

AN ASSESSMENT OF THE RHODE ISLAND MEDICAID ADULT DENTAL PROGRAM

This report provides a structured review of the Medicaid dental program for adults in Rhode Island and identifies opportunities for improved program quality, access and value.

Prepared for the
Rhode Island
General Assembly by
the Rhode Island
Executive Office of
Health and Human
Services

January 2014

TABLE OF CONTENTS



| Introduction | 3 |
|--|----------|
| Description - Current Status of Adult Dental Services | 5 |
| o Adult Dental Benefits Coverage | 6 |
| Adult Dental Service ExpendituresAdult Dental Service Utilization | 11 15 |
| o Madre Benear Bervice Guinzación | 10 |
| Other Medicaid Costs Related to Oral Health | 23 |
| National Environmental Scan- Medicaid Adult Dental Services | 25 |
| Options for RI Medicaid's Adult Dental Program | 30 |
| Summary | 39 |
| Conclusion | 39 |
| References | 41 |
| Attachment A | 46 |

An Assessment of the Rhode Island Medicaid Adult Dental Program and Opportunities for Improved Program Quality, Access and Value

Introduction

This report was written in accordance with The Rhode Island General Assembly Act Relating to the Medicaid Reform Act of 2008 Article 19 Section 2, as summarized below:

The Executive Office of Health and Human Services shall provide a report to the House and Senate Finance Committees that analyzes and evaluates the current dental benefits program for Medicaid eligibles, and includes the number of recipients, types of services provided, reimbursement rate and the settings. The report shall also examine the opportunities for improved quality, access and value of partnerships with private entities and shall propose a five (5) year plan for dental services for Medicaid-eligible adults.

This report is submitted pursuant to Article 19 and provides an overview of the current delivery system for RI Medicaid adult dental benefits and will examine opportunities to improve program quality, access and value by partnering with private entities. A five-year plan for the administration of Medicaid adult dental services will be conceptualized as part of this report.

The goal of the Rhode Island Executive Office of Health and Human Services (EOHHS), is to provide eligible recipients with covered medical services that are accessible, achieve recognized high quality standards, and promote positive health outcomes in the most cost-efficient and effective manner. As such, this report was written with several objectives as outlined below.

Goal: To assure effective and efficient administration of the Rhode Island Medicaid Dental Program.

Objective 1: Describe the current state of the RI Medicaid Dental Program utilization, benefits and expenditures including benchmark comparisons with both national Medicaid data and population based commercial dental coverage.

Objective 2: Identify strengths, weaknesses and potential opportunities for enhancement of the RI Medicaid Dental Program.

Objective 3: Identify options for program improvement for adults and special population groups that incorporate evidence-based practices that will result in cost-effective and quality driven outcomes.

In order to describe the Medicaid adult dental benefit in RI and to provide an assessment of the current environment, this report draws upon a number of resources. These resources include but are not limited to: RI EOHHS Program data, national dental data sources from federal and dental professional organizations, RI EOHHS policy and procedures, commercial dental sources and philanthropic and education- based reporting sources.

National Relevance

Based on the Center for Medicare and Medicaid Services (CMS) triple aim, as exhibited below, State Medicaid and CHIP Programs have been challenged to improve care, improve health and lower costs. Rhode Island may have an opportunity to develop an adult dental program in partnership with experienced third-party organizations that will impact the overall health of the beneficiaries that the agency serves.

CMS's triple aim, as shown below calls for better health in the population, a better experience of care, which suggests quality improvements and finally, lower per costs per person for the delivery of healthcare services. All three parts of this challenge will be addressed in this report.



It is essential that an adult dental program combine a commitment to quality and access with on-going efforts to ensure prudent and effective management of costs. Maximizing the value of the State dollar must be a continued focus while at the same time incorporating new individuals who will become eligible for Medicaid as a result of the Affordable Care Act (ACA). It is estimated that there will be a significant increase to the RI Medicaid program increasing enrollment of adults by up to fifty percent (50%). If cost-effective, quality strategies are not identified by the State, it will be extremely difficult to avoid reductions in eligibility and/or covered benefits to adults. Rhode Islanders must receive the most value for the limited available State resources invested, so all programs and services must be administered in the most cost-effective manner.

More broadly, as the ACA legislation is implemented in 2014 and forward, there are opportunities for policy makers to re-examine the role of dental care within the broader health care delivery system. Although adult dental benefits are not considered essential within the ACA, routine dental care has benefits to both lifetime dental care costs and overall health care costs.

Reforming the RI Medicaid Adult Dental Program in the following four key program components should start with setting some clearly outlined, attainable goals for program success around:



Adult dental program areas that will be cited for improvement in this report should be considered as they relate to each of the four important and measurable program components identified above. Access to dental care and utilization of services are often linked to each other. However, adults may have access to a robust network of dentists and still not utilize dental services. Moreover, quality dental care and cost-effective delivery of those services are two program components that will be explored in this report.

Description- Current Status of Adult Dental Services

Background

Dental care utilization is changing in the United States. Recent analysis has shown that the percent of the population who see a dentist in a given year has been declining among adults and increasing among children since the early-2000s.1 Low-income adults experienced the sharpest decline in dental care utilization, which potentially affects oral health, general health, and health care expenditures. Oral health is an important component of general health and routine dental care is an important component of a comprehensive oral health strategy.² Access to routine dental care has been associated with increased savings to the health care system through both a reduced need for acute dental care in expensive hospital emergency room settings³ and reduced overall medical costs. Although oral health is essential to adult general health and well-being many older adults experience significant barriers to obtaining necessary dental care. 4 Such care is especially important for older adults who are at greater risk for oral conditions and diseases related to age-associated physiological changes, underlying chronic diseases, and the use of various medications.⁵

In the U.S., many people have access to the best oral health care in the world, yet millions are unable to get even the basic dental care they need. Individuals who are low-income or racial or ethnic minorities, pregnant women, older adults, those with special needs, and those who live in rural communities often have a harder time accessing a dental provider than other groups of Americans. Tooth decay is almost completely preventable, yet when people do not see a dental provider, they do not get the preventive services and early diagnosis and interventions that can halt or slow the progress of most oral diseases. Lack of access to dental care is extremely

- One fourth of adults in the U.S. ages 65 and older have all of their teeth.6
- Low-income adults are almost twice as likely as higher-income adults to have gone without a dental check up in the previous year.⁷
- Poor dental health impacts overall health and increases the risk for diabetes, heart disease, and poor birth outcomes.8
- ➤ There were an estimated 831,000 visits to emergency rooms across the country for preventable dental conditions in 2009 a 16% increase since 2006.9

serious because untreated oral diseases can lead not only to pain, infection, and tooth loss, but also contribute to an increased risk for serious medical conditions such as diabetes, heart disease, and poor birth outcomes.¹⁰

Since 2000, when the U.S. Surgeon General called dental disease a "silent epidemic," ¹¹ there has been increasing attention paid to oral health issues. "Healthy People 2020," a report issued every decade by the Department of Health and Human Services and released in December 2010, includes oral health as a leading health indicator for the first time, and the Institute of Medicine published two reports in 2011 which documented that the lack of access to needed care and oral health disparities continue to be significant problems for millions of people. However, not nearly enough has been done to adequately address the true oral health crisis that exists in America today. ¹²

Medicaid is the primary vehicle for dental coverage among adults with low incomes in the U.S. Medicaid provides health care coverage to certain categories of people with low incomes, including children and their parents, pregnant women, the elderly, and individuals with disabilities. While state Medicaid programs are required by federal rules to cover comprehensive dental services for children, coverage for adult dental services is optional. States often choose to offer adults a more limited set of covered services than for children or to offer no coverage at all. Because of its "optional" status, adult dental coverage is often one of the first areas states turn to when making Medicaid budget reductions. ¹³

Adult Dental Benefits Coverage

Patterns of Dental Coverage- Dental Insurance Coverage in the U.S. (Commercial and Public)

Overall, dental insurance coverage is much less prevalent than medical insurance in the United States. More than 15 percent of persons 18 and older have no form of medical insurance, but three times as many, or more than 85 million persons, have no form of dental insurance. Private dental insurance plans, usually received through employment, are the largest providers of dental insurance coverage. However, only an estimated 46 percent of full- and part-time workers have access to dental coverage and only 36 percent participate in it. Among elderly Americans, traditional Medicare is not a source of dental insurance. It provides coverage for only extremely limited hospital based oral surgeries required in conjunction with other treatments. Therefore, almost 70 percent of Americans age 65 and older do not have dental coverage. Adult dental benefits are important not only to ensure good oral health, but also overall health. A 2000 report by the U.S. Surgeon General noted the importance of oral examinations for detecting early signs of nutritional deficiencies and systemic disease. Other concerns regarding oral health that are particular to the adult Medicaid population include:

- *Employability:* Good oral health enhances Medicaid beneficiaries' ability to obtain and keep jobs. An estimated 164 million work hours each year are lost due to oral disease.
- *Children's oral health:* The bacteria that cause dental disease are usually passed from parents and other caretakers to their children. Access to dental care and education for parents can lessen the children's chances of severe dental disease, and can also improve the family's oral hygiene habits, such as maintaining regular dental visits.
- *Inflammatory disease:* There is a growing body of research that points to associations between untreated oral disease and an exacerbation of chronic conditions such as diabetes, heart disease, and stroke.
- *Adverse pregnancy outcomes:* Several studies have suggested an association between untreated periodontal (gum) disease and increased likelihood of pre-term labor and low-birth weight.

- Cancer detection: Oral cancer is more common in older Americans than leukemia, melanoma, Hodgkin's disease, and cancers of the brain, liver, bone, thyroid, stomach, and ovaries. Oral cancer kills more Americans every year than cervical cancer.
- *HIV prevention:* The earliest manifestations of HIV disease often occur in the mouth, so dental professionals can play a critical role in the early detection of this disease. Early detection allows earlier intervention, extending the productive life spans of affected individuals, improving their quality of life, and reducing the opportunity for further transmission of HIV.
- Adults with special needs: Individuals with disabilities and the elderly may have physical, cognitive, or behavioral limitations that impair normal oral self-care; chronic and complex conditions that are adversely affected by oral disease; and medication regimens that reduce saliva flow (a natural defense against cavity-causing bacteria). Additionally, poor oral health may impair their ability to maintain proper nutrition.¹⁸

Figure 1 below shows the percentage of adults in the U.S. in 2004, based on their type of insurance coverage, who reported having any dental visit, compared with actual data from RI Medicaid covered adults in SFY 2012 with a dental visit. It is important to note that in SFY 2012, for non-institutionalized adults, ages 21-64 enrolled for at least 6 months, **35%** had a dental visit reimbursed by RI Medicaid and for adults ages 65 and over, **22%** had a dental visit. By contrast, according the Medicaid Expenditure Panel Survey (MEPS) Chartbook No. 17¹⁹, in 2004 the percentage of adults covered by private commercial dental insurance with a dental visit was 56% for ages 21-64 and 65% for ages 65 and over. This significant variation in the utilization of dental services by the commercially insured adult experience versus the RI Medicaid-covered adult experience provides a clear benchmark for dental program improvements to strive toward.

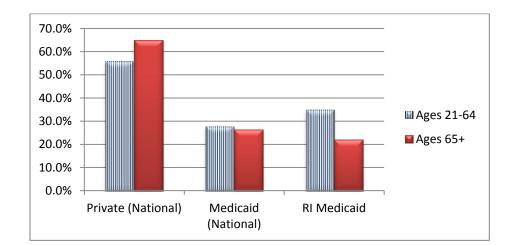


Figure 1 Percentage of Non-Institutionalized Adults (Ages 21+) based on Insurance Type with Any Dental Visit

Sources: Medicaid Expenditure Panel Survey Chartbook, #17 2004 and RI EOHHS Dental Utilization Data (SFY 2012)

<u>Patterns of Dental Coverage- Dental Insurance Coverage in R.I. (Public and Commercial)</u>

Description of RI Medicaid Adults with Dental Coverage

Low-income adults in RI are eligible for Medicaid based on the State's eligibility criteria. The average number of adults ages 21 and over who are eligible for Medicaid dental services in RI increased from 85,383 in SFY 2008 to 93,911 in SFY 2012, which is an increase of approximately 10 percent in four years. In SFY 2012, the

Medicaid adult (ages 21+) population consisted largely of Aged Blind and Disabled (ABD) adults (47,664) and RIte Care (RC) adults (46,247):

Figure 2



Of the ABD adult population covered by RI Medicaid, several eligibility categories exist. These four categories are: adults with disabilities and with developmental disabilities (MRDD), Waiver adults (those adults eligible for services covered as part of a Medicaid waiver), adults with serious and persistent mental illness (SPMI) and ABD adults living in either long-term care or community-based settings. The following table displays the average number of adults enrolled in each ABD eligibility category during SFY 2012.

Table A Average Number of ABD Adults Enrolled in RI Medicaid in SFY 2012, by Eligibility Category

| Adults Who are ABD | Adults Eligible for | Adults with Serious & | Adults with Disabilities |
|----------------------------|---------------------|---------------------------|--------------------------|
| Living in either Long-term | Waiver Services | Persistent Mental Illness | and Adults with |
| Care or Community-based | | (SPMI) | Developmental |
| Settings | | | Disabilities (MRDD) |
| 35,461 | 4,329 | 4,927 | 3,614 |

As Table A shows above, in SFY 2012 adults who are ABD and are living in either long-term care or in a community-based setting make up the largest number of enrolled adults. Adult beneficiaries who fall into these eligibility categories may be challenged to receive dental services due to a number of environmental issues, all of which may affect the frequency and type of dental care they receive. Despite this challenge, overall ABD adults, like the rest of the adult population on Medicaid may be retaining their teeth through their more senior years.

January 1, 2014 signals an important change in Rhode Island's Medicaid Program. Rhode Island has opted to exercise the Medicaid expansion provisions of the Affordable Care Act. Effective January 1, 2014 adults without dependent children with incomes up to 133% of the federal poverty level are eligible for Medicaid. Although the number of persons who will enroll remain to be seen, it is clear that this provision will substantially increase the number of Medicaid eligible adults perhaps by fifty percent (50%) or more.

This report examines adult dental care as it has been structured to this point. As is evident throughout this report, it is a challenge to adequately meet the oral health needs of Medicaid eligible adults. It is likely that there will be considerable unmet oral health needs in the expansion population that will need to be incorporated into future planning.

Characteristics of RI Medicaid Adult Dental Delivery System

Rhode Island's Medicaid adult dental benefits are currently administered in a traditional Fee-For-Service (FFS) delivery system model. As of 2012, over 75 percent of adults enrolled in RI Medicaid were enrolled in a risk-based managed care plan for the administration of their medical benefit²⁰. With introduction of Rhody Health Options and the enrollment of the adult expansion population, the figure will exceed 80% by the close of calendar year 2014. In contrast, 100 percent of RI Medicaid adults are enrolled in FFS for their dental benefits. Recent dental service utilization data from the RI EOHHS reveal that in SFY 2012, only 33 percent of non-institutionalized Medicaid-enrolled adults ages 21 and over with dental benefits actually accessed services. This report will explore whether the issues and challenges inherent in the existing FFS delivery system, which are the sources of shortfalls in both access to care and quality of care that exist today for Medicaid-enrolled adults. This report will identify and address the issues that affect the delivery of quality, timely oral health services to adults covered by RI EOHHS.

