the Commission on Dental Accreditation reviews applications for provisional accreditation twice each year, and it is therefore crucial that the appropriate documents be submitted on time.

The GME contract must be completed before the program actually begins. If the program begins before a GME contract with a hospital is in place, the program would forever lose its GME eligibility, which would probably be fatal to its financial viability.

The success of the program will, in part, depend on having adequate financial stability to recruit a program director and faculty and to start and train the first classes of residents. Any revenue streams will take some time to grow. Program sustainability financially will depend on a number of variables, including GME support, the necessity of a practice site where residents and faculty can see insured and private-pay patients, the mix of services that can be offered (a function primarily of the qualifications of the supervising faculty), and Medicaid reimbursement rates and definition of eligible populations. A viable dental practice for program faculty either on-site at the sponsoring hospital or off-site at another community location is essential to assuring a good patient mix and for salary supplementation for the faculty.

Resident's stipends are in the range of \$40,000 per annum per resident. Additional compensation in the form of incentive plans for clinical production can be profitable for the clinic if carefully administered, as well as being a positive factor in recruitment of residents.

There will be a need for faculty and residents to access library resources. The library is best managed by access to an existing medical/dental library, even if some small fee for the privilege is involved unless this were to be part of the support offered the program by its sponsoring institution.

Service to the Underserved

GPR and AEGD residency programs have the potential to serve needs in the community and to increase the likelihood of dentists considering a permanent location for practice in the State of Delaware. If the primary delivery site for residents is located in space also occupied by a safety-net clinic, care for the underserved will most likely be an important source of clinical activity. Additionally, in that residents must provide certain types of care to fulfill the educational requirements of the program, it is very likely that some patients will receive a higher level of care and more services than would today be available through the safety-net clinics alone. The fact that dental services for adults are excluded from Delaware Medicaid coverage means that much of the care for the underserved provided through the residency clinic will likely be uncompensated.

Dental Hygiene Training ProgramsOverview of the Delaware Technical & Community College (DTCC) Dental Hygiene Program

The Delaware Technical & Community College (DTCC) offers a two year, associates degree program in Dental Hygiene. The program is based on the Wilmington Campus but an extension of the program is offered at the Terry Campus in Dover for residents of Kent and Sussex counties. The purpose of the Terry Campus program extension is specifically to help build the dental hygienist workforce downstate and only students from Kent and Sussex Counties can participate in the Terry Campus extension of the program. Conversely, students from New Castle County can only participate in the Wilmington-based program. Roughly 24 students graduate from the program each year. Approximately two-thirds are from New Castle County and one-third are from Kent and Sussex Counties. In the three year period between 2006 and 2008, there were 23 students enrolled in the Terry Campus extension of the DTCC Dental Hygiene Program. Nine or 39% of these were from Sussex County, Twelve or 52% were from Kent County, and the remaining two students or 9% were from Maryland, near the border of either Kent or Sussex County.

County/State of Residency	Year of Enrollment		
	2008	2007	2006
Kent County, DE	3	5	4
Sussex County, DE	3	2	4
Maryland	0	1	1
Total Enrollment	6	8	9

The students meet their education requirements by participating in didactic classroom-based educational sessions at both the Terry and Wilmington DTCC Campuses. The students also participate in a series of practical sessions at the DTCC Dental Health Center in Wilmington as well as at the Dover Air Force Medical Clinic in Dover. On average students are required to travel to Wilmington for either classroom sessions or practical clinic rotations two times per week. Similarly, students are required to participate in practical training sessions at the Dover Air Force Base 1 to 2 days per week depending on whether the student is in their first or second year of the program.

During practical training sessions at DTCC Dental Health Center and the Dover Air Force Base, first year students work with licensed hygienists that are on the faculty at DTCC as well as with private dentists that are employed by the clinic. First year students primarily shadow and observe the licensed hygienists and dentists and learn how to manage and communicate with patients. In the second year, students gradually increase their expertise and knowledge and ultimately learn to provide comprehensive hygiene care and to assess oral health needs. By the end of the two year period, students learn all of the competencies necessary to be a hygienist and pass their dental hygiene licensure examinations. However, even by the end of year two students are not functioning at a level where they are adding a great deal to the clinic's overall productivity. Students require a significant amount of supervision and gradually become more efficient by the end of year 2, but are still not as efficient as an experienced hygienist by the end of the program.

Recently, the DTCC Hygiene Program signed a three year agreement with the Dover Air force Base that has helped to solidify the program's ability to use the Base's dental clinic as a practical training site. It is important to note though that this agreement does not necessarily guarantee that the DTCC program can use the base's clinic at all times. The Dover Air Force Base is an important and active part of US Department of Defense (DOD) operations both domestically and internationally and, as such, the Hygiene Program functions at the pleasure of the Dover Air Force Base and the DOD. Historically, there have been times when the Air Force Base has had to suspend the program's ability to operate on the Base due to various DOD related circumstances. This instability has caused problems and certainly threatens the viability of the Terry Campus Extension. One of the objectives of this Feasibility Assessment with respect to Dental Hygienist training opportunities is to explore ways that the State and DTCC could further solidify the Terry Campus Extensions existing arrangements for a clinical training site.

It should be noted that there is some ambiguity regarding the demand or need for hygienists Downstate. On the one hand, as discussed above, the 2008 Dentists in Delaware Study conducted by CADSR revealed that many dental practices in the State report that they are not fully staffed with the appropriate dental hygienists, dental assistants, and other office staff. More specifically, the 2008 study revealed that 17% of practices participating in the study statewide and 28% of participating practices in Sussex County reported that they were not fully staffed. The provider type that was most difficult to fill was dental hygienists, with 42% of dentists statewide and 61% of dentists in Sussex County reporting difficulty in recruiting dental hygienists. Thirty-four percent of dentists statewide and 22% of dentists in Sussex reported difficulties in recruiting dental assistants. Placement information generated by DTCC also seems to suggest that a vast majority of the students who graduated from the DTCC Dental Hygiene Program were able to find jobs in their field. According to data compiled on students in the class of 2009, of the 26 students that graduated 23 of them were seeking dental hygiene jobs and 21 of these students were able find jobs in the dental hygiene field. On the other hand, while exact data is not available, DTCC staff have heard anecdotally that many students, particularly those graduating from the Terry Campus Extension who were looking for employment in Sussex County, had a difficult time finding full-time employment.

Before major efforts are undertaken to expand training opportunities Downstate, DTCC or some other stakeholder group, should conduct an assessment to more rigorously determine the demand for hygienists, particularly Downstate. The CADSR study applied a strong approach and provides valuable information related to access to dental care as well as the operational and practice characteristics of the State's dental providers. However, it was not designed to rigorously assess the demand for hygienists. Additional information is required to confirm the demand for hygienists and to guide effective expansion efforts.

Options for Expanding or Solidifying Training Opportunities Downstate

The options for expanding or solidifying the dental hygiene workforce and training opportunities downstate, assuming that there is need and demand, are focused in three areas. First are initiatives that promote dental hygiene and other allied health careers for those who live in Kent and Sussex Counties, particularly among high school students or recent high school graduates but also among other older segments of the population. Second are initiatives that make training more accessible and remove or lessen the barriers that hinder people from being trained, most notably the cost of education, cost of transportation or housing, and limited enrollment capacity. The third are initiatives that allow DTCC to solidify its Terry Campus Extension operations and are specifically related to identifying an additional clinical training site for students Downstate to augment its capacity at the Dover Air Force Base. The following section addresses these areas and presents a range of options, including those that are feasible and practical as well as those that may not be given policy, budget, or other contextual realities.

1. Additional Marketing and Promotion of DTCC's Dental Hygiene Program to Sussex County Residents. Currently, annual enrollment in the Terry Camus Extension of the Dental Hygiene Program has been set a roughly 6 - 8 enrollees per year. Given that the program is a two-year program this means that there are roughly 12-16 students enrolled in the DTCC Dental Hygiene Program from the Terry Campus Extension at a given time. One option for enhancing the dental hygiene workforce Downstate, would be for DTCC to work cooperatively with the Division of Public Health, the Delaware State Dental Society, the Board of Dental Examiners, Delaware high schools and vocational schools, as well as other stakeholders to strengthen DTCC's existing marketing and recruitment campaign with the goal of placing more students from Downstate in the Hygiene Program. These efforts could be focused on Sussex and Kent Counties as well as perhaps on attracting trained hygienists from upstate or even out of State who are committed to working in a Downstate dental clinic.

Given current program and budgetary constraints this could only occur if DTCC decided to expand the proportion of program slots allocated to students from the Terry Campus Extension. At the moment, the program is unable to expand beyond the roughly 25 students that are enrolled each year so this would require increasing the Terry Campus allotment while decreasing the Wilmington campus allotment.

2. Scholarship opportunities or loan repayment programs for those enrolled in the DTCC's dental hygiene school exclusively for residents of Dover and Sussex County. Cost of training is one of the major barriers for many prospective students. The State and DTCC could explore the development of scholarship or loan repayment programs geared specifically to

residents of Kent or Sussex Counties. Eligibility in the program could be limited to those who can prove that they have been long-term residents of Kent or Sussex County and could possibly include a commitment to practice dental hygiene downstate for a period of time after graduation. Currently, the Delaware Health Care Commission in cooperation with the Delaware Higher Education Commission and the Division of Public Health administers the State Loan Repayment Program (SLRP), which offers licensed health professionals an opportunity to work in underserved areas and to receive awards for repayment of educational loans in exchange for their commitment to serving the uninsured, underinsured, Medicaid, and Medicare populations in Delaware. Since 2001, SLRP has placed 66 health care clinicians (42 physicians; 10 nurse midwives, nurse practitioners or physician assistant; and 14 dentists). The service obligation typically requires a commitment of two years of full-time service in an underserved area. The State has set aside \$250,000 annually for this program, \$150,000 for medical professionals and \$100,000 for dental professionals. Average awards for advanced-degree practitioners range from \$25,000 - \$35,000 for a two year contract. Average awards for mid-level practitioners range from \$10,000 - \$15,000 for a two year contract. Of the 66 placement, 22 have been in New Castle County, 17 in Kent County, and 27 in Sussex County. Dental hygienists are eligible for SLRP support but to-date a dental hygienist has not been awarded funds.

A portion of these funds could be set aside specifically for a program tailored and marketed more aggressively to dental hygienists willing to serve low income patients in Sussex County for a period of time.

3) Development of a practical training site at La Red Community Health Center in Sussex County specifically for students enrolled in the Terry Campus Extension of the DTCC Dental Hygiene Program. The burden and cost of transportation and housing is another barrier to participation for some prospective dental hygiene students. DTCC could explore the development of a new dental hygiene practical training site in Sussex County to augment or possibly replace DTCC's training site at the Dover Air Force Base. This could alleviate some of the burden, especially for students who live in Sussex County. This could also increase awareness and exposure to the DTCC Dental Hygiene program for residents in Sussex. A new practical training site would also alleviate some of the pressure related to the current arrangement at the Dover Air Force Base as it would provide a back-up site if operations at the Base were suspended for a period of time. La Red Health Center has expressed its willingness to explore the development of such a site should they develop strong and viable oral health operations over the next few years.

Students enrolled in the Terry Campus Dental Hygiene Program are required to participate in training sessions in Wilmington and in Dover. Since housing and transportation is neither provided nor subsidized by the program, transportation can be a burden for many students, particularly for those who do not have access to a personal vehicle. Many students carpool but this does not alleviate the burden for many students. Students from Sussex County would still need to travel to Dover and Wilmington for various training sessions but a practical training site in Sussex County could reduce some of the transportation burden.

It should be noted that it could actually increase the transportation for some students but if the practical training site at the Dover Air Force Base were to remain available it would likely have limited to no additional burden on students.

Further research is needed to explore the extent to which this would incent students from Sussex County. This option is also dependant on La Red developing oral health operations and upon developing a training program that would allow them to participate with DTCC while maintaining the viability of its program.

4) Development of new Owens Campus Extension of the DTCC Dental Hygiene Program.

Another option that would alleviate barriers to access for Sussex County residents as well as help to promote and raise awareness about dental hygiene careers more generally would be to develop an Owens Campus Extension of the Hygiene Program. The Owens Campus is located in the heart of Sussex County in Georgetown and thus would be much more convenient for those living in Sussex County. There is a strong body of evidence that shows that students or trainees in clinical education programs end up practicing in the areas in which they study. The Terry Campus Extension has been extremely successful and has allowed DTCC to expand dental hygiene training opportunities, particularly for those living in Kent County. Assuming demand warranted, an Owens Campus Extension could be developed, mirroring the successful Terry Campus model, which was geared specifically to attracting and training students from Sussex County.

Depending on resource constraints, this effort could be initiated either as an outright expansion of the program from 25 slots to roughly 30 or 35 depending on how large DTCC wanted the Owens program to be. It could also be initiated with the goal of maintaining the current size of the program and simply redistributing the students. In this case, the Terry Campus Extension would be retooled and likely downsized to accommodate the addition of the Owens Campus Extension.

If an Owens Campus Extension were to be created, DTCC would have to identify staff to administer the program and conduct didactic, classroom training for enrollees. It is possible that students from the Owens Campus could use the clinical training site at the Dover Air Force Base but it would be much better if the Owens Campus Extension had access to its own clinical training site within Sussex County. Regardless, of whether the Owens Campus Extension had a clinical training site of their own or not, it is likely that students would still have to travel to Wilmington to be exposed to certain training activities (e.g., exposure to special needs children and adults).