Dental Benefits for Adults- Characteristics of Commercial Coverage

In contrast to the national trend, in RI the percentage of employers offering dental insurance is on the rise. In 2011, nearly 60 percent of employers now offer dental insurance to their full-time workers up from 48 percent in 2005. Fourteen percent of employers offered dental benefits to their part-time workers in 2011, on par with a 2005 and 2009 survey. 21

It is important to note that commercial dental insurance plans are most often structured with varying annual dollar maximum expenditures per covered person (e.g. \$1000, \$1,200 or \$1,500), after which the covered person is responsible for the cost of care. Commercial dental insurance plans are also characterized by a structural model that is built around service limitations. For example, oral cleanings are covered twice per year and a complete set of x-rays is covered once every five years or 60 months. A typical commercial dental benefit in RI offers enrollees a comprehensive dental benefit package similar to the following:

Table B Typical Commercial Dental Plan in Rhode Island

| Procedure | | Coverage | Frequency/Limitation | |
|-------------|--|----------|---|--|
| Diagnostic | | | | |
| | Oral exams | 100% | Once per policy year | |
| | Complete x-rays | 100% | Once every 60 months | |
| Preventive | | | | |
| | Cleaning | 100% | Once every 6 months | |
| Restorative | | | | |
| | Amalgam (silver) fillings | 80% | Composite (white) fillings on front teeth only. | |
| | Crowns | 50% | Replacement limited to once every 60 months | |
| Endodontic | s | | | |
| | Root canal therapy 80% Frequency limitations for retreatment | | Frequency limitations for retreatment | |
| Periodontic | cs | | | |
| | Periodontal Services | 50%-80% | Frequencies vary by service | |

| Prosthodon | Prosthodontics | | | |
|--|---|-----|----------------------|--|
| Rebasing or relining of partial or complete dentures | | 80% | Once every 60 months | |
| Extractions and Oral Surgery | | | | |
| | Extractions and other routine oral surgery | 80% | | |
| Other Services | | | | |
| | General anesthesia or intravenous (I.V.) sedation | 80% | | |

Dental Benefits for Adults- Characteristics of Medicaid Coverage in RI

In describing the current patterns of adult dental benefits, this report will address both the current RI Medicaid adult dental benefit package and a typical commercial (private) dental insurance benefit sold to employers in RI. For Medicaid adult dental services, states can seek authority to vary the coverage of dental services among the various adult populations that are eligible for Medicaid, targeting, for example pregnant women, those who are physically or developmentally disabled, persons at risk of needing long term care services, or the elderly. In RI, the Medicaid adult dental benefit package is identical for all populations and although it includes services in all of the service categories, is still considered to be a "limited" one. This means that the adult dental benefits provide for certain basic services in several of the standard categories of dental care to restore the normal form and function to the adult oral cavity. A more comprehensive dental insurance benefit structure would provide coverage for a broader mix of dental services in all of the standard dental services categories of care that exist in the dental market. Table C below outlines the RI Medicaid adult dental benefit categories of coverage, as they exist today.

Table C RI Medicaid Adult Dental Benefits

| Adult Dental Service Categories | Adult Dental Benefit Notes | |
|---------------------------------|--|--|
| Preventive | 2 cleanings per calendar year | |
| Diagnostic and Radiology | Diagnostic oral evaluations and radiographic images | |
| Endodontic | Root canals for anterior teeth, other endodontic services | |
| Restorative | Amalgams and resins | |
| Periodontal | Gingivectomy or Gingivoplasty | |
| Prosthodontics | Relines/adjustments, partial and full dentures | |
| Emergency and Palliative | Routine and surgical extractions, incision and drainage of abscesses | |
| Oral Surgery | Covered when medically necessary | |

Source: RI Executive Office of Health and Human Services

As a critical process in improving access to quality, appropriate dental services for Medicaid-enrolled adults, the dental benefits offered in the program are one of the most important factors to consider. As such, the specific services covered as part of the system of care and how frequently those services may be provided and paid by Medicaid are factors that affect overall program costs. In every dental service category listed above, there is a frequency limitation on reimbursement of dental claims. For example, adults have coverage for two cleanings and one set of bitewing x-rays per year, regardless of the beneficiaries' level of disease or "risk" of dental disease. These types of systematic frequency limitations support a budgetary projection but are not based on scientific evidence that a particular number of dental treatments will result in optimal oral health.

The structure of the current Medicaid dental benefits for adults in RI is similar to that of very basic private, commercial dental insurance plans, except for the typical employment of an annual dollar maximum and the implementation of member co-insurance (copays). Several of the significant differences that exist between RI Medicaid adult and commercial dental benefits are that the following services are **not included** in the Medicaid benefits:

- 1. Posterior (back) teeth root canals or crowns
- 2. Scaling and root planing and periodontal maintenance
- 3. General anesthesia and intravenous (I.V.) sedation

These services are cited in particular, because non-coverage of these services affects the adult's decision-making, often resulting in the extraction of a tooth, rather than maintaining it in the dentition. Tooth loss in the adult population requires prosthetic replacement (partial dentures and dentures) that are costly, and also need periodic replacement. The Medicaid adult dental benefit design currently in place leans heavily toward treatment services verses preventive services.

Diseases of the oral cavity are among the most prevalent health conditions in the United States. Fifty-nine percent of children aged 5-17 and 85 percent of adults over 18 have caries experience in at least one tooth. Sixty-one percent of adults 25 years and older and 86 percent of adults 45 and older have at least one site of periodontal disease in the mouth.²² In fact, the American Dental Association has developed and approved three new caries risk assessment Current Dental Terminology (CDT) billing codes available for use starting 1/1/2014. The codes are essentially non-specific to age or risk assessment method.

Caries risk assessment and documentation, with a finding of low risk Caries risk assessment and documentation, with a finding of moderate risk Caries risk assessment and documentation, with a finding of high risk

The existence of such codes give payers an opportunity to consider financial and payment structures that reimburse for dental services based on a patient's level of risk, rather than a one-size fits all payment methodology. A disease management model with a risk-based payment structure is an innovative model in the dental marketplace and would provide Rhode Island with a new approach to improving dental service delivery for both adults and children who are served by the program.

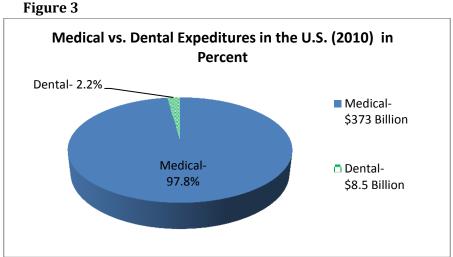
Medicaid Adult Dental Service Expenditures

Medicaid Dental Expenditures in the U.S.

Total Medicaid expenditures reflect the combination of patterns in enrollment, covered benefits, utilization and pricing. It is difficult to make direct comparisons across Medicaid programs due to differences in programs from state to state.

An element of the Medicaid expenditures increase was due, in part to the increase in the U.S. population from 292.9 Million in 2004 to 308.7 Million in 2010.²³ In addition, the impact of the economic recession that began in December, 2007, was a factor in an increased unemployment rate. Unemployment and an economic downturn are factors that can contribute to an increase in Medicaid eligibility.

Figure 3 below shows the level of the total Medicaid and CHIP medical program expenditures as a percent of the total and the level of the total Medicaid and CHIP dental program expenditures in the U.S. in 2010. Although the Medicaid and CHIP dental expenditures make up a very small portion of the total Medicaid and CHIP expenditures, the percentage in 2010 was 2.2, up from 1.6 in 2002.



Source: US Department of Health and Human Services, Center for Medicare and Medicaid Services, National Expenditure Data

As part of understanding the adequate levels of reimbursement necessary for Medicaid dental programs to consider in network development, it is helpful to review how the U.S. inflation rate has changed over the last several years. The inflation rate in the United States has fluctuated over the five year timeframe studied for this report. The table below shows the national inflation rate trend from 2008 to 2012. The inflation rate, which compounds over time, was at 3.8 percent in 2008 and 2.1 percent in 2012. As inflation elevates overall costs and Medicaid reimbursement rates remain unchanged, dentists have a difficult time covering their office overhead costs, making the acceptance of low Medicaid rates very challenging or even impossible.

Table D National Inflation Rate 2008-2012

| Year | Rate |
|------|------|
| 2008 | 3.8% |
| 2009 | 4% |
| 2010 | 1.6% |
| 2011 | 3.2% |
| 2012 | 2.1% |

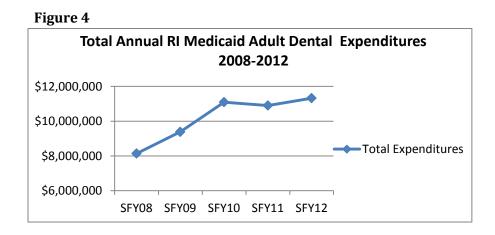
Source: Bureau of Labor Statistics reports. http://www.bls.gov/cpi.home.htm

Medicaid Adult Dental Expenditures in RI

Medicaid dental reimbursement rates are generally low for eligible adults and vary by state with a reported norm of between 30 and 50 percent of usual and customary fees. ²⁴ The inadequate levels of Medicaid dental reimbursement serve as a financial disincentive to the care provider in private practice. As noted above, the rates are often significantly lower than the overhead costs incurred by the dentist. In Rhode Island, the Medicaid private practice dental provider reimbursement rates were last updated in 1993, twenty years ago. It is clear that RI Medicaid's dental provider reimbursement rates have not kept up with the effects of inflation. In addition, certain segments of the adult population, like those with disabilities and the elderly can frequently present in the dental setting with complex management problems that necessitate extra time and personnel for which the dentist too often is not reimbursed adequately in a procedure-based payment scale.

To put the private practice dental provider rates discussion in context, in a 2007 national Medicaid rate analysis done by the American Dental Association most of RI's most commonly billed procedure codes were in the 1st percentile or below. 25 This means that the rates met or exceeded the usual, customary and reasonable charges (UCR) of only 1% or fewer of RI's dentists. In contrast, the current RIte Smiles rates are closer to the prevailing Preferred Provider Organization Rates (PPO) rates in RI, which are generally discounted by about 25 percent of usual and customary dentist fees.

In RI, the total cost of dental care for Medicaid adults ages 21 and over has increased by forty percent (40%), over a five year period. As depicted in Figure 4 below, in SFY 2008, the total dental expenditure for all adults ages 21 and over who are covered by RI Medicaid was **\$8.1M** and had increased to **\$11.3M** in SFY 2012.



Source: RI EOHHS Medicaid Dental Service Data, SFY 2012

This expenditure increase can be attributed to the number of average eligible adults and the number of unique users in the same timeframe. This next section will explore the adult dental service costs over the five year period (2008-2012) to report how costs relate the user to the type of service location (Private Practice (PP), Federally Qualified Health Centers (FQHCs) and Hospital-based clinics.

Table E below outlines the Medicaid adult dental expenditures from SFYs 2008 through 2012 by the dental location where services were rendered, Private Practice, FQHCs, and Hospital Clinics. The table does the same for the number of unique adult users of services. As the table depicts, adult dental service utilization in the Private Practices in RI has leveled out in the last five years when both expenditures and the number of unique adult users are considered. The growth for adult dental services utilization, it seems, is consistent with the

FQHC growth in the state. FQHC growth has contributed to a 12 percent increase in the number of unique Medicaid adult dental users from 2011 to 2012. Respectively, the annual adult dental expenditure for the FQHCs also increased by 17 percent in the same time period, as highlighted in Table E below. This type of trend is experienced when there are fluctuations in the availability of dental care in the community, which correlates to dental provider capacity in each of the dental provider types accessible to adults covered by RI Medicaid.

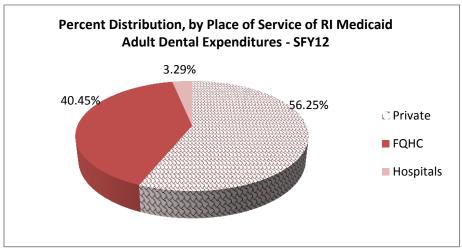
Table E RI Medicaid Annual Adult Dental Service Expenditure and Utilization ('08-'12)

| | | SFY08 | SFY09 | SFY10 | SFY11 | SFY12 |
|--------------|-------------------------------|-------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | Private | \$5,033,377 | \$5,589,637 | \$6,625,549 | \$6,646,694 | \$6,369,909 |
| Total | FQHC- Dollars % Change | \$2,833,516 | \$3,433,750 21.18% | \$4,058,263 18.19% | \$3,905,932 -3.75% | \$4,580,503 17.27% |
| Expenditures | RI Hospital & St. Joseph's | \$272,819 | \$363,039 | \$410,362 | \$350,030 | \$372,894 |
| | TOTAL: | \$8,139,712 | \$9,386,426 | \$11,094,174 | \$10,902,656 | \$11,323,306 |
| | Private | 22,390 | 23,419 | 25,090 | 25,385 | 24,793 |
| Unique Users | FQHC- Users % Change | 7,333 | 8,018 9.34% | 8,974 11.92% | 9,617 7.17% | 10,789 12.19% |
| | RI Hospital & St. Joseph's | 866 | 1,151 | 1,221 | 1,237 | 1,294 |
| | TOTAL: | 30,589 | 32,588 | 35,285 | 36,239 | 36,876 |

Source: RI EOHHS Medicaid Dental Service Data, SFY 2012

Figure 5 below shows that in SFY 2012, over half (56.3 percent) of the total RI Medicaid adult dental expenditures were spent in private practice dental settings, 40.5 percent in FQHCs, 3.2 percent at RI Hospital's Samuel's-Sinclair Dental Clinic. Since 2008, although the majority of the adult dental service expenditures are going to Private Practices, this trend has leveled off and FQHCs have expanded their capacity to serve the Medicaid adult population. Notably, despite low Medicaid dental rates, private practice dentists have continued to provide dental services to adults. The current dental service delivery system in RI relies on all three dental provider types. It is important that all three continue to be a part of any Medicaid adult dental program improvement effort, as all three are vital to the delivery of appropriate, timely, quality dental services to Medicaid-covered adults in RI.

Figure 5



Source: RI EOHHS Medicaid Dental Service Data, SFY 2012

According to the RI EOHHS claims data, the annual adult dental expenditure per person is \$1,000 or less for 98% of the adult population receiving dental services. Only 2 percent of the Medicaid adult population has a total annual dental claims expenditure of over \$1000. This means that of the adults who are receiving dental services, the vast majority do not receive large numbers of high-cost services.

When costs are considered on the overall total cost per visit for adult Medicaid dental services across all provider types, the annual increase is marginal- from \$107 in SFY 2008 to \$119 in SFY 2012. By eligibility type, in SFY 2012, the cost per dental claim for ABD adults (includes MR, DD, Waiver and Disabled) was \$122 (up from \$111 in 2008 and for RIte Care adults it was \$115 (up from \$102 in 2008).

These relatively low service expenditures are due in part, to the low Medicaid private practice provider rates and to the limitations that are placed on various treatment services.

Adult Dental Service Utilization

How Adults in U.S. Enrolled in Medicaid Use Dental Services

Since the implementation of Medicaid in the late 1960s, older adults overall are retaining their natural teeth, potentially increasing their dental needs at a time when they may also be experiencing a diminished capacity to access care because of retirement and its associated loss of income and dental coverage. The oldest age groups are the fastest growing segments of the U.S. adult population. Although the total U.S. population is expected to increase by 42 percent over the next half century, the number of men and women aged 65 years and older will increase by 126 percent, those aged 85 and older will increase by 316 percent, and centenarians will increase by 956 percent, nearly 10 times the present number. According to the U.S. Administration on Aging, persons aged 65 years or older totaled 35 million in the year 2000, representing 12.4 percent of the U.S. population.

At the same time, a growing proportion of U.S. adults are retaining an increasing number of their teeth throughout their life span.²⁸ A relative increase in coronal and root caries (cavities), periodontal diseases, inadequate or absent prostheses (replacement teeth), and preventive needs may result from a greater number of retained teeth among elderly persons.²⁹ Additionally, because oral and pharyngeal cancers are diagnosed primarily among older Americans, as the population ages, the number of persons benefiting from early diagnosis will also increase.³⁰

Ironically, as the number of people with dental care needs increases, for many aging Americans, the ability to finance this care may actually be decreasing as a result of retirement. Retirement is generally accompanied by a decrease in income and the loss of employer-sponsored dental coverage.^{31,32} Although Medicare is usually available to retirees to cover many, if not most, health care needs, routine dental care is rarely covered.

Oral health care for adults with disabilities is a health care area that has received little attention. It is estimated that one out of two persons with a significant disability cannot find a professional resource to provide appropriate and necessary dental care. Lack of access to dental services for this growing segment of our population is reaching critical levels and is a national dilemma. About one in five Americans has a disability and one in ten have a severe disability.³³

Three major demographic developments account for an increase in the number of adults with disabilities living in the community:

- A higher initial survival rate and increased life expectancy for persons with disabilities
- A concomitant increased likelihood of acquiring a chronic disability later in life
- The deinstitutionalization of adults with severe disabilities from large state institutions and their placement in the community in group homes, foster homes, with their families, or in independent living arrangements with minimal assistance.³⁴

Disparities exist in both the prevalence and severity of oral diseases within the US population. Mexican American and African-American adults and children have more untreated decay than Whites. African-American and Mexican American adults are more likely to have gingivitis or more severe periodontal disease (bone loss).³⁵

For caries and periodontal disease, the traditional paradigm of surgical treatment of disease has historically utilized the majority of resources. In the medical model, this end-stage approach can be viewed as a failure of disease prevention, and while surgical intervention is needed to remove existing disease, it should be complemented by risk assessment and identification of high-risk individuals at the earliest possible stages, in order to deliver appropriate interventions that could prevent, delay or arrest disease progression.