In 2008, the senior administrative staff at DTCC identified the Dental Hygiene Program as a candidate for expansion and accordingly the DTCC was very open to discussing options for expansion, geared specifically to Downstate regions. JSI staff had numerous discussions with staff from the Hygiene program as well as staff from the central administrative offices and the Owens Campus offices. Assuming it could be clearly established that there was demand and need for hygienists, DTCC made it clear that it was more than willing to consider programmatically and financially viable operations that were sustainable and that were carefully geared to workforce needs. However, it should be clearly noted that, given

the State's current budget issues, overall expansion of the program was not likely and any efforts would need to be budget neutral.

C. Creation of a case management program for Medicaid-eligible children

The complexity and challenging nature of many people's lives combined often with poverty and/or a lack of awareness regarding the importance of regular oral health care can greatly hinder access to oral health services for many individuals and families. With this in mind, case management can be a stabilizing force and can be used to facilitate for individuals and families with limited to no access to services. Case management often includes patient education, assistance in identifying an access point, arranging for an appointment, transportation and maintaining a dental home. It has also proven to be useful in improving access to a variety of other services which may assist patients. While case management is but one facet of the solution for dental access, it has demonstrated to be valuable in facilitating access and as a result it has been the focus of many private and public initiatives, particularly in support of Medicaid or SCHIP. Primary strategies for implementing case management focus on reaching children in settings where outreach to them is greatly facilitated, as a result, below is a discussion of the utility of implementing case management in a variety of venues such as physician offices, schools and through collaboration with Medicaid and Public Health programs.

Pediatric and Primary Medical Care Case Management

It has become gradually more evident that one of the most significant challenges in improving oral health among children is the coordination and collaboration of the medical and dental care systems serving them. Given that more children see a pediatrician before the age of five than any other provider, including dentists, they have increasingly been looked to expand their role in oral health education, screening, preventive care and case management. Some states have moved forward on this issue allowing fluoride varnishes to be applied in pediatric offices and for reimbursement of this service by Medicaid. Increasingly, oral health risk assessments are becoming part of the assessment functions of primary care and pediatrics. Given these issues, case management within these settings has promise to bridge the gap between primary care and dental care providers and to facilitate access to dental care. Nurses and administrative staff often have shared roles in terms of education, screening, patient referrals, case management, and care coordination.

It is important to note though that pediatricians and other primary care providers typically have limited experience addressing oral health access and patient barriers to care. They may also have limited understanding of oral health and the system of dental services in their community. In light of this, approaches involving pediatric providers and their office staff need to be supported by education and training. Also, while fluoride varnishes at a pediatrician's office may be reimbursable under Medicaid, other case management activities are typically not, unless they are bundled with other medical case management activities, making this model difficult to sustain in the absence of ongoing support or changes to Medicaid reimbursement policies.

Spotlight on Pediatric and Primary Care Offices: Filling the Gaps Project and Connecticut's HUSKY Case Management Program

The Children's Dental Health Project completed a white paper for the American Academy of Pediatric Dentistry's Filling the Gaps Project. The white paper *The Interface Between Medicine and Dentistry in Meeting the Oral Health Needs of Young Children* outlines several important policy considerations to improve access to dental services and the oral health status of young children. The project details the great potential to increase and improve oral health care through collaborative relationships with dentists and primary care offices. The study also recognizes and describes the challenges and barriers associated with improving coordination across these settings.

The white paper describes how the progressive involvement of primary care medical practices in the provision of oral health education, screening, preventive care, anticipatory guidance, and the provision case management, including referrals to general and specialized dentistry. The paper also describes how states are looking at new regulation, funding mechanisms, and program policy to support this work. For example, the Connecticut Department of Social Services oversees the HUSKY program which provides Medicaid services to children and their families. Their Primary Care Case Management (PCCM) program is available to eligible clients enrolling with a Managed Care Organization (MCO). In exchange for a \$7.50 per month case management fee, the primary care office is responsible for the coordination of each of its enrolled members care. This includes referrals, coordination and support in the provision of dental and behavioral health care.

School-based Case Management

Schools have an opportunity to collect information regarding oral health access and the presence of a dental home as part of students' health histories and records. Within this model of case management a nurse, dental hygienist or dental assistant is responsible for reviewing health histories and performing paper screens to assess the need for dental services. This activity is often paired with other important functions such as fluoride mouthrinse programs, visual screenings, transportation and other case management activities. Engaging family members is also a key consideration in that families can be better stewards for oral health access and case management activities through their ongoing involvement with school staff. Similarly, school staff may function to engage other family members and assist in their access of dental services. Some schools utilizing this model have found that hiring a dental hygienist or dental assistant who currently works in a dental office and is familiar with dentist practices in the region is much more adept at building relationships between schools and the dentist community to place children in dental homes. Alternatively, many school-based programs are operated by state and local health departments and utilize public health nurses or dedicated oral health professionals, dental assistants or hygienists.

The EPSDT Program does provide some funding mechanisms for these activities and should be explored as part of the business model and sustainability planning. Having said this, EPSDT funds require a match from the school and the amount of match may depend on the percent of Medicaid eligible children (often using the free lunch program as a proxy

measure). Given the budget constraints and pressures for schools it can be difficult to obtain not only EPSDT matching funds but the funds to support other non-EPSDT eligible activities.

Spotlight on School-based Programs: Tooth Tutor Dental Access Program

In collaboration with schools, the Vermont Department of Health provides oversight and training to administer the Tooth Tutor Dental Access Program. While schools are the sponsoring agency, providing base funding to support the program, they work with the Department of Health to access Early Periodic Screening, Treatment and Diagnosis (EPSDT) funds to match local funds. The program provides a dental hygienist to work with each participating school with the main goal of facilitating the development of a dental home for every participating child. Oral health is linked to overall health in the Tooth Tutor curriculum and the dental hygienist works with the school nurse, health liaison, classroom teachers and community dentists towards the goal of developing a dental home.

In addition, dental hygienists often administer a fluoride mouthrinse program, provide education to children, parents and other human service agencies as well as facilitate access through finding a dentist, assisting with appointments and transportation and reminding families of their appointments. The program has served approximately 60 schools with over 9,000 students. Of those students, over 2,000 are identified as lacking a dental home with approximately 90% obtaining a dental home by the end of the school year. The primary focus is on K-6, however, some middle and high school programs also participate.

Public Health and Medicaid

Public Health and Medicaid programs have each demonstrated models of case management where they have redirected and expanded the duties of existing staff positions. At times their focus is on the population of individuals utilizing public health dental clinics, however, targeting WIC, Head Start, social service programs and school programs may be within the scope of their work. Case management programs often facilitate access to other human services and benefits programs run by the state providing valuable resources to patients and their families. Medicaid matching dollars are often used to assist in funding this model, however, the programs are subject to the state budgetary process. Given the need for State dollars to match Medicaid dollars, these types of programs are at risk for being cut during difficult economic periods. These programs may be limited to just Medicaid eligible individuals; as a result some states only provide case management for children or other covered populations.

Medicaid and Public Health case management can vary depending upon the focus of the particular program. In some Medicaid programs states have hired case management services from external companies, these case managers are primarily responsible for calling patients to remind them of appointments and direct them to resources within the community. This approach is rather passive in its efforts, as compared to other peer programs in which state employees work closely with patients and human service providers on behalf of patients to remove such barriers as child care and transportation. The Delaware State Service Centers and/or Public Health Dental Clinics would be logical venues to house

either “paper screens”, telephone-based case management, or more hands-on, physical, screening, preventive services, and referral case management activities.

Spotlight on Public Health and Medicaid: New Mexico Department of Health

Two public health districts are served in the state by dental case managers. The role of each staff person is to provide social and supportive services to low income, uninsured individuals to secure dental or preventive services and assure that a dental treatment plan is completed. These licensed social workers target activities at the regional, county and community levels to provide social services to their client population; coordinate and direct dental clinics; prepare and provide oral health education (to WIC, Families First, Early Head Start, social service programs and school health programs); act as an information source to programs, citizen groups and individuals; participate on Oral Health Councils, prevention task forces and policy meetings and; promote water fluoridation and sealant varnish activities.

Other Private For-Profit and Not-For-Profit Options

Essentially any entity may engage in case management activities. Private dental clinics, other types of health related service providers, or even not-for-profit Social and human resource service organizations may work with the range of possible stakeholders (private dentists, health departments, State Medicaid Offices) to provide case management activities for their patients or target population if it is part of their mission or financially beneficial. Some health care service sites or organizations may offer dental case management because it helps to reduce morbidity and prevent medical complications and limit further morbidity. For example, nursing homes, assisted-living facilities, or senior centers may have volunteers or staff who provide oral health case management to their clients. Migrant and seasonal farm worker organizations may provide case management for similar reasons. Many FQHCs have incorporated case management activities into their operations to address a real need that they realize exists among their target population as well as to help identify new medical patients. In some cases, organizations have developed synergies between oral health and their core line(s) of business (e.g., primary care medical services) that can be very beneficial and justify the cost of the case management. Finally, there are also examples of not-for-profit organizations that are created specifically to address oral health care access such as the Apple Tree Dental Program in Minnesota. The Minnesota program has diverse public and private funding streams and implements many of the same types of case management activities discussed above in various community settings, including private dentist offices, school settings, and nursing homes through stand-alone dental clinics, a mobile van, and community partnerships.

Spotlight on Iowa’s I-Smile Program

Iowa’s I-Smile program provides services similar to the Tooth Tutor Program (see description above), however Coordinators work more broadly with health care providers and community organizations. Dental hygienists serve as the I-Smile Coordinator and liaison with families and individuals to oversee referrals and care coordination. In addition, I-Smiles utilizes the Child and Adolescent Reporting System (CAREeS) to document and track dental services

provided to children served through the I-Smiles program. During Federal Fiscal Year (FFY) 2008 34,320 children received fluoride varnishes, 43,490 oral screenings and 29,868 received education and oral health counseling.

Source: Inside I-Smile: A Look at Iowa's Dental Home Initiative for Children Oral Health Bureau, Iowa Division of Public Health. December 2008

Spotlight on the Apple Tree Dental Program, Minnesota

Apple Tree is a nonprofit dental organization dedicated to bringing dental care to people in numerous locations in Minnesota. Target populations include nursing home residents, people with disabilities, low-income families and others for whom financial, physical or cultural access to dental care is a barrier. Their system of case management provides service coordination, appointment reminders and education to the families and individuals accessing their services. The "Community Collaborative Practice" model also works with private dentist practices and safety net dentist practices to establish and support a dental home. This approach has been successful in expanding the network of dental practices serving the target population. The system of clinics paired with its mobile delivery system, and network of volunteer providers brought care to 4,432 children, 4,840 adults and 4,840 seniors in 2007 resulting in 46,982 patient visits and \$3,209,959 in uncompensated care.

Source: <http://www.appletreedental.org/>

SECTION V: FINDINGS FROM KEY INFORMANT INTERVIEWS

As discussed above, one of the major tasks through out all three phases of this project was to interview key stakeholders throughout the State and particularly in Sussex County. A list of the people that were interviewed along with their affiliation is included in Appendix A. These interviews were critical and allowed the Project Team to gain important insights on the oral health needs, barriers to access, and service gaps that exist in Sussex County for the population overall as well as for specific segments of the population (e.g., children, adults, low income families, disabled adults, children with special health care needs, uninsured populations, etc.). These interviews also allowed the JSI Project Team to gain a better understanding of the oral health service system and the underlying workforce issues, particularly with respect to the safety net system for low income, uninsured, or at-risk populations. Perhaps more importantly, these interviews allowed JSI to meet with potential collaborators to inform them of the project, obtain their feedback regarding oral health access and workforce issues, and discuss specific program ideas related to each of the three strategic areas under exploration. Ultimately, these discussions facilitated a narrowing of the viable programmatic options, drawn from the review of best practices, and identified organizations willing to be involved in on-going planning and implementation of potential programs. The initial interviews in many cases led to ongoing discussion with certain organizations to explore and develop program plans, including financial pro formas.

Below is a brief summary of key findings from these interviews. Please note that the narrative below does not necessarily encompass all of our findings from the interviews. Our interviews were rich in data and nuance and allowed us to gain a very good sense of the oral

health issues, needs, resources, and context in Sussex County. It would be nearly impossible and probably not productive for this report to try to capture and relate all of this information. Instead, the report captures the major findings that had the most bearing on our recommendations. The findings have been organized thematically by strategic area rather than by individual interviewees so as to assure anonymity and provide a better sense on how the Project Team arrived at its ultimate recommendations.

Establishment of a multi-purpose dental clinic and training facility in Sussex County

- **Stakeholders are not in agreement regarding the need to build oral health capacity in Sussex County and/or the extent to which there are oral health service gaps for certain segments of the population.**

Nearly all of the individuals and organizations with whom the Project Team met believed that there were limited barriers and relatively good access to dental services for those with dental insurance or the financial means to pay for services. However, the vast majority of those that were interviewed believed that there were major barriers to access, and in some cases total service gaps, for low income children and adults. More specifically, these stakeholders believed that Medicaid children, immigrant/migrant populations, and disabled adult populations, as well as those who were uninsured or underinsured often faced major barriers to access and in many cases had no where to go for dental care. Many of those that were interviewed cited that there were a limited number of private dentists who were willing to take Medicaid patients through out the County but especially in the more rural, western parts of the County. Furthermore, they said that even among those providers who did take Medicaid patients many put a relatively low cap on the number of patients they would serve. Some interviewees also cited that there were few dentists who were willing or able to see low income, uninsured patients who had a limited ability to pay the usual and customary charge on a sliding fee scale basis. As a result, many patients were turned away entirely or faced long wait-times, waiting lists for services, or had to travel long distances to reach a dental provider willing to see them.

It should be noted that there were a number of people who said that there were major barriers to access and provider shortages even for those who were insured and had the means to pay. These interviewees said that it was not uncommon for even insured adults to spend a great deal of effort finding a dentist who could see them in a timely manner.

We also heard from a smaller pool of people that believed that the idea that there was limited access to dental care was exaggerated or not existent. These interviewees said that there was ample access for those who wanted to see a dentist and were either insured or had means to pay for services. Furthermore, these interviewees believed that the current safety net system (e.g., the State's FQHC dental clinics, the Wilmington Hospital Residency Clinic, the DTCC Dental Clinic, and the pool of private dentists that serve Medicaid and Uninsured patients on a sliding fee scale) provided adequate access to low income Medicaid insured children as well as low income uninsured children and adults. There was general recognition among these stakeholders that some people did face barriers that hindered their access (e.g., long wait-times or long travel distances) but that this was understandable and/or appropriate given the lower payment rate and the additional burden that these

patients were to treat. Some of those who were interviewed felt that the public sector, policy makers and advocacy organizations statewide should explore models for better supporting low income, uninsured and indigent populations. Some believed that the Public Health Clinics should take up a greater portion of the care for this population. The general sentiment among these interviewees was the idea that the burden of meeting the needs of this population should not fall on the private sector.

Some of these sources believed that at the root of this confusion were ideas related to perceived need for services versus actual consumer demand for services. In other words, they believed that the fact that many people were not receiving dental services was more an issue of poor education and lack of awareness of the need for services than it was an issue of lack of capacity or a shortage of providers. Some went on to say that just because someone needed services or could benefit from services did not mean that they would actually seek or demand services.

- **The oral health “safety net” in Sussex County is limited and very constrained. Other than the public health clinics in Seaford and Georgetown and the Stockley Center in Georgetown, which only serves adults with disabilities, there are no other public or private organizations in Sussex County who are dedicated, either through mandate or mission, to serving low income, Medicaid insured children or uninsured adults and children.**

The Division of Public Health’s clinics in Georgetown and Seaford provide a significant amount of dental services to Medicaid children but as a matter of policy do not serve other populations. Moreover, the public health clinics have limited staff capacity and face significant administrative barriers related to State budget issues as well as other State policies and regulations that hinder their ability to operate to their full potential. Private sector dental practices provide a significant amount of care to low income Medicaid insured and uninsured populations. As mentioned above, in 2008 there were 17 private providers who are enrolled in the State’s Medicaid program. These providers served approximately 4,300 patients (22% of the eligible Medicaid population) and generated about 10,500 Medicaid claims. Anecdotally, from interviews we understand that a majority of the claims come from a handful of providers and that many of those enrolled do not serve Medicaid populations in large numbers. While hard data is not available, an even smaller proportion of the dental providers in the County have a sliding fee scale and provide discounted fees to uninsured low income patients. In general these private practices do not dedicate themselves to these populations and are not perceived in the community as safety net providers. The Stockley Center in Sussex County provides a limited amount of dental care to adults with disabilities and is a critical part of the safety net in this respect but does not serve the general population at all.

Sussex County’s Hospitals (i.e., Beebe Medical Center, BayHealth Medical Center, and Nanticoke Memorial Hospital) are vital parts of county’s health care safety net. Related to oral health, they provide emergency oral health services through their emergency departments. However, these hospitals do not currently operate dental clinics nor do they have plans to open up clinics on their campuses in the near future. Currently they do not see this as part of their strategic mission. It should be noted that these institutions do

provide a great deal of support to other health and social service providers in the County (e.g., La Red Health Center, local public health departments, and other non-profit health and social service organizations). Beebe Medical Center and Nanticoke Memorial Hospital have expressed willingness to explore how they might support the development of a dental residency in Sussex County, which will be discussed in more detail below.

Henrietta Johnson Medical Center and Westside Family Health Care in New Castle County are Federally Qualified Health Centers (FQHC) and operate dental clinics that provide services to Medicaid insured children and uninsured adults on a sliding fee scale basis. In addition, Kent Community Health Center in Kent County (also known as Delmarva Rural Ministries) in Kent County has also historically operated a dental clinic and, in fact, set aside a very small portion (5-6 slots per week) of their overall capacity specifically to low income patients from Sussex County. It should be noted, however, that in January 2010, during the writing of this report, Kent Community Health Center (KCHC) closed its dental clinic. It seems likely that this closure will only be temporary but as of this time no date has been set for restarting operations. FQHCs are required to provide services to all comers regardless of ones ability to pay. These clinics, except for KCHC at this time, provide a limited amount of care to residents of Sussex County but realistically can only meet a fraction of the care needed by low income, Sussex County residents and for many traveling to Kent and New Castle Counties is an insurmountable barrier. The Pierre Toussaint Dental Office, Christiana Care Health Services at Wilmington Hospital, and the DTCC Dental Health Center are all health care providers in Wilmington, DE that provide dental services to uninsured and in some cases Medicaid insured patients. They provide care on a discounted basis and serve residents of Sussex County. However, once again travel is a major barrier to access and capacity is limited.

- **La Red Health Center (La Red) is a Federally Qualified Health Center that provides comprehensive primary care medical services to low income children and adults in Sussex County. Currently, unlike the other three FQHCs in Delaware, La Red does not provide dental services. In 2009, the Board of Directors and the senior staff at La Red made a commitment to develop dental services for its target population and have taken a number of significant steps to fulfill this commitment.**

La Red has been providing primary care medical services to low income populations since its inception in 2001. Historically, they have served primarily immigrant and migrant adult populations but over the past five years they have greatly diversified their patient population. In 2005, they applied for and received their FQHC status and they now serve a broad and representative cross-section of Sussex County's low income population. In 2009, La Red served approximately 5000 patients who generated approximately 12,000 visits per year. Based on formal and informal assessments of the needs of their patients, La Red's staff believes strongly that their patients have major oral health needs and have limited to no access to dental services. This is particularly true for their adult patient population, most of whom report that they have never been to a dentist.

As a result, in 2008, prior to the start of this project, La Red's Board of Directors made a commitment to develop dental services similar to the other FQHCs in Delaware. The JSI Project Team has had numerous discussions with La Red during the course of this project to

explore their plans and ideas for developing services. The following is a description of a series of activities that have either already taken place or that are planned that could or will have a bearing on the programmatic strategies that the JSI Project Team is exploring.

- In response to the Board of Director's commitment to develop dental services, in the winter of 2009 La Red applied for an Oral Health Expansion Grant through the Health Resources Services Administration's (HRSA) Community Health Center Program. As an FQHC, La Red is eligible to apply for these expansion funds to support the development and maintenance of oral health services operations for its target population. FQHCs can apply for up to an additional \$250,000 annually, which is added to their base grant every year. Funds can be used to pay for outreach/education and to help offset a portion of the facility and other indirect costs for their dental operations. A majority of the funds though are used to subsidize the cost of uncompensated care to low income uninsured or underinsured populations. These expansion grants are highly sought after by FQHCs across the country and, despite an application that received a very strong score, La Red was informed in August 2009 that it was not funded. Over the past decade, HRSA has put out requests for Oral Expansion Grant applications on a regular basis (roughly speaking every two years) and it is likely that another request for applications will be distributed by HRSA sometime over the next 12 to 18 months. La Red is planning to refine and resubmit its application as soon as possible. La Red has an outstanding chance of being successful in the next round.
- In 2009, La Red successfully negotiated a lease agreement with the Stockley Center that would allow La Red to use a 6,500 square foot building on the Stockley Campus at an extremely discounted rate of \$100 per month. These arrangements have been recently finalized and La Red now has access to the Stockley facility to house its dental operations should plans move forward. The Stockley Center is 7 miles from La Red's clinics in Georgetown.
- La Red has received a donation of dental equipment from the Sussex Smiles Program which operated at the Stockley Center until 2008. As part of their lease agreement with the Stockley Center, La Red also has access to two operatories located at the Stockley Center. They are also exploring further partnerships with the Stockley Center that would allow them to utilize two additional operatories that are located at a new, state-of-the-art facility at the Center that are currently being used to provide oral health services to Stockley Center clients.
- In the summer of 2009, La Red submitted an application for funding through the American Recovery and Reinvestment Act (ARRA) of 2009 to support the development of a new, comprehensive, state-of-the-art medical and dental facility that would replace their current medical facility. Roughly 4,000 square feet of this new building would be set aside for dental operations, allowing space for up to six (6) dental operatories. As part of the application process, La Red had to develop shovel ready plans, including architectural drawings that could be implemented if funding were awarded. Unfortunately, the La Red grant was not funded. As a

result La Red will move forward with its plans to operate within the Stockley Center and the business plan and pro forma are based on this assumption. It should be noted, however, that La Red plans to move forward with the planning for a new facility and will likely begin a private capital campaign sometime over the next year. The goal is to have a new facility within 3 to 5 years.

- **The Stockley Center provides comprehensive dental services to adults with disabilities in Sussex County. The Center provides services to adults that live on the Stockley Center campus in Georgetown (88 adults in 2008). The Stockley Center also helps to coordinate services for adults with disabilities who live in other Sussex County community settings outside of the Stockley Center campus through other contractual relationships. Arranging these contractual relationships has always been challenging as there are a limited number of qualified dentists who are willing and able to serve the disabled population. The Stockley Center is eager to explore collaborative relationships that would allow them to provide quality, comprehensive oral health services to their target population in an effective and efficient manner.**

The Stockley Center provides comprehensive services to adults with disabilities in Sussex County through contractual arrangements with private dentists who either operate within the facilities on the Stockley Center campus or in other community-based settings. Some of these arrangements are with local dentists and some are with dentists in Wilmington who travel to Sussex County on a limited but periodic basis. Arranging these contractual relationships has always been challenging as there are a limited number of qualified and interested dentists who are willing and able to serve the disabled population.

Over the years, the Center has always had access to dental facilities and equipment on campus where dentists provide these services. In 2008, the Center completed the development of a new state-of-the-art facility that houses most of the services they provide to their target population. Included in this facility is a new dental suite with two state-of-the-art dental operatories.

The Stockley Center has made some headway recently and there are Sussex County dental practices that are building their capacity to serve this population, but capacity is still limited and it has been very challenging to identify dentists willing to operate within their on-campus facility on a regular basis. The Stockley Center is eager to explore collaborative relationships that would allow them to provide quality, comprehensive oral health services to their target population in an effective and efficient manner. They are also willing to explore how they can maximize the use of their facilities with the caveat that their primary allegiance is to their target population.

- **The Delaware State Medicaid Program does not cover adult dental services but does cover dental services for children (0 to 21 years of age). Dentists who are enrolled in the Medicaid program receive 80% of their usual and customary charge. In this regard, it is one of the nation's most generous Medicaid programs.**

There has been major growth in the past 10 years in the number of dentists enrolled in and providing services to Medicaid eligible children. However, there are still relatively

few dentists, particularly in Kent and Sussex Counties that serve large numbers of Medicaid children.

The Delaware State Dental Society has been working with a number of State legislators to introduce a bill in the General Assembly that would provide a limited but substantial range of benefits to adults but given the current economic and budget climate in the State it is unlikely that this will be passed in the near future.

The Delaware Medicaid Program provides dental care to children, age 0 – 21, whose families meet the programs income and other eligibility requirements. Dentists who are enrolled in the program provide comprehensive services and are paid 80% of their usual and customary charge. In other states it is not uncommon for states to pay dentists only 40-50% of their charges.

In 2008, there were 429 licensed FTE dentists in Delaware. Forty-six of these FTE dentists operated in Sussex County and 50 of these FTE dentists operated in Kent County. According to data compiled from the Dentists in Delaware Study, approximately 200 dentists (45% of the 429 dentists statewide) were enrolled and served Medicaid insured children. In Sussex County only approximately 19 dentists (42% of the 46 dentists in Sussex County) were enrolled and served Medicaid insured children and in Kent County only approximately 11 dentists (22% of the 50 dentists in the Kent County) were enrolled and served Medicaid insured children. Furthermore, only a small portion of these dentists serve Medicaid patients in large numbers.

In 2009, The Delaware State Dental Society worked with a number of State legislators to develop and introduce a bill in the General Assembly that would provide a limited but substantial range of benefits to adults but given the current economic and budget climate in the State it is unlikely that this will be passed in the near future.

- **There are large numbers of low income, uninsured, adult populations in Sussex County who have virtually no access to dental services and who have very significant oral health needs. Many of these adults have never been to a dentist in their lives.**

In 2008, the Delawareans Without Health Insurance Study, prepared by the Delaware Health Care Commission and conducted by the Center for Applied Demography and Survey Research (CADSR), reported that there were 101,000 people statewide, 11.8% of the total population, without health insurance. Approximately 28,000 of these people resided in Sussex County comprising approximately 17.2% of the County's population. Numerous stakeholders in our interviews referenced this large, uninsured population and expressed particular concern about their lack of access to dental care. While data specifically on dental insurance is not available, one can assume that there are 2 to 3 times as many people without dental insurance as there are without health insurance. This uninsured population is made up of a racial and ethnic cross section of Delaware's population but has a disproportionate number of migrant and immigrant populations, particularly of Hispanic/Latino descent. According to the CADSR study on the uninsured about 20% of those without medical health insurance in Delaware are non-citizens and 22% are Hispanic.

The State's Medicaid Program covers children but not adults. Accordingly, low income adults, who do not have private insurance are particularly at risk and often have limited to no ability to pay the usual and customary charges required by most private dentists. There are some dentists who are willing to serve this population on a sliding fee scale basis but very few and this capacity is limited. According to staff at La Red Community Health Center a large proportion of their adult patients have never been to the dentist. Often these populations end up in the hospital emergency room with acute and severe oral health problems. This puts additional operational and financial burdens on the County's hospitals.