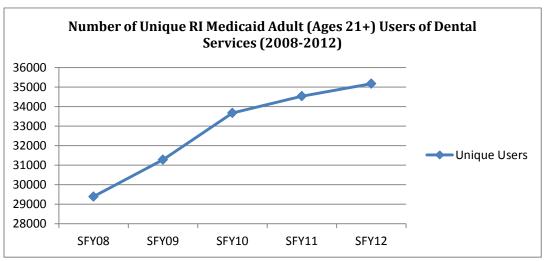
How Adults Enrolled in RI Medicaid Use Dental Services

The complex set of issues that are inherent in a Medicaid covered beneficiaries' lives are consistent with the fact that it is a common experience for dental appointments to be missed. Issues with transportation, inability to take time away from work for a dental appointment, housing dilemmas are a few of the most common barriers to getting adequate dental care. The result is that the dental utilization experience of adults in RI who are covered by Medicaid is understated compared to adults covered by commercial dental plans.

Adult Medicaid Dental Service Utilization

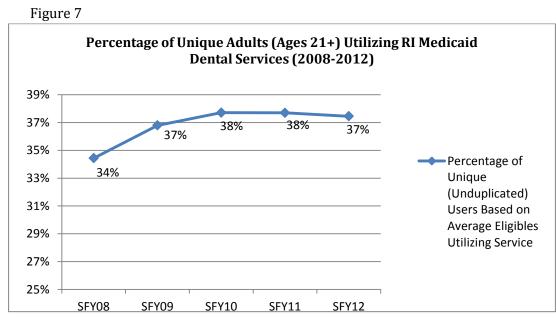
Figure 6 below shows the number of unique Medicaid adult users of dental services between 2008 and 2012. In the five year timeframe, the number of adult users increased by 20% from 29,300 in 2008 to 35,170 in 2012. This utilization increase is approximately twice the percentage increase in Medicaid adult enrollment. This increase is largely associated with the expansion of dental capacity in FQHCs over this time period.

Figure 6



Source: RI EOHHS Medicaid Dental Service Data, SFY 2012

As shown in Figure 7 below, the approximate percentage of unique or unduplicated adult users of dental services based on the average eligibles in the RI Medicaid adult population in SFY 2008 was 34 percent and increased by three percentage points to 37 percent in SFY 2009 and has been essentially flat during the 2010-2012 period.



Source: RI EOHHS Medicaid Dental Service Data, SFY 2012

In 2012, the distribution of the percentage of adult (ages 21+) dental service utilizers, shown by eligibility category, is outlined in Table F below:

Table F Percent of RI Medicaid Adults Utilizing Dental Services- SFY 2012

| Eligibility Category for Medicaid Adults (Ages 21+) in | SFY 2012-Percentage of Adults Utilizing Dental |
|--|--|
| RI | Services |
| Aged, Blind and Disabled (ABD) | 36% |
| RIte Care | 39% |

These data indicate the ABD adults and the RIte Care adults use dental services at about the same rate. In RI. adults with developmental disabilities can be treated for their dental needs in specialty settings like Samuels-Sinclair Dental Clinic, in one of RI's FQHCs running dental centers, or in a private dental practice setting.

It is interesting to note that in SFY 2012, twice as many unique adult women utilized Medicaid dental services than men: 24,352 women versus 10,818 men. This is consistent with both the Medicaid population mix of men and women coupled with the tendency for women to utilize healthcare services more often than men. With the 2014 Medicaid expansion to adults without dependent children, the number of Medicaid covered adults will increase significantly and a higher proportion of this group will be men.

RI Medicaid Adult Dental Type of Service Utilization

Figure 8 below shows the number of dental units or services in SFY 2012 that were delivered to Medicaid adult users by place of service or "provider type": private dental practices, FQHCs and hospital clinics. By categorizing adult dental services as either preventive and diagnostic (p & d) or treatment, one can see that private practices clearly deliver the greatest number of dental units to adults: 93,697 units in p & d and 66,075 units in treatment. Despite the low Medicaid reimbursement rates in RI, it is clear that private practice dentists in the state have continued to provide the majority of the dental services for adults. For FQHCs, the majority of the dental units fall in the treatment category at 48,322 units versus P & D at 32,890 units. This finding is consistent with the usage patterns of adults with Medicaid who might prolong dental treatment until pain is experienced and a service like a restoration or a tooth extraction is necessary. At the point when treatment is imminent, an adult may access care at an FQHC more quickly than at a private practice setting.

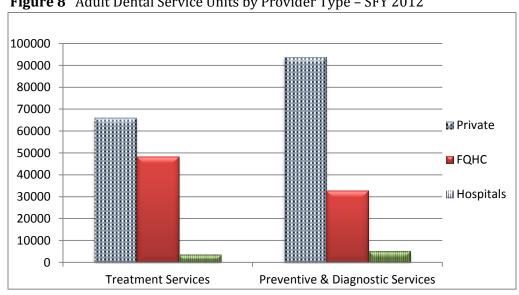


Figure 8 Adult Dental Service Units by Provider Type – SFY 2012

Source: RI EOHHS Medicaid Dental Service Data, SFY 2012

The overall mix of dental services for adults in SFY 2012 is quite different from services used by children. Medicaid-covered children in RI use preventive and diagnostic services far more frequently than adults, due to their lower disease burden, coupled with the fact that dental services are more accessible to them. The service mix can typically be very telling of the behaviors of the population as a whole. Based on RI Medicaid claims experience from SFY 2012, Figure 9 below shows the top three dental service categories (as a percentage of all adult dental services) by dental unit as: Diagnostic, Restorative and Preventive. The figure also depicts the percentage of the other dental service categories utilized by all adults combined. Oral surgery, dentures and adjunctive dental services follow as the next three most utilized dental services by Medicaid adults as a whole. Periodontics is noteworthy for its virtual absence, despite its critical role in oral health and in suppressing more generalized infections.

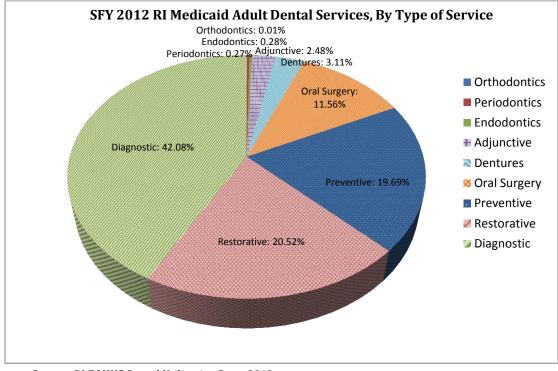


Figure 9 RI Medicaid Adult Dental Treatment Types - SFY 2012

Source: RI EOHHS Dental Utilization Data, 2012

It is worth noting that Medicaid-covered adults tend to receive their dental care from more than one type of provider due to the specialty care needs that are inherent in the population. However, despite this the average number of dental visits per year per Medicaid adult is 2.6, which is about equal to the national average for publically insured adults.³⁶

The data for adults covered by RI Medicaid reveal an opportunity for program improvements that focus on improving primary and secondary prevention, which have been shown to reduce over time, high cost restorative care and costly emergency room visits. Focused interventions like oral health education that includes a disease management component, a dental home initiative that includes service integration with primary care medical providers and the introduction of dental care coordination could be part of an improved RI Medicaid adult dental program.

The Rhode Island Medicaid Adult Dental Provider Network and its Effects on Utilization

The Special Senate Commission on Oral Health's 2011 report pointed to a decreasing supply of dentists in Rhode Island. The Commission recommended that a task force of interested parties be developed to address access to dental care issues due to the current shortage of dentists practicing in underserved areas.³⁷ Several initiatives focused in increasing the dental service capacity at both FQHCs and hospital-based dental clinics in RI were conducted since that time. The RI Oral Health Commission continues this work as solutions to the shortage of oral surgeons in RI who participate in the Medicaid program are explored.

An important factor being considered as dental workforce solutions continue to be explored in RI is the aging dental workforce in the state. Approximately forty percent of current Rhode Island licensed dentists are ages 51 or older (14 percent are ages 61 or older). As they retire, insufficient numbers of new dentists are becoming available to replace them. It has been argued that one of the primary reasons that RI is unable to attract new dentists is that the both the commercial and the Medicaid reimbursement rates are considerably lower than its neighboring states.

As of November 2012, the state of Rhode Island had 586 licensed actively practicing dentists, including all dental specialty types.³⁸ Assuming that a total of 93,939 Medicaid-enrolled adults in RI in SFY 2012, were going to receive dental care, the ratio of licensed actively practicing dentists to Medicaid enrolled adults is one dentist to 159 adults. It is feasible, given this dentist to patient ratio that RI does have the current capacity to serve every Medicaid-enrolled adult. As was described previously, non-institutionalized adults covered by RI Medicaid mainly access dentists for treatment in three settings: 1. Private Practices 2. Federally Qualified Health Centers. and 3. Hospital Based Dental Clinics. Institutionalized adults in RI receive their dental care in either a community-based setting or through a mobile dental services delivery model.

Among dental specialists in RI, oral surgeons are the most sought-after specialty dental type for adult Medicaid recipients. There are approximately 24 practicing oral surgeons in the state, most of who do not participate with Medicaid. This issue is further complicated by the fact that the demand for oral surgery is relatively high, as has been conveyed for many years by Medicaid recipients to a number of state agencies, the RI Oral Health Commission and other community stakeholders.

Quality oral health care is provided by a team including dentists, dental hygienists and dental assistants. An adequate workforce and sufficient treatment space are critical to ensuring access to care. In early 2011, nearly 157 full-time equivalent (FTE) staff was employed by Rhode Island dental safety net providers. This total is nearly double the dental safety net clinicians reported in 2005-06, which included approximately 83 FTEs. The total number of fixed-site dental operatories in Rhode Island safety net settings increased from 87 to 121, a 36 percent increase. A dental operatory is the room in which oral health services are provided, including the dental chair and equipment. Two safety net providers (PCHC Crossroads and Wood River) reported having unutilized or underutilized operatories, which can be associated with staff vacancies and/or insufficient equipment or funding.³⁹

Among RI's FQHCs specifically, there are 74 dental operatories at nine community health center dental locations. The dental offices employ nearly 100 FTE dentists, hygienists, and dental assistants, and additional support staff.⁴⁰ According to RI EOHHS data, about 30% of all the adults covered by Medicaid who received dental care were treated in an FQHC setting in SFY 2012.

As mentioned previously, Samuels-Sinclair Dental Clinic at Rhode Island Hospital specializes in treating developmentally disabled individuals, with a focus on adults with a variety of special needs. The clinic has expanded its clinical capacity in the last decade and now has an accredited Academy of General Dentistry (AGD) Residency Program in place with room for two residents.

The network of Medicaid participating dental practices is limited and eligible adults often face considerable difficulty in obtaining appointments for services. Many dental practices do not routinely serve Medicaid patients. Of the 586 licensed actively practicing dentists in Rhode Island, only a small number actively participate in Medicaid. In 2012, six dental practices accounted for 45 % of all claims payments.

Adult Nursing Home Residents as a Subgroup of the Adult Population

Adult nursing home residents in RI who are covered by Medicaid have a unique set of needs and utilization patterns around oral health. Residents of nursing homes also have access to both community based and mobile dental service providers who treat patients directly in the nursing home. It was clear that a separate analysis needed to be conducted specifically for this population and the finding included in this report.

RI Medicaid Adult Dental Coverage for Nursing Home Residents

RI Medicaid dental policy does not distinguish its dental coverage based on place of residence, so RI adult nursing home residents have the same dental services as described previously in this report as do those adults residing in the community.

Description of RI Medicaid Adults Residing in Nursing Homes

According to RI EOHHS data in SFY 2012, the average number of eligibles in the Aged, Blind, Disabled (ABD) adult population who are covered by Medicaid was 47,664. This number has increased by 9.6 percent since SFY 2008 when there were 43,489 average eligibles. As was mentioned previously in this report, the ABD adult Medicaid eligibility category includes MR, DD, SPMI, Waiver adults. Consistent with Medicaid covered adults overall, females also make up the larger portion of the population in nursing homes. RI's Medicaid recipients who are residents of nursing homes are largely eligible due to their ABD status.

RI Medicaid Adult Dental Service Expenditures for Nursing Home Residents

Also, according to RI EOHHS dental claims data, in SFY 2012, a total of \$595,478 was expended by RI EOHHS for adult dental services provided in nursing homes. Claims data also show that of the total expended for dental services for adults residing in nursing homes in SFY 2012, approximately one third of the total was provided by private practice providers in the community. This includes the largest nursing home mobile dental services provider in RI, CareLink.

Medicaid expenditures for Carelink's *Wisdom Tooth* Program grew from \$55,000 in SFY 2009 to \$244,000 on SFY 2012. The number of dental units (services) billed by Carelink's Nursing Home Mobile Dental Services Program started at 543 in SFY '08 and was 2,590 in SFY 2012 reflecting Carelink's service expansion over the period.

Considering all RI adult nursing home residents, the total Medicaid dental expenditure trend increased, from \$465,713 in SFY 2008 to \$595,478 in SFY 2012. In addition, the overall cost per nursing home resident user of dental services per month has increased since SFY 2008, from \$16.95 to \$20.12 in SFY 2012. Based on the place of service or provider type as Table G below describes, costs per user per month have generally increased in each provider type from 2008 to 2012, except for RI Hospital's Samuels Sinclair Dental Clinic. Again, the difference in reimbursement rates per user per month is reflective of the fact that private practice dental provider rates have not kept up with inflation, and continue to be low and may also reflect higher rates of treatment to preventive services on FQHCs when compared with private practices.

Table G Monthly Medicaid Reimbursement for Dental Care for an Adult Nursing Home Resident

| Provider Type | 2008 | 2012 |
|------------------------|----------------|----------------|
| | Reimbursement/ | Reimbursement/ |
| | User/ Month | User/Month |
| Private Practice | \$13.12 | \$17.07 |
| FQHC | \$32.20 | \$35.22 |
| RI Hospital- Samuels | \$31.72 | \$23.57 |
| Sinclair Dental Center | | |

Source: RI EOHHS Medicaid Dental Service Data, SFY 2012

RI Adult Dental Service Utilization for Adults Residing in Nursing Homes

An analysis of five years of RI Medicaid adult dental utilization data reveals some interesting patterns in the experience of the adult population who were residents of nursing homes at the time a dental claim was incurred. As such, the findings are significant enough to impact the recommended options for consideration as noted in this report.

As shown in Figure 11 below, the percentage of unduplicated nursing home residents who utilize their Medicaid dental benefits has leveled off to 29 percent in SFY 2012 from 27 percent in SFY 2008, when CareLink, the first of three RI based Mobile dental service programs began offering services inside the nursing facility.

Figure 11 **Percentage of Unique RI Nursing Home Residents Utilizing Dental Services 2008-2012** 50% Percentage of 40% **Unique Adults Using** 30% **Dental Services** 20% While in Nursing Home 10% SFY08 SFY09 SFY10 SFY11

Source: RI EOHHS Dental Utilization Data, 2012

Of the 8,446 unduplicated RI nursing home residents in 2008, 2,290 residents received at least one dental service. Over time, after some slight fluctuation in both the number of residents and the number who received a dental service, by 2012 there were 8,548 unduplicated residents with 2,464 receiving a dental service. Despite the implementation of mobile dental service programs whose dental professionals treat Medicaid nursing home residents in-house, the participation rate has not seen a significant improvement. Several factors contribute to the lack of participation of nursing home residents in the mobile dental services program. First, many nursing home residents and their families may have a low perceived need that good oral health plays a role in overall health and therefore, opt not to enroll in the program. Another factor to consider is that some residents are ambulatory and may receive dental care in a private community setting. RI Medicaid data show that in SFY 2012, dental service delivery for residents of nursing homes occurred at a rate of 75 percent through private practice dentists (this percentage includes the mobile dental service providers) with the FQHCs at 24 percent and hospital clinics at one percent.