- **In the Spring of 2009, the Delaware Division of Public Health applied for an Oral Health Workforce Development Grant to support the planning and development of programs geared to expanding oral health access to low income, uninsured populations in areas of the country that face workforce shortages.**

In September of 2009, the Division of Public Health was notified that its application was successful and that it would be receiving \$440,000 per year for three years to support the oral health workforce development projects. The Division of Public Health has expressed its willingness to support efforts targeted on building the oral health workforce in Sussex County.

Enhancement of dental educational opportunities for dental hygienists and dental residents

- **The only viable option for the development of a dental residency program would be the creation of a new General Practice Residency Program sponsored by a Sussex County Hospital**

As discussed above, initially there were three options related to training dental residents: 1. development of an AEGD program, 2. expansion of the existing general practice residency program at Christiana Care in Wilmington and 3. development of a new general practice residency program in Sussex County. The AEGD program was quickly eliminated as an option given that Delaware's legal statutes related to dental licensure do not recognize the AEGD program as fulfilling the licensure requirements for dentists to practice in the State. In addition, after discussion with staff at the Christiana Care's existing general practice residency program, it was clear that they had limited to no interest in expanding their residency program to Sussex County via a satellite program. The only remaining option was to develop a new general practice residency program in Sussex County, which due to State licensure and legal issues would have to be sponsored by a hospital.

- **All three of Sussex County's hospital expressed their general support of efforts to develop a general practice residency program in the County. Discussions are ongoing and one of the hospitals has expressed interest in discussing the risks and opportunities in more detail with a hospital/community health center residency partnership program in Maine that has developed a successful program similar to the one that could be viable in Sussex County.**

The JSI Project Team had numerous discussions with senior staff at the three hospitals in Sussex County (Bayhealth Medical Center, Beebe Medical Center, and Nanticoke Memorial

Hospital). The Project Team gathered general input regarding oral health and workforce issues more specifically in the County, however, the focus of the discussion was on the development of General Practice Dental Residency (GPR) program in Sussex County. Each of the hospitals expressed their general support for the development of a general practice residency in Sussex County but only one of the hospitals was willing to fully explore the costs, risks, and benefits of the residency program. This hospital requested and was provided further information regarding the financial, management, and operational details of the program so that they could make a more informed decision. The other two hospitals said that they would be willing to explore how they could play a supportive role if it would help to bolster the safety net in the County and asked to be kept abreast of planning efforts moving forward.

The JSI Project Team conducted a site visit at a general practice residency program that is operated within the Penobscot Community Health Center in Bangor, Maine, in partnership with a local hospital in Bangor. The GPR in Bangor is sponsored by the Community Health Center, which provides nearly all of the dental services provided by the program, except for a portion of the emergency services and some of the surgical services. The program supports four dental residents, who work along side dentists employed by Penobscot at each of the four dental clinic sites. The Hospital supports the program in numerous ways including allowing the GPR's residents to round in the hospital's emergency room and a number of the hospital's other clinical departments. The hospital receives GME funding from Medicare, a small portion of which is used by the health center to offset some of the cost of the Residency Director. Beebe Hospital has expressed interest in meeting with the hospital in Maine that sponsors the Maine-based GPR as well as the community health center representatives from Penobscot Community Health Center. These meetings are in the process of being organized.

As mentioned above, none of the hospitals operate dental clinics or have oral health departments. Dental services are provided through the emergency room but most patients are triaged and referred to other providers once the patients have been stabilized. None of the hospitals have any experience operating residency programs in any other medical area. As a result, all three of the hospitals entered into discussions cautiously. The JSI Project Team discussed details with the hospitals in an iterative fashion and collected some basic operational and financial data, which was used to help develop the preliminary business plans and financial pro forma that follow in the next section.

In the meantime, all three hospitals have been asked to be kept in the loop with respect to continued planning of the GPR. More specifically, the JSI Project Team will be distributing the detailed financial pro forma and business plans to the hospitals so that the hospitals can determine the extent to which they want to be involved in on-going planning discussions.

- **La Red is excited about the idea of taking a lead role in the development of the dental residency and has expressed its clear willingness to be part of on-going discussions and planning.**

La Red is cautiously optimistic about the idea of developing a GPR in Sussex and is willing to take a leadership role should one of the hospitals agree to sponsor the GPR. Viability of the GPR is solely dependent on La Red's ability to develop strong, sustainable dental operations.

- **Many believe that one of the main reasons that there is a shortage of dentists in Delaware is because the State has one of the most stringent licensure requirements in the nation. Historically, it has been very challenging for organizations to recruit dentists to Sussex County. There are a variety of reasons why this is true but certainly the licensure requirements have a bearing on recruitment.**

If a hospital were to come forward and agree to be the GPR sponsor, the next most significant hurdle would be to recruit a GPR Director who would administer the program, provide dental services at La Red, and help to train residents. In the Summer of 2008, the Delaware State General Assembly amended the dental licensure requirements in a way that specifically paved the way for the recruitment of Residency Directors in the State.

In order for dentists to practice in Delaware they are required to participate in an accredited dental residency program. Dentists must also take the Delaware Dental Board Exam and there is no reciprocity for this requirement, meaning that even if a dentist has passed another dental board exam and has years of experience practicing dentistry in another state, they can not practice in Delaware. Only one other state requires that dentists participate in an accredited residency program and all states have some degree of reciprocity for the dental board exam. Numerous stakeholders said that they thought that these requirements had a major impact on organization's ability to recruit dentists to the State.

Recently, the Delaware General Assembly amended the dental licensure requirements in a way that specifically paved the way for the recruitment of a Residency Directors in the State. More specifically, the new statute states that a dentist who comes to Delaware to take a position as a Residency Director need not take the Delaware Dental Board Exam. According to GPR accreditation guidelines, handed down for the American Dental Association, the GPR Director would be required to have graduated from a residency program, so this requirement stands. However, a GPR Director would not have to take the Delaware Dental Board Exam. This could have a significant impact on the recruitment of the GPR Director should this effort move forward.

- **Representatives from the existing Christiana Care GPR based at Wilmington Hospital said that they were not willing to consider expansion of their program downstate in Sussex County. However, they were gracious and willing to support a new GPR in Sussex should a hospital sponsor and a viable application be prepared.**

The JSI Project Team met with numerous representatives at the Christiana Care GPR and all of them were extremely gracious and willing to discuss the project. The Project Team initially broached the idea of expanding the existing GPR downstate to Sussex County. However, due primarily to issues related to travel and housing for the faculty and the program's residents they believed this was not a viable option.

Overall, they were very supportive of the concept of a downstate residency program, however, most representatives expressed their concerns related to the difficulty of finding qualified sponsors willing and able to submit a viable application. Despite this concern, the leadership of the existing Wilmington-based GPR said that if viable partners and a hospital partner came forward in Sussex County to develop an application, they would be more than willing to provide guidance in the development of the application and to explore how the two GPRs could collaborate. Representatives spoke specifically of the potential to collaborate with respect to some of the didactic, classroom requirements in a distance learning format. Representatives at the existing GPR also spoke of the possibility of some of the Sussex-based residents rounding in Wilmington in key clinical areas that might be challenging to organize in Sussex such as oral surgery.

- **The staff in charge of the Dental Hygiene Program based at the Delaware Technical Community College (DTCC) expressed their willingness to be involved in strategic programs to expand the Dental Hygiene workforce in Sussex County.**

They expressed their concerns regarding the instability of their current practical training site in Kent County on the Dover Air Force Base and said that they would be willing to explore an additional training site based in Sussex County. An additional training site in Sussex County could stabilize current training operations for students attending the Terry Campus Extension of the Hygiene Program in Dover and could also remove some of the transportation barriers for students in Sussex County thus making the program more attractive for Sussex County residents.

A summary description of the DTCC Dental Hygiene Program was included above in Section IV: Description of Best Practices. Overall, the program staff that the JSI Project Team talked with expressed their support for the Terry Campus Extension of the Hygiene Program and were committed to maintaining the program in Kent County. They were also more than willing to explore ways to enhance the impact that the program could have in Sussex County but expressed their concerns related to the transportation and administrative barriers related to fragmenting the program any further. Currently, students enrolled in the Terry Campus extension must travel to Wilmington for both classroom-based didactic training as well as some of the practical, clinic-based training requirements. In addition, students have classroom sessions on the Terry Campus in Kent County and participate in practical training sessions at the Dover Air Force Base. While there might be some benefit to developing a practical training site in Sussex County, care would need to be taken to figure out how an additional site would be staffed and the extent to which an additional Sussex County-based training would remove the travel burden for the faculty and Hygiene students.

In 2008, the senior administrative staff at DTCC identified the Dental Hygiene Program as a candidate for expansion and accordingly the DTCC was very open to discussing options for expansion, geared specifically to Downstate regions. JSI staff had numerous discussions with staff from the Hygiene program as well as staff from the central administrative offices and the Owens Campus offices. Assuming it could be clearly established that there was demand and need for hygienists, DTCC made it clear that it was more than willing to consider programmatically and financially viable operations that were sustainable and that were carefully geared to workforce needs. However, it should be clearly noted that, given

the State's current budget issues, overall expansion of the program was not likely and any efforts would need to be budget neutral. Discussions with the DTCC staff related to marketing and a new training site are on-going.

Creation of a case management program to develop a dental home for children

- **Options for reimbursement of case management activities are limited**

Stakeholders interviewed cited that the most significant barrier to implementing a case management system was the identification of a reimbursement mechanism and sustainable business model. Currently private insurance and public payors do not reimburse for case management services. Given stakeholder feedback and the current economic environment and State budgetary context there is no intent to change reimbursement policies at any time in the near future. One model that could be sustainable is to have publically supported clinics like La Red or the Public Health Clinics fund and manage oral health case management efforts. The reason this could be sustainable is that these clinics could identify and refer Medicaid eligible patients to themselves in the course of their case management activities and therefore drive their clinic utilization and billing. Since Delaware has such a generous Medicaid program this could be a viable and effective way to link vulnerable, Medicaid insured children with a dental home either at La Red, once its dental operations are in place, or the Public Health Dental Clinics. It was suggested that JSI explore a number of options for financing this strategy including determining the extent to which case management can be incorporated into cost based reimbursement for FQHCs.

- **Initial case management activities should be directly connected to an access point like La Red or the Public Health Clinics and associated outreach should be done at places where the target population gathers.**

Concern was expressed that case management activities would increase the demand for dental services yet be unable to increase access or utilization of them. While case management services can result in private dental providers being more willing to increase access to Medicaid eligibles, the point is well taken that if there is no additional capacity then case management activities may simply displace other patients which are accessing care. As a result, the implementation of case management activities would be most effective if paired with previously discussed project objectives of developing a multipurpose dental clinic. In this manner, case management activities will support the business model (by reducing down chair time because of missed appointments) as well as screen and facilitate access for populations with the highest oral health needs. Given the desire for La Red to establish such an access point, a primary focus of case management should be on assuring that existing La Red patients who do not have a dental home are identified and provided supportive services to access the La Red dental clinic.

Subsequent to case management of existing La Red patients, La Red could partner with schools. In fact, there are a number of successful models that deploy a dental assistant to area schools, work with school health staff to identify children which do not have a dental home, and facilitate their access to services at existing clinics willing and able to take patients (e.g., La Red, Public Health Clinics, willing private sector practices). The inclusion of

schools in case management activities was highly supported across stakeholders interviewed.

- **The Delaware Division of Public Health currently operates two Public Health Clinic sites in Sussex County, one in Georgetown and one in Seaford. These sites provide a range of preventive and restorative services to children that are referred from the State Services Centers, other community-based venues, and through some limited case management programs run in the State public school system.**

The State also has recently acquired a mobile van and there are plans underway to recruit voluntary and/or staff dentists that would provide services at selected locations throughout the State, including schools, community centers, senior centers, and other community venues.

The Division of Public Health operates a network of Public Health Dental Clinics throughout the State. There are 8 clinics distributed throughout the State; 4 of the clinics are in New Castle County, two are in Kent County, and two others are Sussex County. The Sussex County clinics are located in Georgetown and Seaford. In 2008 the Georgetown clinic served approximately 1,300 Medicaid insured children and, while the Seaford clinic was closed for renovations in 2008, it served approximately 1,200 children in 2007.

These clinics are a great asset for the State and while their capacity is somewhat limited they are at the core of the State's oral health safety net. As mentioned above, the clinics capacity is constrained by staffing and administrative barriers brought on primarily by State budget and human resource/hiring issues. For example, due to State budget issues, the Division of Public Health has put a freeze on new hires, which has limited the Division's ability to maintain the Public Health Clinic's at full capacity. The Division has also recently lost an administrative person that provided vital central management support, which will further hinder program operations across the State.

In 2009, the Division of Public Health took steps to acquire a mobile dental van, which it intends to use to fill target gaps in access across the State. While plans have not been fully implemented at this time, the Division intends to staff the van with both paid and voluntary providers and operate primarily in public elementary schools. The van will provide a range of preventive and restorative services and could be used as a base for case management services as well. Staff at the van will provide direct services on the van but could also refer patients to the Public Health Clinics.

SECTION VI: RECOMMENDATIONS AND FINANCIAL PROFORMA

Overview

Based upon the review of best practices for dental programs for low income populations, in particular those living in rural areas, interviews with key stakeholders in Sussex County and throughout the that State of Delaware, and development of financial pro forma for possible models, JSI is recommending the development of a multi-purpose clinic in Sussex County

with the following core attributes; 1) a dental access point primarily serving Medicaid eligible children and uninsured adults, 2) a general practice residency program, 3) a targeted case management program, and 4) potentially a dental hygienist practical training site. These activities would be developed incrementally over a 3-5 year period.

This multi-purpose clinic along with a range of important collaborations and partnerships would be at the core of the strategic response to the three areas under exploration. In addition to this core strategic response, the JSI Project Team is also recommending that Delaware Health Commission and Division of Public Health explore the development of a targeted case management program that would utilize paid and voluntary staff who would be placed either in targeted community-based venues or operate out of the Division of Public Health's newly acquired mobile dental van. Finally, the JSI Project Team recommends that the Delaware Health Care Commission and the Division of Public Health take steps to more rigorously determine the need and demand for dental hygienists and dental assistants in Sussex County.

More specifically, the core and secondary recommendations are as follows:

Core Recommendations

1. Development and operation of a full-service (adult and pediatric) dental practice integrated into clinical services at La Red Health Center in Georgetown.
2. Development and operation of a General Practice Residency Program for Dentists sponsored by one of the hospitals in Sussex County and operated through La Red Health Center.
3. Development and operation of a case management system within La Red Health Center that would initially focus on case managing La Red's medical patients and core target population and eventually focus on broader community settings, including County elementary schools.

Secondary Recommendations

4. Development of a targeted case management program that would focus geographically on areas where there were large low income populations with limited to no access to dental care (e.g., western Sussex County).
5. Development of a dental hygienist practicum at La Red Health Center.
6. Commission of a Study to further explore the exact demand for dental hygienists and dental assistants in Sussex County.

A more detailed discussion of operation of each of the components of the program and underlying assumptions used to develop the financial pro forma are outlined in the following paragraphs. A summary of financial projections across the full program is presented at the end of the section.

1. Multipurpose clinic

The proposed dental clinic will be developed under the governance and operational management of La Red Health Center, a federally qualified health center (FQHC) located in Sussex County in Georgetown. The development and operation of the dental clinic under La Red presents an ideal scenario to bring dental services to the low income and uninsured residents of Sussex County, for several reasons as outlined below.

- A. In 2010 it is likely that La Red will have access to funds from the State Division of Public Health that are part of a HRSA Workforce Development Grant that was awarded to DPH in the Fall of 2009. La Red has been encouraged to apply for these funds and would be a very strong candidate for funding. This opportunity could provide approximately \$200,000 to \$250,000 per year for three years and would be used to support workforce development and to start-up operations.
- B. In early 2009 La Red applied for a Department of Health and Human Services (DHHS), Bureau of Primary Health Care (BPHC) Section 330 Expansion Grant to add dental services to its existing medical services. Expansion Grants are awarded in amounts up to \$250,000 per year and funds can be used for the start up and ongoing operation of dental services, including sliding fee discounts on charges for qualifying low income individuals and families. Adult dental services are not part of the optional services covered by Delaware Medicaid and low income individuals and families cannot often afford to purchase dental insurance. Delaware Medicaid does cover dental services for children (under age 19) but a small percentage of children do not qualify for Medicaid, for example undocumented recent immigrants. Children not eligible for Medicaid dental coverage would have access to dental services through La Red.
- C. La Red received notification in September 2009 that they were not awarded an expansion grant for this funding cycle. They plan to resubmit their application the next time this grant opportunity is offered. Over the past 10 years, these expansion grants have been offered roughly every two to three years. La Red's first grant submission was scored 93 out of 100, which is an extremely high score and would typically be in the fundable range. La Red will have an extremely good chance of being funded when it resubmits. The pro forma assumes that La Red will be successful in their grant application for 2011. In the meantime, the HRSA Workforce Development Grant could support start-up.
- D. Through the Delaware Health Care Commission's State Loan Repayment Program for Health and Dental Professionals, La Red could offer loan repayment to dentists hired to provide services in the proposed dental clinic. In addition, Sussex County is designated as a Health Professional Shortage Area (HPSA) for dentists and in 2009 received a score of 19, making the County eligible for loan repayment benefits through the National Health Service Corps.

- E. In 2009, La Red successfully negotiated a lease agreement with the Stockley Center that would allow them to use a 6,500 square foot building on the campus for \$100 per month, or \$1200 per year, an amount well below market rates. The space has 2 fully equipped and operational dental operatories with space for up to 6 operatories.
- F. In early 2009 La Red applied for capital funds through the American Recovery and Reinvestment Act of 2009 (ARRA) to fund the development of a new, state-of-the-art facility to house its medical and new dental operations. As planned, the new facility would have had 3,800 square feet dedicated to dental services, allowing space for up to six (6) dental operatories. In October 2009 La Red learned that it was not funded. However, La Red plans to begin a private capital campaign for a new facility with expected completion within 3 to 5 years. Given the inherent uncertainty of raising capital in this economic climate, the pro forma is based upon locating the proposed dental services within the Stockley Center for the foreseeable future until La Red can construct or arrange for a larger facility that it can move into and integrate its medical and dental operations.
- G. La Red has access to donated equipment and below market rent for dental space. La Red has been offered four dental chairs, of which 2 are fully equipped, as well as an x-ray machine. The dental chairs and x-ray machine would be put into operation in the leased space.
- H. La Red will be able to expedite start up of dental services because the proposed dental clinic will operate under the direction of the Center's long standing and well qualified clinical and administrative management team and will have access to all support services including financial management, human resources, and facility management. In addition, La Red medical users will provide immediate demand for on site dental services.

Operational Plan

The proposed dental clinic will eventually operate in a newly constructed La Red Health Center facility that will integrate its medical and dental operations and allow for the projected growth of its patient population. Until the new facility is ready for occupancy, La Red will build out the leased space at the Stockley Center and operate dental operations in a satellite fashion, taking care to coordinate services and provide timely transportation.

La Red will recruit and hire one full time clinical dentist to begin the practice. Most likely the dentist will be recruited from the Wilmington-based dental residency program. La Red will also likely have access to the State Loan Repayment Program, as well as the National Health Service Corps, which will greatly enhance recruitment efforts. La Red will also offer extremely competitive salary and benefits and a supportive work environment. After the successful recruitment of the dentist, La Red will recruit and hire a dental hygienist, dental assistants, receptionist, billing and administrative staff. Dental hygienists will be recruited from the Terry Campus Extension of DTCC's Dental Hygiene Program in Dover. La Red will hire an additional full time clinical dentist in the third year (CY2012), bringing the complement to 2.0 FTE clinical dentists.

At full capacity, the dental clinic will have 2.0 clinical dentists and 1.5 dental hygienists and up to 6 operatories. The provider complement is before providers related to the residency program. A detailed description of the proposed residency program is included later in this section.

Demand for Dental Services/Dental Users

The need for expanded dental services available to low income residents of Sussex County has been well documented. Still it is important to ensure that there will be sufficient demand for dental services given cultural, financial and other barriers to accessing services. La Red will use a combination of “cross-fertilization,” internal case management, outside referrals, and ultimately school-based case management to generate demand for its dental services. (A more detailed discussion of the proposed school-based case management is provided later in this section under “Case management”).

Initially, demand for dental services will come from La Red’s existing medical users that do not have a regular dental provider/dental home. La Red physicians, providers, health educators, and social workers will inform their patients of the dental services available through La Red and discuss with them the importance of good dental health. In 2008, La Red had 4,939 medical users of which 1,215 were children (under age 19) and 3,624 were adults. In 2009, the number of users is estimated to reach 5,100 and that number is expected to grow to 6,500 by the end of CY2010 and 8,500 by the end of CY 2013. The projected number of medical users is based on current physical capacity and the number could grow even further if La Red is successful at raising the capital for a new and expanded facility. On average, 75% of medical users are adult (over age 19) and the remaining 25% are pediatric users. Through cross-fertilization and internal case management, La Red expects that up to 60% of pediatric medical users and 25% of adult medical users, or a combined average of 34% of total medical users, will become dental users. The projected combined percentage is somewhat higher than the 22% average attained by 330-funded community health centers nationally that provide both medical and dental services.⁵ However, given the lack of access to dental services in Sussex County and the fact that most of La Red’s current patients have no access to care, the Project Team is confident that La Red can achieve these targets with planned, proactive, internal case management and adequate capacity.

The greater conversion percentage for pediatric medical users (60% versus 25% for adults) is due to greater access to dental insurance for children (dental services are covered by Delaware Medicaid for children but not adults). La Red will be able to offer sliding fee discounts to adult dental users, but some financial barriers will still exist for those that cannot afford the discounted charges/minimum fee. Holding the conversion percentages constant year to year, the number of dental users will increase along with the projected increase in medical users. La Red’s senior management team is confident that over time through on-going internal marketing and education they can increase the percentage of medical users that will become dental users to 34% overall.

⁵ Based upon 2007 Uniform Data Set (UDS) nationwide.

Additional demand for dental services will come from four sources outside of La Red: 1) referrals from the Public Health Dental Clinics, 2) referrals from the Stockley Center, 3) outreach and education to the general community, and 4) ultimately a targeted school-based case management program to Sussex County elementary schools.

La Red will work closely with the Sussex County Public Health Dental Clinics to refer patients that need dental services beyond the scope of services provided by the Public Health Clinics, for example, adult services and comprehensive restorative services. The Sussex County Public Health Dental Clinics provide pediatric preventive dental services and some restorative services, for example, cleanings and fluoride treatments. In 2008, the Public Health Dental Clinics in Sussex County provided services to 1,299 pediatric users. While many of these patients will choose to continue to seek services within the Public Health Clinic settings, the Division of Public Health as a matter of policy would often prefer that their patients retain a dental home outside of the Public Health Clinics, particularly for those patients requiring comprehensive, ongoing services and support. As such, the Division of Public Health expects that it will want to refer a large portion of their patients to La Red when operations are initiated. An exact estimate of the number of referrals that La Red can expect is not possible at this time.

Since the Public Health Clinics do not serve adults, La Red would become the dental home for all referred adult patients. Pediatric users would be able to maintain a dental home at the Public Health Clinics and La Red will work with the Division of Public Health on an ongoing basis to ensure that it is not adversely affecting business model and creating adverse competition for the Public Health Clinics.

La Red will provide dental services to the 88 adult residents at Stockley. In addition, La Red could serve as the dental home for Stockley clients that have been able to move to community based care.

La Red will draw dental patients from the low income population residing in its service area that currently does not use the health center for medical services. The individuals will be drawn in through community outreach and education activities. Estimates for the pro forma were based upon Sussex County population data, in particular, adults with incomes below federal poverty level.

Eventually, La Red will likely establish a school-based case management program that will serve as a source for external referrals to dental services once they have exhausted outreach efforts into their own medical patient population. A more detailed description of the school-based program is provided below under “Case Management.”

Financial Pro Forma for Dental Clinic within La Red Health Center

The following section outlines the major underlying assumptions and financial projections for a dental clinic operating within La Red Health Center and fully integrated into its clinical operations. The section is divided into three major areas: revenues, operating expenses, and capital expenditures.

Revenues – The dental clinic will derive revenue from three major sources: 1) net patient service revenue and 2) State labor force grant (Year 1 only), and 3) federal 330 expansion grant (beginning in Year 2).

Net patient service revenue includes reimbursement for services from Medicaid/SCHIP and private dental insurance carriers as well as patient payments for patients without dental insurance. La Red will establish a dental fee schedule that is consistent with prevailing charges in the area. Prevailing rates by CPT code were provided by Delaware Medicaid. Medicaid/SCHIP reimburses at a rate of 80% of charges (recently reduced from 85%) for services provided to Medicaid enrollees. Delaware Medicaid only offers dental services for children through age 19. La Red estimates that 85% of its pediatric patients are enrolled in Medicaid or SCHIP; those not enrolled included recent immigrants that are not eligible for coverage. La Red will accept Medicaid/SCHIP payment as payment in full and will not bill patients for the remaining 20%.

A small percentage of dental users (adult and pediatric) will be covered by private dental insurance. La Red estimates that 5% of adult and pediatric dental users will be covered through private dental insurance. It was assumed that private dental carriers would pay on average 80% of charges and the remaining 20% would be billed to patients as self pay balance after insurance payments, for a net collection rate of 90%. La Red would collect the self pay balance based upon relevant sliding fee percentage and with some amount remaining uncollectible as bad debt.

The vast majority of adult dental users (95%) will be self pay/sliding fee. La Red will apply the same sliding fee scale used for medical services but with the minimum amount set at \$50.00. It is also assumed that the allocation of self pay users within sliding fee categories will follow that for medical users – 70% minimum, 20% pay 40% of charges, 7% pay between 60% and 80% of charges, and 3% are full pay. Only 10% of pediatric dental users are estimated to fall into the self pay category and it is assumed that 100% of those would pay the minimum amount, \$50.00 per encounter. La Red has established a policy to collect for services prior to dental services being provided, except in case of emergencies, and therefore believes that they will be able to collect nearly 100% of charges from self-pay patients.

La Red will prepare a fee schedule based upon prevailing rates in the area. Reimbursement amounts used for the pro forma were based upon Medicaid data providing average reimbursement for the most common dental procedures.

HRSA Workforce Development Grant – The following pro forma is based on the assumption that La Red will apply for be awarded a three-year grant that will provide up to \$250,000 per year that would be used to pay for start-up costs and salaries not otherwise paid for through other means (e.g., uncompensated care to uninsured children and adults) The pro forma includes \$200,000 for the first year (CY2010).

DHHS BPHC Expansion Grant – The pro forma also assumes that La Red will apply for and be awarded a oral health expansion grant in 2011, which will further support operations and

provide a more versatile funding stream that can be used to support operations and cover care to the uninsured. The grant would provide up to 250,000 annually and assuming that La Red can sustain operations that meet HRSA requirements will be funded at this level indefinitely. Because La Red was not awarded an expansion grant in the current funding cycle no expansion grant funds are included in the Year 1 of the pro forma. In the meantime, La Red will utilize funds from the HRSA Workforce Development Grant and plans to re-apply in FY2011. The pro forma assumes that La Red will be successful and receive grant funds of \$250,000 per year beginning in CY2011.