Mobile dentistry is crucial for the oral health of Rhode Islanders living in nursing homes. Often these residents are not able to travel to the dentist. Diagnostic, preventive and palliative dental services help ensure residents are not in pain and can eat properly. Care coordination, a crucial component to successful dental service utilization has also been systematized in mobile dental service programs.

Two community health centers provide important dental care for elders living in nursing homes. East Bay Community Action Program provides dental services to patients in nursing homes in the East Bay through their Still Smilin' Program. Another FQHC, Well One, works with the Wisdom Tooth van to care for nursing home residents in the Foster area.

It is also important to note that the Medicaid data show that among adult nursing home residents, unique users of dental services tend to have services provided by more than one provider type. This is primarily due to the fact that specialty services like oral surgery may not be available in the primary dental care setting, in part because of the complex medical needs of adult nursing home patients.

After an analysis of claims data, due to the unique needs of the adult nursing home residents the top three categories of services from both a dental unit (service) and cost perspective were: dentures, adjunctive dental services and periodontal services. Diagnostic services were a close fourth. It is worth noting that preventive services that would typically include disease management trended toward the middle when analyzing the dental services by unit and cost for nursing home adults covered by Medicaid. This is an opportunity for the State to incorporate a prevention-oriented approach into the development of a program improvement strategy for the adult population as a whole. In addition, enhancement of dental service utilization among nursing home residents should be an objective of a Medicaid initiative to expand overall dental service access for the adult population.

Discussion: Other Medicaid Expenditures Related to Oral Health

Scientific knowledge has evolved to consider the oral cavity as an integral and interrelated part of the human body and view oral disease through a medical model rather than a surgical model based on drilling, extractions and dentures. Caries and periodontal disease are now understood to be chronic diseases caused by specific transmissible bacteria, in which onset, severity and duration are modulated by multiple factors. Additionally, research has shown associations (but not causality) between chronic periodontal disease and several systemic conditions such as diabetes, low birth weight outcomes and cardiovascular disease.⁴¹

Pew's Report , *A Costly Dental Destination* estimates that preventable dental conditions were the primary reason for 830,590 ER visits by Americans in 2009—a 16 percent increase from 2006. Pew concludes that states can reduce hospital visits, strengthen oral health and reduce their costs by making modest investments to improve access to preventive care.

The access problem is driven by multiple factors, including a shortage of dentists in many areas of the U.S. and the fact that many dentists do not accept Medicaid-enrolled beneficiaries. The cost of dental care in the ER care can be quite substantial. For example, in Florida, dental-related, emergency hospital visits produced charges exceeding \$88 million in 2010. States are saddled with some of these expenses through Medicaid and other public programs. Roughly one-third of Florida's ER dental visits (2010) were made by Medicaid patients.⁴²

A RI Department of Health report entitled *Hospital Emergency Department Visits For Non-Traumatic Oral Health Conditions Among Rhode Island Adults Age 21–64 Years, 2006–2010* had some notable conclusions around

emergency department usage for oral health conditions. Oral/dental problems were more frequently reported by Medicaid-enrolled and uninsured (whose payment sources were identified as "self-pay") adults. For Medicaid-enrolled and uninsured adults, the top 20 primary diagnoses in the EDs included two dental diagnoses; however, the most common 20 ED primary diagnoses for privately insured adults did not include any oral/dental problems. Medicaid and "self-pay" were the most common payment methods for oral/dental complaints in the EDs, accounting for seven out of ten oral/dental problem-related ED visits (13,992 visits and 13,712 visits, respectively). Regardless of payer type (Medicaid, self-pay, or private insurance), younger adults age 21–34 years were the most frequent users at the EDs for oral/dental problems. However, significantly more visits by younger adults (aged 21–34 years) were observed among Medicaid-enrolled and uninsured adults than those with private insurance (p<0.0001).⁴³

Many adults sought care at Rhode Island EDs for acute signs and symptoms of oral health problems that are mostly preventable, given access to routine dental care. The RI Department of Health report highlights that young uninsured or underinsured (including Medicaid-enrolled) adults seek treatment in hospital EDs for oral health problems more often than those with private insurance. For these people, lack of affordable comprehensive dental coverage, difficulties finding a dentist who accepts Medicaid patients, or not being able to leave work during regular dental office hours, may explain why many young and low income adults postpone needed dental care and finally show up at hospital EDs to address their oral health needs.⁴⁴

A recent analysis of hospital costs associated with dental disease diagnoses was conducted by the RI EOHHS. The query was conducted using a number of non-emergency, dental-related diagnosis codes that have been identified by other state Medicaid programs in the Medicaid-CHIP State Dental Association (MSDA) National Profile of State Medicaid and CHIP Oral Health Programs.⁴⁵

As shown in Table H, it was determined that a total of \$2.5 Million was spent in SFY 2012 on both inpatient and outpatient services related to dental disease. The most common diagnosis billed to Medicaid that year was for unspecified dental disease. This is an area where opportunity for cost-avoidance exists for Rhode Island to improve dental program access, quality and cost-effectiveness.

Table H Avoidable Hospital Emergency Room Expenditures Associated with Dental Diagnoses for Medicaid Adults Ages 21 and Over- SFY 2012

| Hospital-based Location | SFY 2012 Expenditure |
|-------------------------|----------------------|
| Inpatient | \$892,971 |
| Outpatient | \$1,282,858 |
| Total | \$2,541,524 |

Source: RI EOHHS Data, 2012

Regular visits to the dentist may also lead to fewer hospital visits and trips to the emergency room, as well as to lower medical costs. These are the conclusions from a three-year Cigna dental study that looked at the potential benefits of treating periodontal (gum) disease. The findings were recently presented at the International Association for Dental Research (IADR) conference in Seattle. IADR is a non-profit organization dedicated to advancing research and increasing knowledge to improve oral health worldwide. According to the Centers for Disease Control and Prevention (CDC), periodontal disease and tooth decay are the two biggest threats to dental health and are mostly seen in adults. Periodontal diseases are infections of the gums and bone that surround and support the teeth. Half of Americans aged 30 or older – 64.7 million people – have

One study looked at periodontal patients from 2009 through 2011.

On average, patients who received gum disease treatment had better outcomes than patients without treatment. Hospital admission rates were 149 per thousand (67%) lower, emergency room visits were 100 per thousand (54%) lower, and medical costs were \$1,020 per year (28%) lower.

periodontitis, the more advanced form of periodontal disease. Cigna's study looked at periodontal patients from 2009 through 2011. On average, patients who received gum disease treatment had better outcomes than patients without treatment. Hospital admission rates were 149 per thousand (67%) lower, emergency room visits were 100 per thousand (54%) lower, and medical costs were \$1,020 per year (28%) lower.⁴⁶

Another study conducted at Columbia University, School of Dental Medicine⁴⁷ that entailed a retrospective examination of patient data found that groups with treatment for periodontitis had a lower retrospective risk for chronic conditions: Diabetes Mellitus (DM), Coronary Artery Disease (CAD), or Cerebrovascular disease (CVD), than patients who did not have periodontal treatment. There is evidence that an

individual's systemic condition can affect their overall oral health, and a mounting body of evidence that oral health, particularly periodontal status can also affect an individual's general health status. It may be reasonable, therefore, to recommend that examination of the oral cavity be included in guidelines for care of patients with DM, CAD and CVD, and that public health programs and insurers work together to raise awareness of the need for periodic dental visits for those members of the population who have diabetes and cardiovascular diseases. This was recognized in objective 5.15 of Healthy People 2010, which calls for increasing the proportion of people with diabetes who have at least an annual dental examination.⁴⁸

There seems to be emerging evidence that some of the indirect costs associated with oral disease can be avoided with integrated approaches that manage the disease appropriately and prevent either onset or reoccurrence through education and prevention. This evidence provides Rhode Island an opportunity to explore integrated care models that could enhance the delivery of quality, timely and appropriate and cost-effective dental services that promote overall health and wellness.

National Environmental Scan- Medicaid Adult Dental Service Delivery

In order to appreciate the work that has been done in the U.S. to reform Medicaid dental systems of care, a look into children oral health reforms is helpful. In the late 1990s and early 2000s, there was a national push to address the gaping disparities in oral health access that face low-income children. This followed, in part, from the enactment of the State Children's Health Insurance Program, lawsuits against states for failing to meet their federal obligations, and a Surgeon General's report that labeled oral disease as a "silent epidemic." Some states, including Alabama, Michigan, and Tennessee, overhauled their Medicaid dental programs, and a key part of their reforms was budget increases that brought provider reimbursement closer into line with dentists' usual fees. Often, this meant doubling the rates paid to providers as well as making reforms to administrative processes, improving the supportive services and education provided to program enrollees, and building partnerships with state dental societies.

Each of these states enjoyed successes in regard to increasing the number of dentists participating in their programs and the utilization of dental services by program enrollees. They are now held up by dentists and dental advocates as examples of model practices for states to emulate. However, the fiscal environment facing states today is decidedly more mixed than it was ten years ago. States such as Virginia are undertaking similar reforms,

but with far fewer resources than were available previously. Also, there is a sobering realization that even in these front-running states, Medicaid-enrolled children's utilization of dental services is still below the rates of utilization of the privately insured.⁴⁹

A 2008 NASHP Study⁵⁰ examined Medicaid oral health program reforms in six states. Key findings in that report pointed to a number of interrelated factors that contributed to the effectiveness of a state Medicaid oral health program reform:

- Rate increases are necessary but not sufficient on their own to improve access to dental care. Easing
 administrative processes and involving state dental societies and individual dentists as active partners in
 program improvement are also critical. Administrative streamlining and working closely with dentists can
 help maximize the benefit of smaller rate increases, and mitigate potential damage when state budgets
 contract.
- While dentists often seek reimbursement rates that mirror their usual charges, states have seen gains in
 dentists' participation and patient utilization with rate increases that do not meet that threshold. However,
 rates need to at least cover the cost of providing service, which is estimated to be 60 to 65 percent of
 dentists' charges.
- Working with patients and their families about how to use dental services is a core element of reforms.
 States have successfully used case management, educational brochures, and patient support provided by contractors to reduce barriers and address one of dentists' chief complaints.
- In the six states examined, provider participation increased by at least one-third, and sometimes more than doubled, following rate increases. Not only did the number of enrolled providers rise, but so did the number of patients treated. Patients' access to care, as measured by the number of enrollees using dental services, also increased after rates rose.
- Despite meaningful gains in provider participation and access achieved by these "front-runner" states, the portion of children receiving services is still far below the experience of privately-insured children. Data from 2004 show that 58 percent of privately insured children received dental services, while in these six states after substantial effort and investment 32 to 43 percent of children covered under Medicaid received dental care. This finding points to the need to explore other solutions as well.

A recent report by the American Dental Association⁵¹ suggested some key considerations for Medicaid programs and their stakeholders that relate to breaking down the barriers that exist to achieve the maximum oral health for all Americans. The report suggests a coordinated, collaborative approach that is centered on health education and promotion, effective prevention, and care coordination is critical to meeting the oral health needs of the underserved.

- Prevention is essential
- Everyone deserves a dentist
- Availability of care alone will not maximize utilization
- Coordination is critical
- Treating the disease alone without educating the patient is a wasted opportunity, making it likely that the disease will occur
- Public-private collaboration works

In 2012, the Medicaid-CHIP State Dental Association conducted a national Profile of all 51 of its member state Medicaid and CHIP Oral Health Programs. As part of the survey process, states provided their current delivery system for adult dental benefits administration, the managed care contractors in place, if applicable and the benefits available for adults enrolled in their respective state Medicaid programs. Table I below provides a summary of responses to one survey question from the MSDA National Profile of States. A detailed report can be found in Attachment A. of this report.

Table I States in the in the U.S. with **Adult Dental** Benefits and Service Delivery System Model (2012)

| Number of States with MCO Model | Number of States with Traditional FFS Model | Number of States with Adult Dental Benefits* |
|------------------------------------|---|--|
| 10 | 33 | 37 |

^{*} State adult dental benefits range from emergency dental only to comprehensive FFS= Fee-For Service Delivery Model MCO=Managed Care Organization

To summarize the MSDA Profile excerpt above, there are ten states that currently contract with managed care organizations to administer the adult dental benefits in their states. One state, CT indicated that their adult dental benefits are administered through a combination of a traditional fee-for-service delivery system and an Administrative Services Only (ASO) contract. The majority of states (33) with an adult dental benefit responded that in 2012, the program was being administered through a traditional fee-for-service delivery system. Results show that there were 37 states in 2012 that offered a dental benefit to adults on Medicaid, with varying ranges of dental service coverage. The majority of states reported that adult dental benefits are "limited" meaning not every dental service category like endodontics and periodontics includes covered services or that a very limited number of procedures are covered within each category.

As part of the overall national environmental scan, several state Medicaid adult dental programs whose current model includes one of the following were reviewed:

- 1. Adult dental benefits include emergency dental services only
- 2. Adult dental benefits vary in scope and have a set expenditure cap per person per year.
- 3. Adult dental benefits are limited in scope and are administered by the state through:
 - A fiscal agent
 - A dental benefits manager using an ASO arrangement
 - A dental managed care organization using a partial risk-based contract
 - A hybrid model that includes at least two contracting structures

Each one of these models has worked in its respective state, having varying degrees of "success" from one year to the next, depending on the individual state's budget situation.

Pennsylvania, Kentucky and New Jersey have models in place that fully integrate their adult dental benefits into their managed care health plan's administrative functions. Rather than "carving out" dental services from these managed care contracts, these two states have included dental services for adults in the existing health plan contracts. If necessary, each plan subcontracts with an experienced dental benefits management entity to meet the

contractual obligations for dental service administration. The health plans are responsible for oversight and monitoring of the dental subcontractor.

Other states like Oregon, Michigan and Wisconsin Medicaid programs contract directly with dental managed care companies to administer the adult dental benefits. This type of arrangement is known as a "carve out" because dental services are not integrated into the Medicaid managed care health plan contract. Rather, the state Medicaid program directly oversees and monitors the dental MCO.

States have found that overall, contracting with experienced Medicaid dental plan administrators that perform a number of responsibilities that are conducive to the appropriate and timely use of quality dental services and can include:

- Provider network development and maintenance, including provider credentialing
- Member services and outreach, including extensive ongoing care coordination activities
- Quality Improvement Initiatives that include:
 - Meeting goals in certain key areas of importance like access to care and outreach to beneficiaries
- Ongoing reporting, as part of a "Dashboard"
 - The dashboard includes regular reports to the State that analyze program status in areas such as: utilization of services, expenditures, member call center statistics, outreach to providers, provider network status.

These contracting scenarios suggest the implementation of a program that creates a dental home for adults, thereby better managing their oral healthcare outcomes over time. Quality improvement initiatives around provider and member outreach and education around oral health literacy and other relevant issues would be required. Member outreach is an important component, as some states like Connecticut have found that strategic outreach efforts result in improved and more appropriate dental service utilization.

Very little analysis around the effectiveness of adult dental delivery systems and benefit structures has been conducted by states. Rhode Island has an opportunity to be a forerunner in this area by developing an innovative model that demonstrates a cost-effective, quality adult dental benefits program. States have had varying degrees of success with Medicaid dental benefit administration transitions. While other state experiences can provide valuable lessons learned, it is important that state Medicaid agencies examine the goals and objectives of the program and position the agency in the best possible place to make a beneficial and long-lasting impact on the health of the beneficiaries they serve.

RI Experience with an MCO Model for Children

Armed with Robert Wood Johnson Grant funds for development from the State Action for Oral Health Access (SAOHA) Project, Rhode Island began the RI Oral Health Access Project. As a result, a dental carve out managed care program for covered children ages 0-6 was implemented in 2006. The RIte Smiles Program began as the first Medicaid dental managed care program. RIte Smiles, Rhode Island's mandatory managed oral health program for children born on or after May 1, 2000, is administered under a Section 1115 of the Social Security Act waiver, although it was originally implemented under a Section 1915 (b) waiver. Children age into the program, one age group each year, until all eligible children ages birth to 21 are enrolled. The program currently includes over 60,000 enrolled children ages birth through 13.