Operating Expenses are grouped into two major categories: 1) labor and fringe benefits, and 2) non-labor operating costs.

Labor costs consist of salaries for clinical dentists, dental hygienists, dental assistants, receptionists, billing clerks, and a unit administrator. Annual salaries for the clinical dentists, hygienists, and dental assistants were estimated based upon prevailing rates for the local area. Annual salaries for receptionist, billing clerk, and unit administrator were based upon La Red's salary structure for similar positions in their medical operations. Staffing ratios from other community health centers that provide dental services and local providers as well as guidelines provided by the American Dental Associates (ADA) were used to develop annual staffing plans for the proposed dental clinic. Staffing levels were also adjusted to support start-up and ramp-up to full capacity. For example, a full-time clinical dentist and full-time hygienist will be hired in the first year of operation (CY2010) to ensure that La Red can be competitive in its hiring practices and that demand is adequately met. The dental clinic will begin with 1.0 FTE clinical dentist and ramp up to 2.0 clinical dentists by the third year of operation.

Fringe benefit costs were estimated using La Red's current fringe benefit rate of 30% of total salaries.

Non-labor operating costs include clinical supplies and lab, office supplies, housekeeping and maintenance, insurance, and bad debt. Major assumptions used to project these costs are outlined below.

- Clinical supplies – based upon industry average (ADA) of \$7,100 per operator. Clinical supplies increases with the number of operatories and are estimated at approx. \$10,000 per operator. Currently the pro forma assumes that much of these supplies will be donated.
- Lab fees – based upon La Red's historical experience for medical services of \$7.00 per encounter.
- Office supplies – based upon La Red's historical experience for medical services of \$1.00 per encounter.
- Equipment maintenance – based upon industry (ADA) average of \$2100 per operator in full operation.

- Housekeeping – based upon La Red historical cost of \$2.20 per square foot for the allocated 6500 square feet in the Stockley Center
- Communications (telephone, internet access, etc) – based upon La Red’s estimate of \$15,000 per year.
- Recruitment – estimated at \$20,000 per year for first three years of operations to recruit dentists.
- Continuing professional education (CPE) allowance – based on industry (ADA) average of \$1500 per FTE dentist and hygienist

Professional liability insurance – pro forma is based on assumption that dentists and dental hygienists will be covered under Federal Tort Claim Act (FTCA) coverage afforded to federally qualified health center providers or hospital coverage. An insurance rider would be needed to cover residency director and residents when operating at alternate site (hospital if employed by La Red and La Red if hired by hospital). An amount of \$400 per year per individual has been budgeted for insurance rider and was based upon an estimated amount of 10% of the cost of full professional liability coverage.

Occupancy costs include lease payments of \$100 per month. Other occupancy costs, for example, general insurance and utilities are covered by the Stockley Center.

The pro forma operating expenses do not include an allowance for depreciation. These costs are reflected in capital costs as outlined below.

Capital Expenditures

Capital expenditures over the 5 year period will include leasehold improvements, health information system, and purchase of 2 fully equipped chairs. La Red has been donated 4 dental chairs, 2 of which are fully equipped, and one x-ray machine. Before beginning operations, La Red will make leasehold improvements to the Stockley Center space. Although 6500 sq feet is available, leasehold improvements costs are budgeted only for 3800 square feet, or the amount needed to support 6 operatories. Leasehold improvements are estimated at \$150 per square foot for 3800 square feet, or \$554,800. La Red will also spend \$30,500 to purchase a practice management system for dental billing and patient accounts management.

In CY2012, another \$25,000 will be needed to purchase small equipment to fully equip the other 2 donated chairs (\$12,500 per chair). In CY2013, two fully equipped chairs will be purchased to support added residency director and two residents at a combined cost of \$145,000.

Capital expenditures do not include any costs associated with constructing the new facility.

2. General Practice Residency (GPR) program

Based on the State's legal statutes and licensure requirements, the proposed General Practice Residency Program would have to be sponsored by one of the County's hospitals, Beebe Medical Center, Bayhealth/Milford Hospital, or Nanticoke Memorial. Currently, none of the hospitals have any form of graduate medical education programs. However, one of the hospitals has expressed sincere interest in sponsoring such an endeavor and is in the process of exploring the risks and rewards. While no commitments have been made discussions are on-going and there are plans underway for one of the hospitals to discuss details with an existing successful model in Maine that is similarly organized.

Assuming a hospital sponsor is identified, it is estimated that it will take three years to develop the program, file the application and get accreditation. The dental residency program will be under the clinical management of a full time Residency Director. The hospital sponsor and La Red would collaborate on the hiring of a highly qualified residency director. Recent changes in Delaware dental licensing regulations will make it easier to recruit from out of state and expand the pool of qualified candidates. Until recently, the residency director would have had to fully comply with the State's licensure regulations, which would have required that the residency director pass the Delaware Practical Board Examination in Dentistry. In 2009, the Delaware General Assembly passed a bill that amended the State licensure regulations and removed the requirement that a dentist serving in the State as a residency director had to take the Practical Board Examination.

The first resident will be placed in the dental clinic the fourth year of operations (CY2014) and the second resident placed the following year. At full capacity, the dental clinic will support two residents – one first year and one second year. The residency director and residents could be employees of either the sponsoring hospital or La Red as decided by the hospital and the health center and defined by residency program requirements. Factors to consider include clinical management and financial implications, for example, mal practice insurance coverage.

Financial Pro Forma for Residency Program

Revenues – Revenues for the residency program will come from two major sources: GME funds included in Medicare inpatient reimbursement and 2) net patient service revenue for dental services provided by the residency director and residents. Once the graduate medical education program has been accredited, the sponsoring hospital will receive Graduate Medical Education (GME) funds as part of its Medicare reimbursements for inpatient services. The actual amount varies based on a hospital's cost structure, but typically ranges from \$100,000 to \$150,000 per resident. GME funds are paid to the hospital with one third of the amount paid in year 1, two thirds in year 2, and the full amount in year 3. The pro forma reflects all of the GME funds; the amount of GME funds retained by the hospital and the amount provided to La Red would be mutually agreed upon by the two entities.

La Red will bill Medicaid, private dental insurers, and patients for services provided by the residency director and residents. The residency director will spend half time in clinic (.5 FTE clinical). Residents operate at an estimated 50% to 60% of a full time clinical dentist. The

pro forma assumes that first year residents will operate at 50% productivity of a clinical dentists and second year will operate at 60% productivity.

Expenses – The primary expenses of the residency program are salaries and benefits for residency director and residents. The resident director salary is estimated at \$200,000 and is based upon prevailing salary for a dentist qualified to serve as residency director. Resident salaries are estimated at \$50,000, the average salary for a dental resident in the current Wilmington-based GPR. Other expenses would be those associated with expanded dental services – added clinical support staff, increased clinical supplies and lab fees, and increased office supplies.

Capital expenditures – Two additional dental chairs would be needed for residency director and residents, to bring complement to 6 operatories. These expenses were already factored in the discussion and pro forma above.

3. Internal and School-based Case Management Operated Conducted By La Red

La Red will implement a case management program that will operate initially internally at La Red and overtime will operate in School-based settings throughout Sussex County. La Red will hire an additional case manager that is trained as a dental assistant. Initially, the case manager will work with La Red’s clinical and administrative staff in both a proactive outreach role as well as in a referral capacity. With respect to outreach, the case manager will organize education and awareness activities that will inform patients about the importance of regular preventive dental services and guide patients on how to access services. In addition, the case manager will be a source of referrals from medical clinicians who in the course of their regular medical primary care sessions identify someone who is need of preventive or restorative dental care. In this circumstance, the case manager will participate in “warm-hand-off” counseling sessions directly following a patient’s medical visit during which time the case manager will, as above, inform patients about the importance of regular preventive dental services and guide them on how to access services.

Eventually, as dental penetration rates increase within La Red’s medical patient population, the case manager will conduct outreach and case management activities in schools and other community-based settings. More specifically, the case manager will travel to local area elementary schools to see and evaluate the dental needs of low income children, identified as those on the subsidized lunch program. The case managers will conduct paper evaluations – review students’ records with the school nurse or relevant staff person to identify those that have not had access to dental services. Low-income children that do not have a consistent dental provider (dental home) will be referred to La Red Dental Clinic. The case manager will not be able to provide any services on site at the school, for example fluoride brush, because under Delaware regulations the case manager/dental assistant would need to operate under the supervision of an on-site dentist. Children without a dental home would be referred to the Dental Clinic for clinical evaluation and follow up.

Financial Pro Forma for Case Management

Revenue – The case management program does not produce any direct revenues. Delaware Medicaid does not pay for dental case management services. The case management and community outreach programs will support the projected demand for dental services for both adults and children that are reflected in the pro forma for the dental clinic.

Expenses – Expenses for the case management include salary and benefits for the case manager as well as some local travel expenses (mileage) for travel to/from area schools. Salary for the case manager is budgeted at \$26,000. An estimated \$500 per year was budgeted for reimbursement of local travel costs (mileage, parking, etc).

4. Community-based Case management Conducted by the Division of Public Health

Similar to the above case management program, the JSI Project Team strongly suggests that the Division of Public Health develop a targeted case management program that would focus geographically on the most underserved areas of the State and particularly Sussex County. As mentioned above, the CADSR Dentists in Delaware Study identified large portions of western Sussex County, the areas around Bridgeton and Laurel for example, that have no dentists who accept Medicaid insured children. These areas would benefit greatly from outreach and case management activities that would address the access barriers that exist and work to link those in need to services in other parts of the County.

The program would operate much like the La Red case management program described above. The Division of Public Health would hire a cadre of case managers, the exact number would depend on the initiatives goals and scope, who would be trained as dental assistants. These case managers would conduct outreach and case management activities in schools and other community-based settings. More specifically, these case manager would travel on their own or within the Division of Public Health's Mobil Dental Van to local area elementary schools and other community-based setting to see and evaluate the dental needs of low income children. The case managers would screen and counsel prospective clients and identify those that do not have access to dental services or a dental home and be referred to the Public Health Clinics, La Red, or a participating private dentist. The case manager would not necessarily provide any direct clinical services, because under Delaware regulations the case manager/dental assistant would need to operate under the supervision of an on-site dentist, unless the case managers were operating within the mobile van while working with a staff or volunteer dentist,

Financial Pro Forma for Case Management

Revenue – The case management program does not produce any direct revenues. Delaware Medicaid does not pay for dental case management services. The case management and community outreach programs will support the projected demand for dental services for both adults and children that are reflected in the pro forma for the dental clinic.

Expenses – Expenses for the case management include salary and benefits for the case manager as well as some local travel expenses (mileage) for travel to/from area schools.

Salary for the case manager is budgeted at \$26,000. An estimated \$500 per year was budgeted for reimbursement of local travel costs (mileage, parking, etc).

Given the economic downturn and the State's budget crisis the JSI Project Team understands that this recommendation may not be viable. However, the Project Team believes that it could be an extremely cost effective and flexible way of expanding access and targeting areas with limited to no access to care. Partnerships with community venues, such as schools, could be formed in high-need areas and case managers could be dispatched on a regular or as needed basis. The Division's mobile van could also be utilized as a locus of these activities and case management could be woven into these activities if they had not been considered already.

Depending on how well this recommendation is received the JSI Project Team will further estimate the potential cost and impact that a case manager will have on a per FTE basis. Given this statistic, the Division could either hire staff or contract out case management activities of whatever scope necessary or possible depending on perceived need/demand and budgetary constraints.

5. Dental Hygienist Training Program

La Red will sponsor 4 - 5 dental hygiene students beginning in Year 4 (CY2013) of the dental program. Dental hygiene students would be drawn from the Terry Campus Extension of the DTCC Dental Hygiene Program. Dental hygiene students will shadow and work under the direction of the hygienists 2 - 3 sessions per week.

Financial Pro Forma for Case Management

The financial pro forma assumes that La Red will sponsor one dental hygiene student in Year 4 with a second student added in Year 5. A second part time (.5FTE) dental hygienist (for a complement of 1.5 FTE hygienists) will be added to ensure adequate supervision of students. The hygienists and students will combine to produce the equivalent of .5FTE encounters for dental hygienists. Dental hygiene students are not paid a salary or stipend, so there is not added labor costs associated with sponsoring the students.

6. Demand/Needs Assessment for Dental Hygienists and Dental Assistants in Sussex County

Based on our review of the existing studies and report as well as discussions with stakeholders throughout the State, there was significant ambiguity regarding the need or demand for dental hygienists and dental assistants in Sussex County. As stated above, The 2008 Dentists in Delaware Study revealed that 32% of dental practices in the State perceived themselves to be not fully staffed with the appropriate dental hygienists, dental assistants, and other office staff. In New Castle County, 34% of practices believed they were understaffed. In Kent County 28% of practices held this belief and in Sussex County 22% of practices felt that they were understaffed. These shortages impact access as they reduce the productivity of the existing dentists. The provider type that practices thought was most difficult to fill was dental hygienists, with 42% of dentists statewide and 61% of dentists in

Sussex County reporting difficulty in recruiting dental hygienists. Thirty-four percent of dentists statewide and 22% of dentists in Sussex reported difficulties in recruiting dental assistants.