RIte Smiles was designed to increase access to dental services, promote the development of good oral health behaviors, decrease the need for restorative and emergency dental care, and decrease Medicaid expenditures for oral health care. The two major goals of RIte Smiles are:

- 1) To increase the percentage of children on Medicaid who receive dental services, and
- 2) To shift, over time, the types of dental services these children receive to more preventive care.

To achieve these goals, Rhode Island transitioned from functioning simply as a payer of services to becoming a purchaser of a new oral health delivery system, a dental benefit manager (DBM) program provided by United Healthcare Dental. Among other responsibilities, the DBM program was charged with: 1) increasing reimbursement rates paid to private dentists, 2) ensuring there are enough dentists who participate in the network, and 3) assisting members with finding dentists. The DBM is also required to contract with all FQHCs providing dental services, as well as with both hospital dental clinics in Rhode Island.

Network requirements under the State's managed dental care contract are broadly similar to those for medical and behavioral health care. The dental benefits manager (DBM) is contractually required to establish and maintain a geographically accessible statewide network of general and specialty dentists in numbers sufficient to meet specified accessibility standards for its membership. Accessibility standards are as follows:

- (1) Every member must have a dental provider available within a 20 minute drive;
- (2) Treatment services available within 48 hours for an urgent dental condition;
- (3) Preventive services available within 60 days of a member's request or of new enrollment; and
- (4) Members have a choice of dental providers accepting new patients.

These are the types of requirements that should be considered when developing a model for Medicaid adult dental services in RI.

RIte Smiles Program Evaluation

The RI EOHHS is committed to program evaluation to ensure the delivery of quality, appropriate and cost-effective health services to all beneficiaries. The agency engaged Maternal and Child Health Evaluation as part of the Medicaid Research and Evaluation Project to conduct an independent evaluation of the impact that the first years of the RIte Smiles program had on the children who were enrolled in the program.⁵² A few of the highlights of the report are as follows:

- From SFY05 to SFY08, two years before to two years after RIte Smiles enrollment, all five groups of children enrolled in RIte Smiles experienced an increase in the percentage of children under age seven who received at least one dental visit a year.
- From SFY05 to SFY08, two years before to two years after RIte Smiles enrollment, all five groups of children enrolled in RIte Smiles experienced an increase in the percentage of children under age seven who received at least one preventive dental visit a year.
- From SFY07 to SFY08, the first and second year RIte Smiles began enrollment, there was a 35 percent increase in the percentage of children age six who received at least one dental sealant.

In 2011 a Health by Numbers report was developed by EOHHS staff and staff from the RI Department of Health's Oral Health Program.⁵³ This report titled Assessing the impact of RI's managed oral health program (RIte Smiles) on access and utilization of dental care among Medicaid children ages 10 years and younger

investigated the impact that the RIte Smiles Program has had on children's access to dental care, particularly preventive services. The report also noted that since RIte Smiles was implemented in 2006, the state expenditure for restorative services has flattened or leveled off and has recently begun to decline.

As another internal evaluation, the EOHHS RIte Smiles member satisfaction survey was conducted in 2011⁵⁴. Results showed that:

- Over 95% satisfaction with services provided by the dentist and the courtesy of dental staff
- Almost 90% of RIte Smiles members have a regular dentist
- Over 98% of children brush teeth daily
- Most parents recognized that dental care needs to begin before age 3
- Over 95% satisfaction with written materials from the Dental Plan

The RIte Smiles program has received a number of national recognitions as an emerging innovation that should be considered by other state Medicaid programs. From its federal partners, in January 2011, a Center for Medicare and Medicaid Services Report highlighted the RIte Smiles Program and other RI Oral Health Access Project initiatives in *Innovative Best Practices for the Provision of Medicaid Dental Services.* In addition to this report, RIte Smiles was one of three focus states in a June 2012 CMS Learning Lab Webinar. The CMS Learning Labs are quarterly events that are co-branded by Medicaid/Chip State Dental Association (MSDA) to provide professional development to Medicaid and CHIP Oral Health Program Directors and Managers. The June 2012 Webinar explored state initiatives that have demonstrated access to care improvements and was titled: *Improving Oral Health through Access*.

While RIte Smiles has been successful in improving access to quality dental care for RI Medicaid children, as with any program of this magnitude, there are areas for improvement that can be identified. Based on both anecdotal information and member satisfaction survey responses, program enhancements around outreach to parents, oral health literacy and care coordination are three of the key areas where improvements would be welcome. Each of the aforementioned areas is crucial to the success of a program that promotes preventive dental service utilization, or the medical versus the surgical model. In addition, an improved or strengthened structure to enhance the medical-dental integration would be a program performance improvement initiative that could be introduced.

Options for RI Medicaid's Adult Dental Program

Opportunities for Improving Adult Dental Benefits Administration

<u>Identified Areas for Program Improvement & Suggested Solutions</u>

The potential approaches for improving Rhode Island's adult program access to quality dental care are derived from research on (1) The administration of adult dental **benefits** for Medicaid enrollees, (2) Medicaid adult dental **expenditures** for all enrollees, (3) Medicaid adult dental service **utilization** that included all eligibility categories, and (4) Consideration of many of the **program strengths and weaknesses**, which are associated with delivery system improvements.

Several areas for RI Medicaid adult dental program improvement have been discussed throughout this report. In short, the critical areas for adult dental program improvements are:

- Improved **access** to appropriate, quality dental care
- Improved adult dental service **utilization**
- Improved dental medical service integration
- Shifting over time from high-cost services to **preventive services that reduce the disease burden** or moving from the current surgical model to a medical model for adult dental services

Each of these four inter-related areas for improvement is defined as follows with some suggestions for solutions also included:

1. <u>Improved access to appropriate, quality dental care</u>

Adults covered by RI Medicaid should have a robust choice of dentists from whom they get both their primary dental and their specialty dental care. The participating network of dentists should be ready and able to treat the needs of the Medicaid adult dental community. It is important that oral diseases such as dental caries and periodontal disease be managed in the Medicaid adult dental patient. Dentists should also be willing to communicate with their patient's primary medical providers, as an integrated system of care that focuses on the entire body. Vital factors to developing an adequate network of dentists are:

- Reimbursement rates that are closer to the prevailing Preferred Provider Organization (PPO) dental rates in RI;
- Professional development and cultural competency training for dentists on treating Medicaid-covered adults, who frequently have a high disease burden and very specialized needs.
- All of the current provider types in RI should be included in the network. Ways to expand/enhance provider capacity would also be explored and considered.

2. Improved adult dental service utilization

Dental service utilization is decidedly low (35%) for Medicaid adults in RI due to a number of factors. Access to care, as discussed above is a strong determinant of adult service utilization and is therefore, linked very closely. However, a key element in the adult dental services equation is utilization behavior. It is important to consider that among privately insured adults in the U.S., just over half use their employer-sponsored dental benefit. This fact implies that there are other factors (e.g. dental phobia, lack of perceived need, and inconvenient appointment times) that are barriers to receiving appropriate dental care. An adult dental program must consider this and take steps to eliminate the more patient-centered barriers to dental utilization. For example, primary care providers could be encouraged to make appropriate and timely referrals to a primary care dentist or an adult dental program that focuses on the "dental home". Dental service utilization among nursing home recipients in RI needs particular attention.

3. Improved medical-dental service integration

Adult dental service utilization can be significantly affected by the use of a service delivery model that fully integrates dental health with overall health. This report identified evidence that the health of the mouth has a significant impact on overall health. Periodontal disease, in particular has been identified in studies to negatively impact systemic disorders like diabetes, pre-term births, cardiovascular disease, among others. One method to improve medical-dental service integration is to consider a care coordination model or system that provides assistance to Medicaid's adult in the following ways:

- Referrals to primary care dentists
- Appointment coordination and follow-up
- Oral health literacy services (e.g. importance of oral health to overall health, disease prevention/management)

- Transportation and interpreter service facilitation

Care coordination has been successful in several healthcare areas, especially when people exhibit competing and complex health issues and have a high disease burden.

4. **Shifting** over time from high-cost dental treatment services **to preventive dental services** that reduce the disease burden

Medicaid adult dental benefits in RI are centered on the "surgical" model of dental care rather than the "medical" model. This means that Medicaid reimburses for dental services that treat the disease once it is present in the mouth, rather than focusing on preventing and/or managing the disease. Dentists have been accustomed to treating patients based on frequency limitations set by insurance plans, rather than a patient's risk level. Prevention and disease management programs have shown to be cost-effective in all other areas of healthcare and the strategy can work in dentistry.⁵⁷ Also, and very importantly, considering additional services to the adult dental benefit package that aren't currently covered, like posterior root canals and periodontal maintenance would enhance consumer choice by providing cost-effective alternatives to permanently losing teeth. Adding such services for adults would allow teeth to remain intact, reducing the high costs of replacements (prosthodontics).

It is important to recognize the areas where program short-falls currently exist that will require enhancement in order to improve the adult dental program:

- 1. Develop a more comprehensive dental benefit that meets the needs of the population, which would include certain dental services like periodontal treatment, posterior tooth root canals and dental anesthesia for oral surgery procedures
- 2. Increase the number of preventive dental services performed on adults with Medicaid
- 3. Improve the number of actively participating dental providers
- 4. Develop a fully integrated medical-dental delivery system for adults covered by RI Medicaid. (this would include introducing a dental disease management program.

Each of these program enhancements has inherent in it a list of strategies or methods that will help the State realize the necessary improvements. Regardless of which delivery systems model is implemented for adult dental, these program enhancements must be addressed.

From a population perspective, based on the data presented in this report, driving improvements in the program's effectiveness may require grouping the Medicaid-enrolled adults into two overarching population groups, which are:

- 1. Community- based Medicaid adult enrollees and
- 2. Institutionalized (nursing home residents) Medicaid enrolled adults.

Based on the unique dental needs of nursing home residents, a program enhancement that pays particular attention to the provider network that is delivering dental care is of primary importance. Ultimately, the strategy used to enhance a network of dentists for nursing home residents will likely be quite different from the network enhancement strategies used for adults living in the community.

Program Evaluation

Oral health indicators to measure the progress and demonstrated success of the program changes and interventions would be developed by the Rhode Island EOHHS in collaboration with community stakeholders and

other relevant state agencies. Indicators that address each of the areas for improvement: access/utilization, medical-dental service integration and shifting to a medical model that promotes primary disease prevention will be critical elements in program improvement. As there are no certified, national standardized measures for adult dental service utilization, as a start, RI EOHHS could consider using the related dental access measures for children ages 21 and under that exist in the annual standardized reports to the Center for Medicare and Medicaid Services (CMS).

Program Options for Consideration

Based on this analysis and review, feasible program reform options for consideration by Rhode Island are identified. A multi-pronged approach is necessary to ensure program success, as is the case with any complex health issue. Key to this approach is the contracting arrangement that a State employs for effective benefits administration. The table below outlines the feasible contracting options that Rhode Island might consider for adult dental program improvements.

Table J Contractual Model Options for the RI Adult Dental Program

| FEASIBLE CONTRACTUAL ARRANGEMENTS- RI MEDICAID ADULT DENTAL |
|---|
| Fee-for-Service |
| Fiscal Agent Contract |
| ASO Arrangement |
| Managed Care |
| Direct Dental MCO Contract |
| Integrated Health Plan Contract |

Table J above depicts some feasible contracting options for the State's consideration. To provide some descriptive analysis each area is discussed more fully below:

Fee-for-Service Option

1. Fiscal Agent Contract

This model is the current arrangement that RI EOHHS has in place for the administration of adult dental benefits. In this traditional approach, the state reimburses the dental provider for providing dental services directly by passing the reimbursement through a fiscal agent that manages a pool of Medicaid service dollars. The fiscal agent, Hewlett Packard is the current contractor that is responsible for claims payment, provider relations and program integrity. There are several program areas that have been identified (e.g. access/utilization and disease management and prevention) for improvement in this report, many of which are not addressed in the current fiscal agent contract. If RI EOHHS were to continue this fiscal agent arrangement for the adult dental service administration, then in order to achieve some of the identified program improvements, purchasing certain services like customer service and network development and maintenance through experienced third-parties would be an option, as described below:

2. An Administrative Service Only (ASO) Arrangement

This is a contractual scenario with a third party administrator that does not include a shared financial risk arrangement. The program dollars for services are paid directly to the contractor. All of the critical services that have been identified for adult dental program improvement could be embedded in an ASO contract. There have been positive outcomes seen in state Medicaid oral health programs (CT, VA and SC) through the implementation of this type of model.

One important consideration to note here is that depending on the contracted company, an ASO arrangement would not necessarily promote an integrated approach to managing the entire adult body, including the mouth, through coordination with medical benefits.

Managed Care Option

Health plans have effectively enhanced networks, built a continuum of care, strengthened care management, improved member communication and education, and implemented cost savings measures. To continue to be effective into the future, further enhancements and improvements will be needed and expected around new models of care. The evidence generally suggests that states have both saved money and enhanced quality where managed care contracting arrangements are in place, although, the experience varies by state. ⁵⁸ Managed care contracting arrangements may include a shared risk financial methodology in which both the state and the health plans assume responsibility for program expenditures and that has been an effective way to maintain financial accountability.

1. Direct Dental MCO Contract

This contracting scenario is one that RI EOHHS currently employs for the Medicaid dental benefits for young children, (RIte Smiles) as described in an earlier section. This direct contracting method affords the state a set of contracting tools that can be used to achieve program objectives. Overall, states have seen program improvements around access/utilization, quality and cost-effectiveness, many of which RI has experienced in the RIte Smiles program. However, the connection between medical and dental can be difficult to establish in this model, especially if the contractor does not have a separate health plan contract in the same state. This is a critical disconnect that can affect the quality of care that patients receive for their overall physical health.

2. Integrated Health Plan Contract

RI EOHHS currently contracts with two experienced Medicaid managed care organizations for the administration of covered health benefits for RIte Care and Rhody Health Partners populations. This contracting enhancement or service integration would mean that the Medicaid adult dental benefits would be added to the current medical health plan contracts. In such an approach, it is important that vendor procurement and accountability clearly articulate requirements for integration of oral health and overall health.

While there are states like Kentucky and Pennsylvania that do administer Medicaid dental benefits through subcontracts with their medical managed care organizations, RI has a unique opportunity to develop an integrated model of care for adults that allows for a full continuum of overall health and oral health care to occur. A fully integrated system of care is an approach that would give a managed care contractors the ability to coordinate benefits for a full range of services that cover the entire body, including the oral cavity.

Both program managed care contracting scenarios would involve the same basic obligations on the part of the third-party. Either contracting arrangement must include critical service areas like claims payment, provider network development and maintenance, customer service and provider relations.

Adult Dental Program Improvements as Part of Five Year Plan

Although several states have opted to eliminate dental coverage for adults in the face of fiscal constraints, Rhode Island has continued to include this important benefit as part of its Medicaid Program. At the same time, there is substantial room for improvement on this system care. Benefit scope can be expanded, reimbursements rates are low, access and utilization is problematic. The participating provider network is limited. There is little coordination between overall health care and oral health care.

In the concluding section of this report, one scenario for a five year phased implementation plan is offered to provide context for further review. Any number of variations might be considered. In this scenario, the first year would be a planning and implementation year followed by a phase enrollment of successive groups within the adult population.

The first year would allow time for the appropriate program planning and development. Potentially, grant funds may be available for Medicaid program innovations¹. Rhode Island could seek funds to assist in program development for one year, which would end in the implementation of adult dental benefits through a contractual relationship with an experienced third party or parties. The program planning process would provide an appropriate examination of the adult dental benefit package and the development of an effective disease management program for adults- one that is both cost-effective and sustainable. A diverse stakeholder advisory group would be formed to guide the agency, starting at the program development phase.

One potential path to phasing an improved adult dental program includes aligning with the Integrated Care Initiative that is presently being implemented for a subpopulation of adults with complex needs. As EOHHS continues to implement the Integrated Care Initiative for approximately 27,800 dual Medicare-Medicaid (MME) eligibles in the state, oral health could be considered as an integral component of this model. The Integrated Care Initiative is presently being implemented with two different delivery models:

- 1. Rhody Health Options, a managed care model that includes an integrated service model for qualified health plans to administer.
- 2. Connect Care Choice Community Partners, an enhanced primary care coordination model (PCCM) combined with a community health team.