On the other hand, according to discussions with senior staff at the DTCC Dental Hygiene Program, graduating students have recently had a difficult time finding full-time placements after graduation. Furthermore, there was not consensus among the stakeholders regarding the need for hygienists and dental assistants. The CADSR Study applied a provider self-report methodology that asked for qualitative perceptions and did not ask for productivity data or conduct more detailed interviews to refine its understanding or interpretation of its qualitative findings.

DTCC said that it would be willing to expand the Terry Campus Extension of the Hygiene Program and/or more fully explore an Owens Campus Extension of the Program but only if the current need for Hygienists could be confirmed more clearly.

Financial Pro Forma for Demand/Needs Assessment

The financial implications for this assessment are dependant on the approach and methods applied by whoever conducts the assessment. If this type of assessment was contracted out to a vendor or individual then the Project Team estimates that it would take roughly 3 months (20-30 work days during this period) and costs approximately \$30,000 – \$50,000 depending on the approach.

General Assumptions and Methodology

The following general assumptions and methodology were used in producing the financial pro forma:

- Projections are for the period CY2010 (first year of operations) through CY2015 (steady state). CY2010 projections are for a full year although operations will not likely begin until mid to late year. La Red projects a start date of September 2010 if dental operations are placed at the Stockley Center, allowing time for recruitment of dentist and completion of leasehold improvements, once the plans are finalized, the pro forma can be adjusted to reflect a partial year in 2010 or a new start-date all together.
- Projections are on a modified cash basis. For consistency year to year, revenues are reported as generated (as opposed to collected) and expenses are reported as incurred (as opposed to paid). Capital expenses are reported on a cash basis rather than as an annual appropriation for depreciation.
- Revenues, expenses, and capital expenditures are reported in 2009 dollars and not adjusted for inflation.

Summary of Financial Projections

A summary of projected revenues, expenses, and capital expenditures is included in the table provided below. Also included below is a discussion of the major financial results.

- The dental program (before residency program) can operate at or near breakeven assuming that 330 expansion grant funds, or comparable amount of grant funding from other sources (e.g., the HRSA Workforce Development Grant) is available to support some of the start-up costs and the cost of care for uninsured dental patients.
- The dental program with the residency program would operate at a loss for the first two year of operation while GME funds are being phased in by Medicare (GME funds are phased in over three year period) and would operate at near breakeven at steady state (CY2015). Implementation of the residency program also requires the hiring of a residency director with a salary significantly higher than that of a clinical dentist (\$200,000 compared to \$110,000). The higher salary reflects the experience and credentials needed for the director to have an accredited residency program. The residency program is considered key to providing an adequate number of trained dentists for Sussex County over the long term and, therefore, it is important to have a viable dental residency program. One option is to expand the program to support up to 6 residents and thereby generating additional GME funds, patient service revenues, and leveraging the cost of the residency. Expansion of the program would require the purchase of additional dental operatories and expanded renovated space.
- The total amount of capital expenditures are projected to be \$750,300 and include leasehold improvements for designated space in the Stockley Center, purchase of small equipment for the 2 donated dental chairs, and purchase of 2 fully equipped dental chairs. La Red has soft commitment from one or more private foundations to fund capital expenditures

Summary of Financial Projections for Recommended Dental Program						
Year of Operation	Year 1	Year 2	Year 3	Year 4	Year 4	Year 6
Calendar Year	Year 2010	Year 2011	Year 2012	Year 2013	Year 2014	Year 2015
Revenues						
Net Patient Service Revenue						
Medicaid/SCHIP	\$ 114,487	\$169,548	\$209,552	\$ 308,626	\$ 353,441	\$ 389,168
Commercial Insurance	21,614	27,560	41,970	52,720	63,584	66,329
Self Pay/Sliding Fee	125,503	146,581	253,889	289,825	362,162	364,512
Total Net Patient Service Revenue	261,604	343,689	505,411	651,171	779,187	779,187
DHHS Expansion Grant Revenue	-	250,000	250,000	250,000	250,000	250,000
State Labor Force Grant	200,000	-	-	-	-	-
Private Grants/Other Sources						
GME Funds (net of hospital general administrative costs)	-	-	-	15,000	66,000	180,000
Total Revenues	461,604	593,689	755,411	916,171	1,095,187	1,209,187
Operating Expenses						
Salaries	292,712	318,712	463,864	782,296	799,016	799,016
Fringe benefits	87,814	95,614	139,159	234,689	239,705	239,705
Non-labor operating expenses	103,715	115,991	154,300	168,308	186,753	190,977
Total Operating Expenses	484,241	530,317	757,323	1,185,293	1,225,474	1,229,698
Net Surplus (Loss)	\$ (22,637)	\$ 63,372	\$ (1,912)	\$(269,123)	\$(130,286)	\$ (20,511)
Cumulative Net Surplus (Loss)	\$ (22,637)	\$ 40,735	\$ 38,823	\$(230,300)	\$(360,586)	\$(381,097)
Capital Expenditures						
Operatories (chairs, supplies)	\$ -	\$ -	\$ 25,000	\$ 145,000	\$ -	\$ -
EMR System	30,500					
Leasehold improvements	554,800					
Total Capital Expenditures	\$ 585,300	\$ -	\$ 25,000	\$ 145,000	\$ -	\$ -
Less: ARRA Capital Grant	-					
Less: Private Foundation Grant	-					
Net Capital Expenditures	\$ 585,300	\$ -	\$ 25,000	\$ 145,000	\$ -	\$ -
Cumulative Capital Expenditures	\$ 585,300	\$585,300	\$610,300	\$ 755,300	\$ 755,300	\$ 755,300
Selected Statistics:						
Users	1,454	1,869	2,859	3,593	4,344	4,529
Adult	861	991	1,774	1,995	2,514	2,514
Pediatric	593	878	1,085	1,598	1,830	2,015
Encounters	3,765	4,824	7,349	9,220	11,135	11,607
Adult	2,253	2,585	4,582	5,145	6,468	6,468
Pediatric	1,512	2,239	2,767	4,075	4,667	5,138
Average Encounter per Users	2.6	2.6	2.6	2.6	2.6	2.6
NPSR per User	\$ 179.92	\$ 183.89	\$ 176.78	\$ 181.23	\$ 179.37	\$ 172.04
Adult	\$ 152.00					
Pediatric	\$ 220.45					
NPSR Per Encounter	\$ 69.48	\$ 71.25	\$ 68.78	\$ 70.63	\$ 69.98	\$ 67.13
Adult	\$ 58.09					
Pediatric	\$ 86.45					

Cost per User	\$ 333.04	\$ 283.74	\$ 264.89	\$ 329.89	\$ 282.11	\$ 271.52
Cost per Encounter	\$ 128.61	\$ 109.94	\$ 103.06	\$ 128.56	\$ 110.06	\$ 105.95
Grant/Other Revenue per User	\$ 137.55	\$ 133.76	\$ 87.44	\$ 73.75	\$ 72.74	\$ 94.94
Grant/Other Revenue per Encounter	\$ 53.12	\$ 51.83	\$ 34.02	\$ 28.74	\$ 28.38	\$ 37.05



Appendix A:
Key Informants and Stakeholders Interviewed

Completed Interviews		
Name	Organization	Position
Laima V. Anthaney	Delaware State Dental Society / Private Practice	First Vice President, DSDS / Private Dentist
Robert Arm	Christiana Care Dental Residency Program	Director, General Practice Residency
James C. Baker	Delaware Institute for Dental Education & Research	Board Member, DIDER / Private Dentist
Ryan C. Barnhart	Delaware Institute for Dental Education & Research / Delaware State Dental Society / Private Practice	Board Member, DIDER / Executive Council Member, DSDS / Private Dentist
Ted Becker	Delaware Health Care Commission	Commission Member
Kevin H. Brafman	Delaware State Dental Society / Private Practice	Executive Council Member, DSDS / Private Dentist
Tom Brown	Nanticoke Memorial Hospital	Senior Vice President
John M. Buckley	Delaware Technical and Community College	Dean of Instruction
Judy Chaconas	Division of Public Health	Director, Health Planning & Resource Management
Paul R. Christian	Delaware State Dental Society / Private Practice	Executive Council Member, DSDS / Private Dentist
Gary Colangelo	Private Practice	Private Dentist
Jeffrey M. Cole	Delaware State Dental Society / Private Practice	Executive Council Member, DSDS / Private Dentist
Kathy Collison	Bureau of Health Planning & Resources Management	Elected Official
Jeffery Cooper	Private Practice	Private Dentist
David R. Deakyne	Delaware State Dental Society / Private Practice	Executive Council Member, DSDS / Private Dentist
Douglas Ditty	Private Practice	Private Dentist
Bruce Fisher	Delaware State Dental Society	Executive Council Member, DSDS / Private Dentist
Jeffrey Fried	Beebe Medical Center	Chief Executive Officer
Wanda Gardiner Smith	Delaware Institute for Dental Education & Research / Private Practice	Board Member, DIDER / Private Dentist
Edwin L. Granite	Christiana Care Dental Residency Program / Delaware State Dental Society / Private Practice	Executive Council Member, DSDS / Private Dentist
Lisa Goss	Delaware Dental Hygienist Association / Delaware Institute for Dental Education & Research	Treasurer DDHA / Board Member, DIDER
Steve Groff	Division of Medicaid and Medical Assistance	Chief, Planning & Policy Development
Charlie Inga	Al Dupont Dental Clinic	Chief, Division of Pediatric Dental Surgery
Leah Jones	Delaware Health Care Commission	Director, Planning and Policy
Missy Jones	Private Practice	Hygienist
Tom Kelly	Stockley Center	Medical Director
Annette Lang	Division of Medicaid and Medical Assistance	Analyst / Community Liaison
John J. Lenz	Delaware State Board of Dental Examiners / Delaware Institute for Dental Education & Research / Private Practice	Board Member, DIDER / Private Dentist
Curtis J. Leciejewski	Delaware State Dental Society / Private Practice	Executive Council Member,

		DSDS / Private Dentist
Frances Hoksch Leach	Delaware Technical and Community College	Dean of Instruction
Kay Malone	La Red Health Center	Chief Operating Officer
Sarah Matthews	Advances in Management Inc.	Consultant to DPH / Oral Health Expert
Brian McAllister	Higher Education Commission / Delaware Institute for Dental Education & Research / Private Practice	Board Member, DIDER / Private Dentist
Greg McClure	Division of Public Health / Delaware Institute for Dental Education & Research / Private Practice	State Dental Director / Board Member, DIDER / Private Dentist
Jerry McNesby	Delaware Technical and Community College	Vice President, Finance
Sean Mercer	Delaware State Dental Society / Private Practice	Executive Council Member, DSDS / Private Dentist
Dave Michalik	Division of Medicaid and Medical Assistance	Senior Administrator
Carol Bancroft Morley	Delaware Technical and Community College	Instructor / Instructional Director
John M. Nista	Delaware State Dental Society / Private Practice	Executive Council Member, DSDS / Private Dentist
Brian Olson	La Red Health Center	Chief Executive Officer
Michael Poleck	Delaware State Dental Society	Executive Council Member, DSDS / Private Dentist
Lou Rafetto	Delaware Institute for Dental Education & Research / Private Practice / Delaware State Dental Society	Chair, DIDER Board / Executive Council Member, DSDS / Private Dentist
Ray S. Rafetto	Delaware Institute for Dental Education & Research / Private Practice / Delaware State Dental Society	Board Member, DIDER / Executive Council Member, DSDS / Private Dentist
Vivian Rizzo	DTCC Dental Hygiene Program	Director, Dental Hygiene Program
Steven A. Rose	Nanticoke Memorial Hospital	Chief Executive Officer
Paula Roy	Delaware Health Care Commission	Executive Director
Lisa Schieffert	Delaware Healthcare Association	Director, Health Policy
Sue Schroeder	DTCC Dental Hygiene Program	Dental Hygiene Instructor
Gary Siegelman	Bayhealth Medical Center	Medical Director
Wayne Smith	Delaware Health Care Commission	Commission Member
Debra Singletary	Kent Community Health Center	Chief Executive Officer
Gail Stevens	Delmarva Rural Ministries	Director of Health Planning
Lois Studte	Delaware Health Care Commission	Former Delaware Health Care Commissioner
June S. Turansky	DTCC Dental Hygiene Program	Dean of Instruction
Anthony W. Vattilana	Delaware State Dental Society / Private Practice	Second Vice President. DSDS
Sharon A. Welsh	Delaware State Dental Society / Private Practice	President, DSDS
Adele Wemlinger	Stockley Center	Executive Director



**Appendix B:
References & Resource List**

**APPENDIX B:
REFERENCES AND RESOURCE LIST**

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Appendix C:
Oral Health Infrastructure Enhancement
Feasibility Analysis PowerPoint Presentation

**Delaware Health Care Commission &
Delaware Division of Public Health**

**ORAL HEALTH INFRASTRUCTURE
ENHANCEMENT FEASIBILITY ANALYSIS**

April 1, 2010

Delaware Health Care Commission
Monthly Meeting



Discussion Items

- Review of Approach
- Presentation of Key Findings & Draft Recommendations (Primary/Secondary)
 - Multi-Purpose Dental Clinic
 - Downstate Training/Workforce Development
 - Case Management



Approach: Phase I

- Review of existing data on need
- Inventory existing service system
- Engage key stakeholders
- Assess underlying issues/context
- Identify potential partners / collaborators
- Compile preliminary information required to build sound, evidenced-based programs



Approach: Phase II

- Refine understanding of context and issues
- Approach potential partners / collaborators
- Develop preliminary bus./operational plans
- Prepare preliminary pro forma for selected initiatives in each area
 - Based on underlying assumptions



Approach: Phase III

- Agree on most promising initiatives
- Develop detailed business and operational plans
(Including identification of partners and collaborators)
- Conduct feasibility assessment
(Sensitivity analysis and testing assumptions)
- Final reporting and presentation
(Including written and oral presentation)

Guiding Principals

- Need for coordinated / systematic approach
- Focus on most vulnerable
- Pragmatic response that is inclusive of all stakeholders
- Builds capacity and strengthens workforce
- Involves the private sector overtime
- Aware of provider concerns & business realities

Presentation of Key Findings & Draft Recommendations

- Multi-Purpose Clinic
- Downstate Training/Workforce Development Initiatives
 - Training for Dentists
 - Training for Hygienists
- Case Management Program

Multi-purpose Clinic

Program Objectives

- 1) To develop an access point for comprehensive primary care dentistry, particularly for low income uninsured adults and Medicaid insured children
- 2) To develop a venue for dental workforce training, particularly for dentists, dental hygienists, and dental assistants



Possible Options

- Free dental clinic
- Not-for-profit, publically subsidized clinic (Non-FQHC) (Quasi Public Authority)
- Full service public health dental clinic
- FQHC / private dentist partnership
- Full service school-based clinics
- Federally qualified health center w/ onsite dental services
- Dental residency program



Program Recommendation

- Support La Red Community Health Center (designated FQHC) with its on-going efforts to establish primary care dental operations
- Once up and running, La Red could work with various stakeholders to implement training activities starting in years 3 or 4
 - Community-based residency program in collaboration with Sussex County hospital(s)
 - Dental hygienist training site with Del Tech hygiene program' students residents of Kent and Sussex Counties
 - Dental assistant training site with Sussex County vocational schools



Summary Operations

- **Staffing:** .5 - 1 FTE dentist, 1 hygienist in year 1 moving to 2.0 FTE dentists, 1 hygienists in year 3
- **Location/Space:** Operating in 6,500 sq. ft. of leased, renovated space at the Stockley Center
- **Capacity:** 4 operatories in year 1 moving to 6-7 operatories at the end of year 3
- **Services provided:** Comprehensive preventive and rehab / restorative services
 - Dental exams, cleanings, sealants, fillings, crowns, minor nerve treatments, & extractions



Projected Timeline

- Apply for HRSA Workforce Development Grant: Spring 2010
- Prepare for initial start-up: March - September, 2010
- If awarded granted funds thru HRSA Workforce Development Grant : Start-up Operations Fall 2010
- Apply for HRSA Oral Health Expansion Grant: 2011
- Gradual expansion of clinic operations through '13



Assumptions

Cost-related Assumptions - La Red will secure:

- HRSA Workforce Development Grant funds from DPH
- \$100 per month discounted lease agreement w/ the Stockley Center
- Capital funds to support leasehold improvements
- Four donated dental operatories and some small equipment / supplies
- HRSA Oral Health Expansion Grant

Staffing-related Assumptions - La Red will:

- hire a .5 - 1 FTE dentist, 1 FTE dental hygienist, and other dental staff by Fall 2010



Assumptions

Demand-related Assumptions

- La Red will expand from 5,000 patients in 2010 to 8,500 patients by the end of 2014
- La Red will provide dental services to 42% of its existing pediatric & 18% of its adult med. patients
- Dental patients will receive ~ 2.4 dental visits/year
- Model **NOT** dependent on case management or extensive outreach to children outside of La Red
- External case management and Stockley Center partnership could help to fill capacity



Assumptions

Revenue-related Assumptions

- 85% of pediatric patients will be Medicaid insured, 5% commercially insured, and 10% self-pay
- 95% of adult dental patients will be self-pay and 5% commercially insured
- La Red will charge on average \$127.06 per unduplicated claim and will receive 80% of that charge as payment from Medicaid
- La Red will apply a min. \$50 payment on all self-pay patients and will receive a waited avg. collection of \$60.10 / encounter



Challenges / Barriers

- Recruitment of a dental provider(s)
 - Loan repayment opportunities
 - Above average compensation
- High need, uninsured adult population
 - HRSA Expansion funds
 - High minimum self-pay payment of \$50
 - Focus on efficiency and productivity
- Capital expenditures and leasehold improvements will be costly
 - Grant and philanthropic efforts
 - Donated operatories and equipment



Challenges / Barriers

- Meeting demand requirements
 - Develop internal and external case mgmt. initiatives if necessary
- Managing mix of patients on dental panel (ratio of adults and children)
 - Develop clear and effective triage and wait-list systems
- Getting support and buy-in from private dentists and the Dental Society
 - Promote vision and mission of clinic



Strategic Focus

- La Red will:
 - Serve Medicaid eligible children and uninsured adults
 - Serve an even mix of children and adults
 - Serve primarily existing / new medical patients
 - Develop partnerships with DPH clinics, schools, and other community partners to recruit children
 - Develop partnership with Stockley Center to assist them to serve their residents



Financial Proforma

	Year 2010	Year 2011	Year 2012
Revenues			
Net Patient Service Revenue			
Medicaid/SCHIP	\$ 132,386	\$ 178,012	\$ 178,012
Commercial Insurance	20,127	27,243	27,243
Self Pay/Sliding Fee	125,205	168,466	168,466
Total Net Patient Service Revenue	277,718	373,721	373,721
HRSA Workforce Development Grant	250,000		
DHHS Expansion Grant Revenue		250,000	250,000
Share of Hospital GME	-	-	-
Total Revenues	527,718	623,721	623,721
Operating Expenses			
Salaries	292,712	366,640	366,640
Fringe benefits	87,814	109,992	109,992
Non-labor operating expenses	113,995	138,609	138,609
Total Operating Expenses	494,521	615,241	615,241
Net Surplus (Loss)	\$ 33,197	\$ 8,480	\$ 8,480



Training Workforce Development Initiatives

- Downstate Residency Program
- Downstate Expansion of Del Tech Hygiene Program

Downstate Residency Program

Program Objectives

- 1) Address dental provider shortage downstate by developing “home grown” eligible dentists
- 2) Expand current and future dental capacity (.5 FTE Residency Director, two dental residents)
- 3) Facilitate better access and care in hospital emergency departments
- 4) Promote greater involvement of private dentists

Possible Options

- General Practice Residency (GPR)
 - Satellite of existing GPR
 - Academic institution-based
 - Hospital-based
 - Community-based
- AEGD
 - Less intensive community-based model
- Dental Externships

Program Recommendation

- General Practice Residency sponsored by Sussex County hospital w/ community-based clinical co-sponsor
 - Beebe, Bayhealth, or Nanticoke Hospital would be primary applicant (Could be collaborative effort between 2 or more hospitals)
 - La Red would be clinical co-sponsor
 - Wilmington-based GPR would play supportive role
 - Sussex / Kent County private dentists and medical doctors could play supportive role



Program Summary

- Hospital's Role, Responsibility, and Reward:
 - Work w/ stakeholders to submit GPR application to ADA as primary sponsor
 - Work w/ stakeholders to recruit residency director and develop resident recruitment operations
 - Arrange for residents to round in ER, Anesthesiology, and other medical departments
 - Work with Wilmington-based GPR and other stakeholders to provide didactic education
 - Hospital would receive General Medical Education (GME) funding from Medicare (~ 200K)



Program Summary

- La Red's Role, Responsibility, and Reward:
 - Work w/ stakeholders to submit GPR application to ADA as co-sponsor and recruit residency director / residents
 - Provide primary clinical setting for residents and residency director
 - Ensure dental residents access to full, required range of dental services (primary care dentistry, oral surgery, periodontics, endodontics, ER, implants, etc.)
 - La Red would receive all billing revenue for residency director and residents



Program Summary

- Wilmington-based GPR's Role:
 - Provide expertise and support development of GPR application and the development of resident recruitment
 - Explore ways that they can assist with the provision of didactic education through distant learning and resident participation in Wilmington
 - Explore possibility of providing rounding opportunities for residents in Wilmington in key areas
 - Wilmington-based GPR residents could round at La Red



Program Summary

- Sussex County Dentists / Medical Doctors Role:
 - Private dentists could mentor dental residents by volunteering at La Red and other collaborative activities
 - Oral surgeons and other dentists could serve as adjunct faculty and preceptors for dental residents
 - Medical doctors (e.g., ER physicians, anesthesiologists, cardiologists, etc.) could serve as adjunct faculty and preceptors for dental residents
 - Prestige and other professional benefits for exposure with residency program



Challenges / Barriers

- Hospitals lack of experience and exposure with residency programs
 - Concerns about downside risks/upside benefits
- Recruitment of residency director
- Development of operations that meet ADA requirements
- Cost of providing full range of required services for residents



Strategic Focus

- Develop strong win-win partnership between La Red and the hospital sponsor
- Build on partnership between La Red and the Stockley Center
- Promote mentoring opportunities and formal ties between Sussex County dentists and residents
- Become a center of excellence in rural primary care dentistry



Preliminary Proforma (Demand meeting Supply)

	Year 2010	Year 2011	Year 2012	Year 2013	Year 2014
Revenues					
Net Patient Service Revenue					
Medicaid/SCHIP	\$ 132,396	\$ 178,012	\$ 178,012	\$ 269,246	\$ 323,861
Commercial Insurance	20,127	27,243	27,243	41,067	49,402
Self Pay/Sliding Fee	125,205	168,466	168,466	254,733	306,546
Total Net Patient Service Revenue	277,728	373,721	373,721	565,046	679,809
DHHS Expansion Grant Revenue	250,000	250,000	250,000	250,000	250,000
State Labor Force Grant					
Share of Hospital GME	-	-	-	6,667	26,667
Total Revenues	527,728	623,721	623,721	821,713	956,476
Operating Expenses					
Salaries	292,712	366,640	366,640	507,864	537,864
Fringe benefits	87,814	109,992	109,992	152,359	161,359
Non-labor operating expenses	113,995	138,609	138,609	159,389	183,995
Total Operating Expenses	494,521	615,241	615,241	819,612	883,218
Net Surplus (Loss)	\$ 33,207	\$ 8,480	\$ 8,480	\$ 2,101	\$ 73,258



Downstate Expansion of Del Tech Dental Hygiene Program



Program Objectives

- 1) Address dental hygiene provider shortage downstate by developing “home grown” eligible hygienists
- 2) Expand future dental capacity by allowing dentists to maximize their capacity
- 3) Solidify new and/or strengthen existing practical/clinic training opportunities to augment/replace Dover AFB



Challenges / Barriers

- Wilmington and DAFB clinical training sites are currently at full capacity
- Clinical training site at DAFB can be unpredictable
- Transportation and housing expenses limit participation of Sussex County residents
- Ideally would have both a didactic and practical training site downstate, but major barriers exist
 - Costs of expanding existing DTCC program in Wilmington or Dover is currently a major barrier
 - Cost of starting up new Owen's (Georgetown) Campus extension is a major barrier
 - Exact demand for hygienists in Sussex is uncertain



Possible Options

- Didactic Training Expansion
 - Expand DTCC Terry (Dover) Campus Extension of Hygiene Program
 - Develop new DTCC Owens (Georgetown) Campus Extension of Hygiene Program
- Practical/Clinic Training Site
 - Develop training operations at La Red
 - Explore targeted training opportunities at the Stockley Center



Program Recommendation

- Solidify relations with DAFB and develop contingency plans should site be unavailable
- Confirm demand for hygienists in Sussex County
- Explore loan repayment for hygienists, particularly for students from Sussex County
- Explore training opportunities at Stockley Center
- Develop clinical training program at La Red after its operations are solidified to augment DAFB

Program Recommendation

- Assuming demand for hygienists is confirmed:
 - Expand the number of slots for students from the Terry (Dover) Campus Extension, particularly for students from Sussex County
 - Continue to explore the expansion of DTCC Hygiene program to Owens (G-town) Campus

Case Management Program

Program Objectives

- 1) Promote preventive care among populations at high risk for more costly dental needs
- 2) Facilitate access for high need Medicaid eligible children and uninsured adults by providing identification, education, screening, enabling services, and treatment/referral services
- 3) Reduce missed appointments to support viable business model for the provision of dental care

Possible Options

- Publically sponsored efforts
 - School-based programs
 - Elementary school, Head Start and Early Head Start
 - Statewide publically funded program (Medicaid or Public Health delivered)
 - Electronic population based case management system (Medicaid or Public Health managed)
- Privately sponsored efforts
 - Pediatrician's office
 - Primary care clinics (FQHCs)

Program Recommendation

- Work with La Red to case manage existing medical patients to obtain dental care.
- Once established, work with the Public Health Clinics, area schools, and other organizations (as appropriate) to case manage children
 - Coordinate respective outreach within area schools
 - Collaborate to assist in providing treatment to high need children and facilitating a dental home for ongoing preventive care

Program Recommendation

- Develop statewide or regional case management program targeting Medicaid eligible children in high need areas operated by DPH or Medicaid
 - Program operated out of public health clinics, mobile dental van, and/or other community-based venues

**WOULD REQUIRE SIGNIFICANT STATE FUNDING
THAT IS CURRENTLY NOT AVAILABLE**

Challenges / Barriers

- Many adults will be uninsured with significant oral health needs
- Transportation from schools and other community venues to dental clinic
- Managing patient panel yet assuring timely access to care
- Limited capacity for referral (generating demand that cannot be filled)
- Cost of case management staff

Strategic Focus

- In dental clinics (DPH, La Red or Private), dental assistants can be used for clinical care as well as CM, providing flexibility in operations
- At La Red, facilitate access of existing patients, include schools and other venues incrementally (Head Start, WIC, pediatricians, etc.)
- At La Red, even distribution of adults & children
- Most successful CM programs provide hands on assistance, reach clients where they congregate, and match demand with supply



**END OF
PRESENTATION**