The Integrated Care Initiative seeks to transform the delivery system through purchasing person-centered, comprehensive, coordinated, quality health care and support services:

- -Enhanced integration and coordination of services in a person centered system of care
- -Increased proportion of individuals successfully residing in a community setting
- -Managing long term care costs by providing patient-centered care in the most appropriate and cost effective setting

-

¹ For example, the DentaQuest Foundation and others have supported states in planning efforts.

- -Decrease avoidable hospitalizations, emergency room utilization and nursing home admissions and days.
- -Improve and maintain the beneficiary's quality of life

The integration of oral health services into this model could be a strong step toward meeting many of these goals for this vulnerable population. Enhanced dental access could be a key contributor to the the overall success of that program.

Program planning would also need to focus on the impact of enrollment of the expansion group of adults on the capacity of current providers in the oral health workforce to meet the needs of Medicaid eligible adults.

Program Implementation- Years 2-5

Years two, three, four and five could entail carrying out a phased enrollment plan based on targeted adult groups adult. A similar process was engaged during the RIte Smiles enrollment and has worked well operationally. From a budgetary perspective, cost impacts are more manageable with smaller groups being enrolled in a program over a period of time, rather than all at once. It should be noted that the high risk adults impacted by the Integrated Care Initiative are identified here as the first group of enrollees, as data have identified them as the poorest utilizers of dental services, even though they are at risk for dental disease and associated health conditions that could be exacerbated by poor oral health.

Table K below provides an overview of an approach that includes phasing in the Medicaid adult population enrollment over time. The table shows the average eligibles in SFY 2012 in each eligibility category, for a total of 95,291 beneficiaries. Enrollment of adults in the expansion group would add to these totals.

Table K Potential Scenario for Phased Roll-out of a New Medicaid Adult Dental Delivery System

| Implementation Year ¹ | Adult Population Group- Approach 1 (By Category) | Average Eligibles Per Population Group ² (SFY 2012) |
|----------------------------------|---|--|
| Year 1 | Stakeholder Engagement and Program Planning | |
| Year 2 | ICI Population, Adults Residing in Long-Term Care (LTC) Institutions, Waiver Adults- Receive Long-term services and supports (LTSS) | 10,429 |
| Year 3 | Adults with Developmental Disabilities, Persons with serious and persistent mental illness & Community-based Medicare-Medicaid Eligible | 24,558 |
| Year 4 | Adults Enrolled in Rhody Health Partners (RHP) | 13,295 |
| Year 5 | Remaining Adults in RIte Care and RIte Share | 47,009 Plus Expansion Population |

The number of average eligibles for ABD adults is estimated to increase at a rate or 2% over the five year implementation period. Average eligible for all other adults is estimated to increase at 3.5% over five years.

Potential Cost Implications for Adult Dental Program Improvements

Program cost is obviously a key consideration in examining options for dental program improvement. To provide some perspective on potential cost, Table L offers a very preliminary analysis of potential expenditures. (Note: This does not include expenditures for new adult population. It does recognize the recent change in eligibility for RIte Care parents from 175% to 133% of the federal poverty level).

For the purposes of this scenario, Table L uses SFY 2015 as a base year for initial enrollment; this would clearly need to be refined as program timing and components were defined.

Column 1 of Table L identifies the years in a five year phasing approach. Year 1 is a planning year.

Column 2, Affected Adult Population Group, segments the enrollment into four target groups. These are:

- The higher need population within the Integrated Care Initiative Adults residing in Long Term Care Settings and persons eligible for Long Term Services and Supports (11,077)
- The remaining adults affected by the Integrated Care Initiative and residing in the community (26,600)
- Medicaid-only adults with disabilities in the Rhody Health Partners and Connect Care Choice programs (14,691)
- Adults on RIte Care and RIte Share plus the Medicaid Expansion group (57,880 & expansion group)

Column 3 shows the estimated average eligible in each group projected for the respective year.

Column 4 shows the projected annual adult dental expenditure under the current system (no change) based on observed trends carried forward. Column 4 essentially serves as the baseline projection against which projected changes can be compared.

Column 5 then models the impact of potential changes to the system. The changes modeled are:

- a Changes in base reimbursement rates to private provider
- b Increases in utilization consequent to rate increases
- c Estimated costs for additional benefit coverage (periodontics)

As this report has pointed out, a rate increase for private practice dentists would be necessary to bring Medicaid reimbursement closer to the prevailing PPO dental insurance rates in RI and to account for inflationary trends. For purposes of analysis in this report, the dental provider rates used as a benchmark are the current RIte Smiles program rates which are above current FFS rates. Column 5 also includes an estimated increase of twenty percent for dental service utilization for adults enrolled in Medicaid as access to care improves due to program enhancements. Finally, Column 5 incldues an additional projected annual expenditure for the inclusion of selected periodontal benefits for adults covered by Medicaid. If all measures were gradually implemented to impact adult dental program improvements, total annual adult dental expenditures would increase each year, based on the number and population needs of the groups being enrolled in the initiative. The incremental increase is summarized in Column 6. For example, in the Year 2 row of Column 6, the incremental cost associated with these changes for Year 2 target population would be \$816,941 (\$13,328,041 – 12,511,100). The same calculation carries forward into the subsequent years.

Table L Illustration Scenario for Medicaid Adult Dental Program Improvements¹

| COLUMN 1 | COLUMN 2 | COLUMN 3 | COLUMN 4 | COLUMN 5 | COLUMN 6 |
|------------------------|--|---|---|--|--|
| Implementation Year | Affected Adult Population Group (By Category) | Estimated Average Eligibles Per Population Group ² | Projected Total Annual Adult Dental Expenditure "No Change" | Projected Total Medicaid Adult Dental Expenditure— +Enhanced Fee +20%Utilization +Period Benefit | Additional Annual Expenditure - Intervention Over Five Years (Federal & State) |
| Year 1 | Planning, etc. 2015 | | | | |
| Year 2 | ICI Population, Adults Residing in Long-Term Care (LTC) Institutions, LTSS (Waiver adults) | 11,073 | \$12,511,100 | \$13,328,041 | \$816,941 |
| Year 3 | Medicaid/Medicare Eligible Adults Residing in the Community, including those with Developmental Disabilities; Persons with Serious and Persistent Mental Illness | 26,600 | \$12,919,950 | \$16,178,994 | \$3,259,045 |
| Year 4 | Rhody Health Partners (RHP) Adults and Connect Care Choice | 14,691 | \$13,342,880 | \$18,255,956 | \$4,913,076 |
| Year 5 | Remaining Adults (RC, RS) | 57,881 | \$13,780,400 | \$24,208,085 | \$10,427,684 |

Note - 1. Data reflect a dental service rate increase for private dental practitioners in the community only.

Although the cost analysis above indicates that an additional investment in adult oral health is necessary, much of this cost could be off-set by a cost savings in Medicaid dollars associated with the reduced expenditure for direct medical costs of systemic health conditions, such as diabetes and heart disease and for emergency room visits. A thorough analysis of these potential cost offsets should be conducted during a first planning year.

Summary

Key Findings

RI EOHHS conducted a study on Medicaid adult dental that included policies, benefits coverage, claims data, delivery systems and evidence based research reports and issue briefs. Adults ages 21 and over who are

^{*}Actual expenditure from SFY 2012 EOHHS dental utilization data.

^{2.} Enrollment was estimated to increase at a rate of 2% for ABD adults and 3.5% for all other adults over five years.

covered by RI Medicaid have a service utilization rate of 35 percent. Compared to the adult population covered by private, employer-sponsored dental insurance, that has a utilization rate of 56 percent, there is ample room for program improvement.

One barrier to receiving regular dental care for the Medicaid-covered adults is to low provider reimbursement rates, which in part effect dentist's participation. In addition, the lack of perceived need for good oral health by adults is another key barrier to accessing timely and appropriate dental services. Furthermore, despite the implementation of a mobile dental service provider program, the rate of dental service utilization for Medicaid covered adults who reside in nursing homes has not seen a significant improvement since 2008 (27 percent to 29 percent in SFY 2012).

In addition, the mix of the utilization of Medicaid adult dental services is weighted heavily on treatment services like restorative care, rather than disease management and prevention. Reducing the disease burden in the Medicaid adult population through a prevention-focused program that is based on a person's level of disease risk will improve the State's return on its investment by shifting from high-cost restorative services and lowering the per member expenditures. Based on the implications in this report, it is clear that the current state of the RI Medicaid adult dental program can be improved in several critical program areas.

One potential scenario for a five year plan has been sketched at a high level. Many paths could be considered in a planning period with input from community stakeholders and state agencies including but not limited to: RI Department of Health, The RI Oral Health Commission, The RI Dental Association, The RI Medical Association, The RI Health Center Association, and The RI Medicaid Medical Care Advisory Committee and the.

Once critical decisions have been made about areas like benefits and phased enrollment, more refined models could be developed.

Conclusion

It is essential that an adult dental program combine a commitment to quality and access with on-going efforts to ensure prudent and effective management of costs. Maximizing the value of the State dollar must be a continued focus while at the same time incorporating new individuals now eligible for Medicaid. If cost-effective, quality strategies are not identified by the State; it will make it extremely difficult to avoid reductions in eligibility and/or covered benefits to adults. Rhode Islanders must receive the most value for the limited available State resources invested, so all programs and services must be administered in the most cost-effective manner.

More broadly, as the ACA moves into the implementation phase in 2014, there will be opportunities for policy makers to re-examine the role of dental care within the broader health care delivery system. Although adult dental benefits are not defined as essential benefits within the ACA, routine dental care has benefits to both lifetime dental care costs and overall health care costs. On the operational side, it could be more cost-effective for providers to better coordinate services to get the best health outcomes.⁵⁹ Operationalizing the concept of medical-dental service integration could help bridge the gap between oral and general health care, improve coordination of care, and help reduce overall health care costs. Rhode Island has an opportunity to expand the role of the dentist within the health care team, and as a result can help thousands of adult Medicaid recipients in the state better enjoy the benefits of improved oral health.

REFERENCES

- 1. Wall TP, Vujicic M, Nasseh K. Recent trends in the utilization of dental care in the United States. J Dent Educ. 2012;76(8):1020-1027.; Kenney GM, McMorrow S, Zuckerman S, Goin DE. A decade of health care access decline for adults holds implications for changes in the Affordable Care Act. Health Aff (Millwood) 2012;31(5):899-908.
- 2. Institute of Medicine (IOM) and National Research Council (NRC). *Improving access to oral health care for vulnerable and underserved populations.* 2011. Washington, DC: The National Academies Press.; U.S. Department of Health and Human Services (HHS). *Oral Health in America: A report of the Surgeon General.* Rockville (MD): HHS, National Institute of Dental and Craniofacial Research, National Institutes of Health.
- 3. Helen HL, Lewis CW, Saltzman B, Starks H. *Visiting the emergency department for dental problems: trends in utilization, 2001 to 2008.* AJPH 2012;102(11):77-83.; Cohen LA, Manski RJ, Hooper FJ. Does the elimination of Medicaid reimbursement affect the frequency of emergency department dental visits? JADA 1996; 127(5):605-609.
- 4. Oral Health in America: A report of the Surgeon General. Rockville, MD: U.S. Department of Health and Human Services, National institute of Dental and Craniofacial Research, National Institutes of Health, 2000.
- 5. Institute of Medicine (IOM) and National Research Council (NRC). *Improving access to oral health care for vulnerable and underserved populations.* 2011. Washington, DC: The National Academies Press.; U.S. Department of Health and Human Services (HHS). *Oral Health in America: A report of the Surgeon General.* Rockville (MD): HHS, National Institute of Dental and Craniofacial Research, National Institutes of Health.
- 6. Oral Health in America: A report of the Surgeon General. Rockville, MD: U.S. Department of Health and Human Services, National institute of Dental and Craniofacial Research, National Institutes of Health, 2000.
- 7. Centers for Disease Control and Prevention [CDC]. *Oral Health: Preventing Cavities, Gum Disease, Tooth Loss, and Oral Cancers*; 2011. http://www.cdc.gov/chronicdisease/resources/publications/aag/pdf/2011/Oral-Health-AAG-PDF-508.pdf
- 8. Haley J et al. "Access to Affordable Dental Care: Gaps for Low-Income Adults." *Kaiser Low Income Coverage and Access Survey*; July 2008. http://www.kff.org/medicaid/upload/7798.pdf
- 9. Pew. *A Costly Dental Destination: Hospital Care Means States Pay Dearly*; February 2012. http://www.pewcenteronthestates.org/dental
- 10. Institute of Medicine [IOM]. *Advancing Oral Health in America*; 2011. http://www.hrsa.gov/publichealth/clinical/oralhealth/advancingoralhealth.pdf
- 11. U.S. Department of Health and Human Services [DHHS]. *Oral Health in America. A Report of the Surgeon General*; 2000, p. 63. http://silk.nih.gov/public/hck1ocv.@www.surgeon.fullrpt.pdf
- 12. DHHS. *Oral Health in America*. p. vii. See note 7.

- 13. National Academy for State Health Policy. State Health Monitor, McGinn-Shapiro, Mary. *Medicaid Coverage of Adult Dental Services*; October, 2008.
- 14. National Center for Health Statistics (NCHS). 1995 *National Health Interview Survey (NHIS)* Data tabulated by the Office of Analysis, Epidemiology, and Health Promotion. (Washington, DC: NCHS, Centers for Disease Control and Prevention; 2000).
- 15. U.S. Department of Labor, Bureau of Labor Statistics, *National Compensation Survey, Employee Benefits in Private Industry in the United States, March 200* (Washington, DC: U.S. Bureau of Labor Statistics, 2006, 6-7).
- 16. R.J. Manski, E. Brown, *Dental Use, Expenses, Private Dental Coverage, and Changes, 1996 and 2004.* (Rockville, MD: Agency for Healthcare Research and Quality, 2007). MEPS Chartbook No.17.
- 17. U.S. Department of Health and Human Services. Oral health in America: A report of the Surgeon General. Rockville, MD: U.S. Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health; 2000.
- 18. National Academy for State Health Policy. State Health Monitor, McGinn-Shapiro, Mary. *Medicaid Coverage of Adult Dental Services*; October, 2008.
- 19. The Medical Expenditure Panel Survey, Chartbook Number 17, 2004.
- 20. Rhode Island Executive Office of Health and Human Services, Managed Care Report, January 2011.
- 21. RI Department of Labor and Training, A Publication of the Labor Market Information Unit. "RI Trends in Health Care Benefits". 2011.
- 22. Vujicic M. Utilization of dental care declined among low-income adults, increased among low-income children in most states from 2000 to 2010. Health Policy Resources Center Research Brief. American Dental Association. February 2013. Available from:

 http://www.ada.org/sections/professionalResources/pdfs/HPRCBrief 0213 3.pdf
- 23. U.S. Department of Health and Human Services Center for Medicare and Medicaid Services. National Health Expenditure Data. Available at: https://www.cms.gov/NationalHealthExpendData/01 Overview.asp. Accessed April, 2013.
- 24. National Academy for State Health Policy. State Health Monitor. Borchgrevink , Alison; Snyder, Andrew; Gehshan, Shelly. *The Effects of Medicaid Reimbursement Rates on Access to Dental Care.* March 2008.
- 25. American Dental Association. *State Innovations to Improve Access to Oral Health Care for Low Income Children: A Compendium Update*. Chicago: American Dental Association: 2005, 2008.00
- 26. Census 2000 Data on the Aging. Comparison of the Age Distribution of the US Resident Population in the 2000 and 1990 Census (Total Population Count). Administration on Aging (AOA). Available at: http://www.aoa.dhhs.gov/prof/Statistics/Census2000/2000-1999-Pop.asp.

- 27. Census 2000 Data on the Aging. Comparison of the Age Distribution of the US Resident Population in the 2000 and 1990 Census (Total Population Count). Administration on Aging (AOA). Available at: http://www.aoa.dhhs.gov/prof/Statistics/Census2000/2000-1999-Pop.asp.
- 28. Burt BA. Epidemiology of dental diseases in the elderly. Clin Geriatr Med. 1992;8:447–459. [PubMed]
- 29. Douglass CW, Ostry L, Shih A. Denture usage in the United States: a 25-year prediction [Special issue A]. J Dent Res. 1998; 77:209.
- 30. Surveillance, Epidemiology, and End Results Program [public use database CD-ROM (1973–1998)]. Rockville, Md: National Cancer Institute, Cancer Statistics Branch. Updated August 2000.
- 31. Dolan TA, Atchison KA. Implications of access, utilization, and need for oral health care by the non-institutionalized and institutionalized elderly on the dental delivery system. J Dent Educ 1993; 57(12):876-87.
- 32. Niessen LC. Extending dental insurance through retirement. Special Care Dentistry. 1984; 4:84–86.[PubMed]
- 33. Stiefel Doris J., DDS, MS, *Dental Care Considerations for Disabled Adults.* Special Care Dentistry. 22(3)26S-39S, 2002.
- 34. Dolan TA, Atchison KA. Implications of access, utilization, and need for oral health care by the non-institutionalized and institutionalized elderly on the dental delivery system. J Dent Educ 1993; 57(12):876-87.
- 35. Institute of Medicine [IOM]. *Advancing Oral Health in America*; 2011. http://www.hrsa.gov/publichealth/clinical/oralhealth/advancingoralhealth.pdf
- 36. The Medical Expenditure Panel Survey, Chartbook Number 17, 2004.
- 37. Roberts, Elizabeth H., Senator, Chair. *The Special Senate Commission to Study and Make Recommendations on Ways to Maintain and Expand Access to Quality Oral Health Care for all Rhode Island Residents.* Nov., 2001. http://www.oralhealth.ri.gov/documents/SpecialSenateCommissionRecommendations, 2001.pdf
- 38. Kaiser Family Foundation, State Facts. Available at: http://kff.org/other/state-indicator/total-dentists/?state=RI
- 39. RI Oral Health Commission et al., The Dental Safety Net In Rhode Island, Special Report, May 2011
- 40. RI Health Center Association. 2012 Fact Sheet. Dental Offices at Community Health Centers Rhode Island's Community Health Centers Leaders in Dental Care for Low Income Rhode Islanders. http://www.rihca.org/pdfs/dental%20fact%20sheet%202012%20final.pdf
- 41. Agency for Healthcare Research Quality and Research. Evidence Report/Technology Assessment No. 36, Diagnosis and Management of Dental Caries. Publication No. 01-E056
- 42. Pew Center on the States, Children's Dental Health Campaign. Issue Brief: *A Costly Destination*. February, 2012.

- 43. RI Department of Health, Health By Numbers. *Hospital Emergency Department Visits For Non-Traumatic Oral Health Conditions Among Rhode Island Adults Age 21–64 Years, 2006–2010.* Junhie Oh, BDS, MPH and Laurie Leonard, MS. Vol. 95, #11, November 2012
- 44. RI Department of Health, Health By Numbers. *Hospital Emergency Department Visits For Non-Traumatic Oral Health Conditions Among Rhode Island Adults Age 21–64 Years, 2006–2010.* Junhie Oh, BDS, MPH and Laurie Leonard, MS. Vol. 95, #11, November 2012
- 45. Medicaid-CHIP State Dental Association, Washington, DC. 2012 National Profile of State Medicaid and CHIP Oral Health Programs, 2012
- 46. Cigna. *Improved health and lower medical costs: why good dental care is important*. 2010. Available from: http://www.cigna.com/assets/docs/life-walllibrary/Whygooddentalcare is important whitepaper.pdf
- 47. David A Albert, Donald Sadowsky, Panos Papapanou, Mary L Conicella and Angela Ward. *An examination of periodontal treatment and per member per month (PMPM) medical costs in an insured population. BMC Health Services Research* 2006, 6:103 doi:10.1186/1472-6963-6-103vv. http://www.biomedcentral.com/1472-6963/6/103
- 48. U. S. Department of Health and Human Services, *Healthy People 2020*. http://www.healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=32
- 49. Centers for Medicare and Medicaid Services. *Innovative State Practices for Improving the Provision of Medicaid Dental Services: Summary of Eight State Reports.* 2011. Available at http://www.medicaid.gov/Medicaid-CHIP-Program-Information/ByTopics/Benefits/Dental-Care.html
- 50. National Academy for State Health Policy. State Health Monitor. Borchgrevink , Alison; Snyder, Andrew; Gehshan, Shelly. *The Effects of Medicaid Reimbursement Rates on Access to Dental Care.* March 2008.
- 51. American Dental Association. *Breaking down barriers to oral health for all American: Repairing the Tattered Safety Net.* August 2011. Available at: www.ada.org/sections/advocacy/pdfs/breaking-down-barriers.pdf
- 52. Rhode Island Executive Office of Health and Human Services, RIte Smiles Dental Trends Report, 2002-2008. Available at: http://www.dhs.ri.gov/Portals/0/Uploads/Documents/Public/Reports/ritesmiles trends 20022008.pdf
- 53. McQuade, W., et al. (2011). Assessing the impact of RI's managed oral health program (RIte Smiles) on access and utilization of dental care among Medicaid children ages 10 years and younger. Health by Numbers, 94(8), 247-249. http://www.rimed.org/medhealthri/2011-08/2011-08-247.pdf
- 54. Rhode Island Executive Office of Health and Human Services, RIte Smiles Member Satisfaction Survey Results. Available at: http://www.oralhealth.ri.gov/documents/RIteSmilesSatisfactionSurvey,2011.pdf
- 55. Center for Medicare and Medicaid Services, Innovative State Practices for Improving the Provision of Medicaid Dental Services: Summary of eight state reports. January 2011. http://medicaid.gov/Medicaid-CHIP-Program-Information/ByTopics/Benefits/Downloads/8statedentalreview.pdf

- 56. Center for Medicare and Medicaid Services, *Improving Oral Health through Access. June 19, 2012*http://www.medicaid.gov/Medicaid-CHIP-Program
 Information/ByTopics/Benefits/Downloads/LearningLabSlides1.pdf
- 57. Rhode Island Executive Office of Health and Human Services, Managed Care Report, January 2011.
- 58. Medicaid Managed Care Cost Savings- A Synthesis of 24 Studies: Final Report" March 2009 America's Health Insurance Plans (AHIP) with the Lewin Group.
- 59. Vujicic M, Nasseh K. Accountable care organizations present key opportunities for the dental profession. Health Policy Resources Center Research Brief. American Dental Association. April 2013. Available from: http://www.ada.org/sections/professionalResources/pdfs/HPRCBrief_0413_2.pdf

ATTACHMENT A

State Medicaid Program Status on Adult Dental Benefits and Service Delivery Model -2012

| | | | | delivery Model -2012 |
|----------------------|-------------|---|----------------|---|
| State | Model | Contractor/s Name/s | Adult Benefits | Additional Benefits for Pregnant Adults (Y/N) |
| Alabama Alaska | None FFS | | N L | N N |
| | | | | N N |
| Arizona | None | | N | N N |
| Arkansas | FFS | | L | N N |
| California | None | | N | N |
| Colorado | FFS | | Е | N |
| Connecticut | FFS/ASO | Hewlett Packard (Fiscal Agent) BeneCare | L | N |
| Delaware | None | | N | N |
| District of Columbia | MCO | Chartered health Plan UnitedHealthCare HSCSN | L | N |
| Florida | None | | N | N |
| Georgia | None | | N | N |
| Hawaii | - | | - | - |
| Idaho | FFS | | Е | Y |
| Iowa | FFS | | L | N |
| Illinois | FFS | | Е | N |
| Indiana | None | | N | N |
| Kansas | FFS | | Е | N |
| Kentucky | МСО | WellCare of Kentucky Coventry Health Care Kentucky Spirit Passport Health Plan | E | Y |
| Louisiana | FFS | r assport freathfream | None | Y |
| Maine | FFS | | * | N |
| Maryland | FFS | | L | N |
| Massachusetts | FFS | | E | N |
| Michigan | MCO | Delta Dental of MI | L | N |
| Minnesota | FFS | Deita Delitai di Mi | L | N |
| Mississippi | MCO | UnitedHealthCare Magnolia | | • |
| | | · · · | E | N |
| Missouri | MCO | DentaQuest | L | N |
| Montana | FFS | | C | N |
| North Carolina | FFS | | L | N |
| North Dakota | FFS | | L | Y |
| Nebraska | FFS | | L | N |
| Nevada | FFS | | L | Y |
| New Hampshire | FFS | | Е | N |
| New Jersey | МСО | AmeriGroup UnitedHealthCare Community Plan Horizon New Jersey Health Health First PACE | С | N |
| New Mexico | MCO | Lovelace Molina Presbyterian Blue Salud UnitedHealthCare Amerigroup | L | N |
| New York | FFS | 2carroan c minerigioup | L | N |
| Ohio | FFS | | L | N |
| Oklahoma | FFS | | E | Y |
| Oregon | MCO | Advantage Dental Capital Dental Care Willamette Dental Group ODS Community Health Inc Care Oregon Access Dental Plan Family Dental Care Managed Dental Care of Oregon | С | N |
| Pennsylvania | МСО | Vista Health Plan Gateway Plan Inc UnitedHealthCare of Pennsylvania Health Partners UPMC for You Inc Aetna Better Health Inc CoventryCare | L | N |
| Rhode Island | FFS | | L | N |
| South Carolina | None | | N | N N |
| South Dakota | FFS | | L | N |
| Tennessee | None | | N | N |
| Texas | None | | N | N |
| Utah | FFS | | E | Y |
| Vermont | FFS | | L | Y |
| Virginia | FFS | | E | N |
| Washington | FFS | | E | Y |
| Wisconsin | MCO | Southeast Dental Associates DentaQuest | L | N |
| West Virginia | FFS | V | E | N |
| Wyoming | FFS | | L | N |

FFS= Fee-For Service

MCO=Managed Care Organization

ASO= Administrative Services Only

E= Emergency dental services only (e.g. palliative treatment and tooth extraction)

L= Limited dental services and frequencies (some, but not every service category is covered)

C= At least one dental procedure is covered in each of the dental service categories

*Dental services may be covered as medically necessary as an exception for certain medical conditions.

Source: MSDA National Profile of State Medicaid and CHIP Oral Health Programs, 2012

ATTACHMENT B

RI Executive Office of Health and Human Services

Medicaid-Dental

Adult Dental Analysis

Purpose: the purpose of the following is to provide a yearly estimate of additional Dental expense with a phased-in approach of Enhanced FFSD ental Fees over the course of 4 Years from SFY15-SFY.

I.ByAidGroup

| Expenses | | | | | | | | | | | | | |
|--------------------|------------------|---------------|--------------|--------------|--------------|--|--|--|--|--|--|--|--|
| RowLabels | SFY08 | SFY09 | SFY10 | SFY11 | SFY12 | | | | | | | | |
| EarlyIntervention | \$60 | \$90 | \$55 | \$102 | \$147 | | | | | | | | |
| AdoptionSub | \$320,238 | \$334,556 | \$340,720 | \$301,309 | \$309,270 | | | | | | | | |
| KatieBeckett | \$73,172 | \$55,462 | \$49,323 | \$43,334 | \$34,779 | | | | | | | | |
| SSI | \$904,128 | \$956,525 | \$1,059,187 | \$976,796 | \$982,001 | | | | | | | | |
| FosterCare | \$482,828 | \$481,298 | \$468,530 | \$402,260 | \$382,172 | | | | | | | | |
| RiteCare | \$16,899,865 | \$17,461,315 | \$19,852,929 | \$19,491,745 | \$20,108,642 | | | | | | | | |
| ABDAdults | \$4,335,405 | \$5,043,296 | \$5,671,620 | \$5,618,246 | \$5,972,886 | | | | | | | | |
| Total | \$23,015,697 | \$24,332,543 | \$27,442,364 | \$26,833,792 | \$27,789,896 | | | | | | | | |
| | AverageEligibles | | | | | | | | | | | | |
| EarlyIntervention | 2,139 | 2,209 | 2,170 | 2,166 | 2,320 | | | | | | | | |
| AdoptionSub | 2,463 | 2,461 | 2,501 | 2,483 | 2,429 | | | | | | | | |
| KatieBeckett | 1,655 | 1,516 | 1,336 | 1,144 | 1,063 | | | | | | | | |
| SSI | 5,969 | 5,722 | 6,013 | 6,333 | 6,442 | | | | | | | | |
| SubstituteCare | 2,734 | 2,671 | 2,588 | 2,625 | 2,278 | | | | | | | | |
| RiteCare | 123,479 | 119,378 | 125,872 | 130,610 | 133,916 | | | | | | | | |
| ABDAdults | 45,332 | 45,751 | 46,579 | 47,449 | 48,456 | | | | | | | | |
| Total | 183,771 | 179,707 | 187,059 | 192,810 | 196,903 | | | | | | | | |
| | * | PMPM | | | | | | | | | | | |
| EarlyIntervention | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.01 | | | | | | | | |
| AdoptionSub | \$10.83 | \$11.33 | \$11.35 | \$10.11 | \$10.61 | | | | | | | | |
| KatieBeckett | \$3.68 | \$3.05 | \$3.08 | \$3.16 | \$2.73 | | | | | | | | |
| SSI | \$12.62 | \$13.93 | \$14.68 | \$12.85 | \$12.70 | | | | | | | | |
| FosterCare | \$14.71 | \$15.01 | \$15.09 | \$12.77 | \$13.98 | | | | | | | | |
| RiteCare | \$11.41 | \$12.19 | \$13.14 | \$12.44 | \$12.51 | | | | | | | | |
| ABDAdults | \$7.97 | \$9.19 | \$10.15 | \$9.87 | \$10.27 | | | | | | | | |
| Total | \$10.44 | \$11.28 | \$12.23 | \$11.60 | \$11.76 | | | | | | | | |
| II.ByDentalTPL, | ExcludesEI | | | | | | | | | | | | |
| II.DyDCIItai II L, | ExcludesEl | Expenses | | | | | | | | | | | |
| RowLabels | SFY08 | SFY09 | SFY10 | SFY11 | SFY12 | | | | | | | | |
| NoDentalTPL | \$18,403,590 | \$18,606,965 | \$20,274,974 | \$18,851,651 | \$17,995,242 | | | | | | | | |
| DBM(inclEncFee) | \$4,465,147 | \$5,584,429 | \$7,064,929 | \$7,900,946 | \$9,706,795 | | | | | | | | |
| DentalTPL | \$146,900 | \$141,059 | \$102,406 | \$81,092 | \$87,712 | | | | | | | | |
| Total | \$23,015,637 | \$24,332,453 | \$27,442,309 | \$26,833,690 | \$27,789,749 | | | | | | | | |
| | AverageEligibles | Ψ2 1,552, 155 | Ψ27,112,307 | Ψ20,033,070 | Ψ21,100,110 | | | | | | | | |
| NoDentalTPL | 141,531 | 134,282 | 136,064 | 135,919 | 134,376 | | | | | | | | |
| DBM | 35,591 | 39,147 | 45,573 | 51,451 | 56,544 | | | | | | | | |
| DentalTPL | 4,510 | 4,069 | 3,252 | 3,274 | 3,664 | | | | | | | | |
| Total | 181,632 | 177,498 | 184,889 | 190,644 | 194,584 | | | | | | | | |
| | | PMPM | ., | -, | , | | | | | | | | |
| NoDentalTPL | \$10.84 | \$11.55 | \$12.42 | \$11.56 | \$11.16 | | | | | | | | |
| DBM | \$10.45 | \$11.89 | \$12.92 | \$12.80 | \$14.31 | | | | | | | | |
| DentalTPL | \$2.71 | \$2.89 | \$2.62 | \$2.06 | \$1.99 | | | | | | | | |
| Total | \$10.56 | \$11.42 | \$12.37 | \$11.73 | \$11.90 | | | | | | | | |

Note: DBM expense will be excluded from this pointforward. However, Dental TPL expense will be included since the purpose is to gain a sense of projected expense. III. ByAgeCohort, Excludes EI, Dental DBM (including the FFSE incounter Fee for DBM Recipients)

| Expenses | | | | | | | | | | | |
|-----------|---------------|--------------|--------------|--------------|--------------|-------|---------|---|----------------|------------------------|-------------------------------------|
| RowLabels | SFY08 | SFY09 | SFY10 | SFY11 | SFY12 | | | | | | |
| <15 | \$6,989,202 | \$6,035,308 | \$5,555,493 | \$4,647,962 | \$3,413,047 | | | | | | |
| 15-20 | \$3,338,849 | \$3,255,368 | \$3,693,610 | \$3,348,113 | \$3,305,672 | | | | | | |
| 21-44 | \$4,559,117 | \$5,268,582 | \$6,199,843 | \$6,013,251 | \$6,002,130 | | | | | | |
| 45-64 | \$2,579,082 | \$3,023,438 | \$3,567,895 | \$3,513,684 | \$3,839,519 | | | | | | |
| 65+ | \$1,084,240 | \$1,165,328 | \$1,360,539 | \$1,409,732 | \$1,522,586 | | | | | | |
| Total | \$18,550,489 | \$18,748,024 | \$20,377,380 | \$18,932,743 | \$18,082,954 | | | | | | |
| | AverageEligib | les | | | | | | | | | |
| <15 | 37,398 | 31,463 | 28,160 | 25,038 | 21,528 | | | | | | |
| 15-20 | 20,906 | 19,923 | 20,669 | 21,230 | 21,096 | 21-44 | | | \$7.96 \$9.38 | \$7.96 \$9.38 \$10.55 | \$7.96 \$9.38 \$10.55 \$9.99 |
| 21-44 | 47,718 | 46,801 | 48,956 | 50,170 | 51,330 | 45-64 | | | \$9.58 \$11.07 | \$9.58 \$11.07 \$12.39 | \$9.58 \$11.07 \$12.39 \$11.67 |
| 45-64 | 22,440 | 22,766 | 24,005 | 25,085 | 26,171 | 65+ | | | \$5.14 \$5.58 | \$5.14 \$5.58 \$6.47 | \$5.14 \$5.58 \$6.47 \$6.65 |
| 65+ | 17,579 | 17,398 | 17,526 | 17,670 | 17,916 | Total | \$10.59 |) | \$11.29 | \$11.29 \$12.19 | 9 \$11.29 \$12.19 \$11.33 |
| Total | 146.041 | 138 351 | 139 316 | 139 193 | 138 040 | | | | | | |

IV. ByAidGroup

Excludes < Age21, EI, Dental DBM (including the FFSE ncounter Fee for DBMR ecipients)

| Expenses | | | | • | , | | | |
|----------------|----------------|-------------|---------------|--------------|--------------|----------------|--------------|-------------------------------|
| RowLabels | SFY08 | SFY09 | SFY10 | SFY11 | SFY12 | | | |
| ABDAdults | \$4,335,405 | \$5,043,296 | \$5,671,045 | \$5,617,385 | \$5,971,425 | | | |
| RiteCare | \$3,737,620 | \$4,260,676 | \$5,274,274 | \$5,153,023 | \$5,222,284 | | | |
| RIteShare | \$148,288 | \$152,146 | \$182,109 | \$163,652 | \$169,738 | | | |
| AdoptionSub | \$1,126 | \$408 | \$142 | \$466 | \$750 | | | |
| SubstituteCare | | \$821 | \$ 707 | \$2,141 | \$ | 337 | | |
| Total | \$8,222,439 | \$9,457,348 | \$11,128,277 | \$10,936,668 | \$11,364,23 | 5 | | |
| | rerageEligible | | | | | | | |
| ABDAdults | 45,324 | | 46,566 | 47,416 | 48,408 | | | |
| RiteCare | 39,807 | | 40,992 | 42,390 | 43,916 | | | |
| RIteShare | 2,581 | | 3 2,853 | 3,008 | 3,060 | | | |
| AdoptionSub | 14 | 15 | | | | 21 | | |
| SubstituteCare | 10 | 28 | | | 01 | 11 | | |
| KatieBeckett | 1 | C |) | 0 | | | | |
| Total | 87,737 | 86,965 | 90,487 | 92,925 | 95,416 | | | 1Yr@50% |
| RC/RS/AS/SC/KB | 42,413 | 41,221 | 43,921 | 45,509 | 47,008 | | | 2Yr@35% |
| | AverageElig | gibles | Trend | | | 2Yr | 3Yr | 3Yr@15% |
| ABDAdults | | 0.9% | 1.8% | 1.8% | 2.1% | 2.0% | 1.9% | 2.0% |
| RiteCare | | -2.9% | 6.0% | 3.4% | 3.6% | 3.5% | 4.3% | 3.7% |
| RIteShare | | -2.8% | 13.8% | 5.4% | 1.7% | 3.6% | 6.9% | 3.1% |
| AdoptionSub | | 7.2% | -7.4% | 42.6% | 11.1% | 25.9% | 13.6% | 16.6% |
| SubstituteCare | | 175.7% | 128.5% | 45.2% | -88.0% | -58.3% | -26.4% | -68.4% |
| KatieBeckett | | -66.0% | -84.2% | -100.0% | | -100.0% | -100.0% | -50.0% |
| Total | | -0.9% | 4.0% | 2.7% | 2.7% | 2.7% | 3.1% | 2.8% |
| RC/RS/AS/SC/KB | | -2.8% | 6.5% | 3.6% | 3.3% | 3.5% | 4.5% | 3.5% |
| | PMPM | | | | | | | |
| ABDAdults | \$7.97 | \$9.19 | \$10.15 | \$9.87 | \$10.28 | | | |
| RiteCare | \$7.82 | \$9.18 | \$10.72 | \$10.13 | \$9.91thisis | alreadylowmayı | notmakesense | etocontinuedownwardtrend |
| RIteShare | \$4.79 | \$5.06 | \$5.32 | \$4.53 | \$4.62 | | | |
| AdoptionSub | \$6.91 | \$2.34 | \$0.88 | \$2.02 | \$2.93 | | | |
| SubstituteCare | \$0.00 | \$2.49 | \$0.94 | \$1.95 | \$0.28 | | | 1Yr@50% |
| Γotal | \$7.81 | \$9.06 | \$10.25 | \$9.81 | \$9.93 | | | 2Yr@35% |
| | | PMPMTren | d | | 2Yr | | 3Yr | 3Yr@15% |
| ABDAdults | | 15.3% | 10.5% | -2.7% | 4.1% | 0.6% | 3.8% | 2.9% |
| RiteCare | | 17.3% | 16.8% | -5.5% | -2.2% | -3.9% | 2.6% | -2.1%negtrendseemsunreasonabl |
| RIteShare | | 5.6% | 5.2% | -14.8% | 1.9% | -6.8% | -2.9% | -1.8% |
| AdoptionSub | | -66.2% | -62.5% | 131.0% | 44.7% | 82.8% | 7.8% | 52.5% |
| SubstituteCare | | | -62.3% | 108.4% | -85.5% | -45.1% | -51.6% | -66.3% |
| Total | | 16.0% | 13.1% | -4.3% | 1.2% | -1.6% | 3.1% | 0.5%sousebottomlinetrends |

V. By Cohort Excludes<Age21,EI,DentalDBM(includingtheFFSEncounterFeeforDBMRecipients)

| | Expenses | AverageEligibles RowLabels Sl | F Y 12 |
|----------------|--------------|-------------------------------|---------------|
| RowLabels | SFY12 | SFY12 | MPM |
| LTC/Waiver | \$1,030,942 | LTC/Waiver 10,429 | \$8.24 |
| MRDD/SPMI/Comm | \$3,038,307 | MRDD/SPM 24,558 | \$10.31 |
| RHP | \$1,902,175 | RHP 13,295 | \$11.92 |
| RC/RS/AS/SC | \$5,392,810 | RC/RS/AS/ 47,009 | \$9.56 |
| Total | \$11,364,235 | Total 95,291 | \$9.94 |
| | | slightlyloweronly pt 11/12 | |

| Va FYI | ABDAdults | ONLV |
|--------|-----------|------|

| , | | | | | | | | | | | | |
|---------------|---------|-------|--------|--------|-----------|-------|--------|---------|----------|--------------|---------------|----|
| RowLabels | Hospice | MRDD | NH>=90 | Slater | SPMI | T | avares | Waiver | Zamba | ranCommunity | SFY12 | |
| LTC/Waiver | 1,11 | 16 | 5,182 | 3 | 308 | | | 9 3 | 3,798 17 | | 10,429 | |
| MRDD/SPMI/Com | nunity | 2,8 | 31 | | | 3,318 | | | | | 18,409 24,558 | |
| RHP | | 4 7 | 63 15 | | 12 | 1,604 | | | 532 | | 10,366 13,295 | |
| RC/RS/AS/SC | | | 20 | | | 5 | | | 0 | | 24 | 49 |
| Total | 1,120 | 3,614 | 5,196 | : | 319 4,927 | | | 9 4,329 | 17 | 28,799 | 48,331 | |

ABDAdultsSummary

| Total | 48,331 |
|----------|--------|
| LTC/Comm | 35,461 |
| SPMI | 4,927 |
| Waiver | 4,329 |
| MRDD | 3,614 |
| | |

Medicaid-Dental

VI.4-Year Forecast: SFY15-SFY18... Phase d-in Approach of Enhanced FFSD ent al Feesby Cohort and the state of the state

| | | | | DoNothing | 2 | | | | | DoSomethin | ngDBME1 | nhancedFee | s | | | | + | 20%Utilizati | on | | |
|-----------------------------|--------------------|------------------|--------------|--------------|--------------|--------------|--------------|------------------|-------------------|-------------------|--------------|--------------|----------------|--------------|-----------------|-------------------|-------------------|--------------|---|--------------|-----------------------------|
| | | | | Year1 | Year2 | Year3 | Year4 | | | | Year1 | Year2 | Year3 | Year4 | | | | Year1 | Year2 | Year3 | Year4 |
| PMPM | SFY12 | SFY13 | SFY14 | SFY15 | SFY16 | SFY17 | | SFY12 | SFY13 | SFY14 | SFY15 | SFY16 | SFY17 | SFY18 | SFY12 | SFY13 | SFY14 | SFY15 | SFY16 | SFY17 | SFY18 |
| | | | | | | \$8.45 | \$8.49 | | | | | | | | | | | | | | |
| LTC/Waiver MRDD/SPMI/Com | \$8.24 | \$8.28 | \$8.32 | \$8.36 | \$8.40 | 640.55 | | \$8.24 | \$8.28 | \$8.32 | \$10.23 | \$10.28 | \$10.33 | \$10.38 | \$8.24 | \$8.28 | \$8.32 | \$11.58 | \$11.64 | \$11.70 | \$11.76 |
| RHP | | | | 040.45 | 240.52 | \$10.57 | \$10.63 | | | | 240.45 | 040.05 | 242.02 | 040.00 | | | | 040.45 | | 04444 | 04 4 70 |
| RC/RS/AS/SC | \$10.31 | \$10.36 | \$10.41 | \$10.47 | \$10.52 | \$12.23 | \$12.29 | \$10.31 | \$10.36 | \$10.41 | \$10.47 | \$12.87 | \$12.93 | \$13.00 | \$10.31 | \$10.36 | \$10.41 | \$10.47 | \$14.57 | \$14.64 | \$14.72 |
| | | | | | | \$12.23 | \$12.29 | | | | | | | | | | | | | | |
| Trend | 0.5% | /o | | | ABD/ | . 1. 1. | | Enhanced | FeeAdjustm | | s impo to | LE 1 IE | 1 | | Enhanced 39% | | ilizationAdjı | ustment | | | |
| | | | | | | S/AS/SC | | | 22% | L | DentalFFSwit | nEnnancedF | eesj | | 1 39% 44% | | | | | | |
| | | | | | RG/R | 5) 115) 5C | | | 217 | AverageEli | gibles | | | | 717 | 0 | | | | | |
| LTC/Waiver | 10,429 | 10,640 | 10,854 | 11,073 | 11,297 | 11,524 | 11,757 | 10,429 | 10,640 | 10,854 | 11,073 | 11,297 | 11,524 | 11,757 | 10,429 | 10,640 | 10,854 | 11,073 | 11,297 | 11,524 | 11,757 |
| MRDD/SPMI/Com | , | 25,053 | 25,558 | 26,074 | 26,600 | 27,137 | | 24,558 | 25,053 | 25,558 | 26,074 | 26,600 | 27,137 | 27,684 | 24,558 | 25,053 | 25,558 | 26,074 | 26,600 | 27,137 | 27,684 |
| RHP | 13,295 | 13,563 | 13,836 | 14,116 | 14,400 | 14,691 | 14,987 | 13,295 | 13,563 | 13,836 | 14,116 | 14,400 | 14,691 | 14,987 | 13,295 | 13,563 | 13,836 | 14,116 | 14,400 | 14,691 | 14,987 |
| RC/RS/AS/SC | 47,009 | 48,668 | 50,385 | 52,163 | 54,003 | 55,908 | | 47,009 | 48,668 | 50,385 | 52,163 | 54,003 | 55,908 | 57,881 | 47,009 | 48,668 | 50,385 | 52,163 | 54,003 | 55,908 | 57,881 |
| Total Trend | 95,291 ABDAdult | 97,923 s 2.0% | 100,634 | 103,425 | 106,300 | 109,260 | 112,309 | 95,291 | 97,923 | 100,634 | 103,425 | 106,300 | 109,260 | 112,309 | 95,291 | 97,923 | 100,634 | 103,425 | 106,300 | 109,260 | 112,309 |
| RC/RS/AS/ | 3.5% | 3 2.07 | o | | | | | | | | | | | | | | | | | | |
| -, -, -, | | | | | | | | • | | Expen | se | | | | • | | | | | | |
| LTC/Waiver | \$1,030,94 | 2 \$1,057,031 | \$1,083,779 | \$1,111,205 | \$1,139,324 | \$1,168,155 | \$1,197,716 | \$1,030,942 | \$1,057,031 | \$1,083,779 | \$1,359,306 | \$1,393,704 | \$1,428,972 | \$1,465,133 | \$1,030,942 | \$1,057,031 | \$1,083,779 | \$1,539,044 | \$1,577,990 | \$1,617,922 | \$1,658,864 |
| MRDD/SPMI/Com | | | | | | | 1-11 | , , | 1-, -, - | 1-1-1-1 | \$3,274,851 | , ., , | 1 - 1 - 1 - 1 | \$4,317,919 | , , | , , | , , | 1-9 | | \$4,768,204 | , .,, |
| RHP | | 5 \$1,950,311 | | | | | | | | | | | | | | | \$1,999,664 | | | \$2,985,202 | |
| RC/RS/AS/SC Total | | 0 \$5,611,171 | - / / | - / / | | - / / | - / / | | | | | - / / | - / / | | | - / / | \$5,838,375 | | | - / / | \$9,837,495 \$19,445,969 |
| 1 otai | \$11,304,23 | 5 \$11,/55,/00 | \$12,115,845 | \$12,511,100 | \$12,919,950 | \$13,342,880 | \$13,780,400 | \$11,304,233 | \$11,/33,/00 | \$12,115,843 | \$12,759,202 | \$15,924,010 |) \$14,855,585 | \$17,209,001 | \$11,304,233 | \$ \$11,733,700 | 912,115,843 | \$12,938,935 | \$14,051,414 | \$15,948,017 | \$19,445,969 |
| | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | • | | Phased-InE | xpense | | | | • | | | | | | |
| LTC/Waiver | | | | | | | | \$ 0 | \$0 | \$0 | \$248,102 | \$254,380 | \$260,817 | , | \$ 0 | \$0 | \$0 | \$427,839 | \$438,666 | \$449,766 | \$461,148 |
| MRDD/SPMI/Com | m | | | | | | | \$ 0 | \$0 | \$0 | | \$749,687 | \$768,658 | \$788,109 | \$ 0 | \$0 | \$0 | | | \$1,325,514 | |
| RHP | | | | | | | | \$ 0 | \$0 | \$ 0 | Şi | | 0 \$481,229 | \$493,407 | \$0 | \$ 0 | \$ 0 | \$ | | \$829,857 | \$850,856 |
| RC/RS/AS/SC Total | | | | | | | | \$0 60 | \$0 \$0 | \$0 \$0 | \$249 102 | | \$1,510,705 | \$1,879,667 | | \$0 \$0 | \$0 \$0 | \$427,839 | , <u>, , , , , , , , , , , , , , , , , , </u> | | \$2,994,508 \$5,665,568 |
| 1 otai | | | | | | | | φU | \$0 | \$0 | \$248,102 | \$1,004,067 | \$1,510,705 | \$3,428,600 | φU | \$0 | \$0 | \$44/,839 | \$1,731,465 | \$4,005,137 | \$5,005,508 |

Medicaid-Dental

VII.4-Year Forecast: SFY 15-SFY 18... Phase d-in Approach of Enhanced FFSD ental Fees+Periodontal Enhancement by Cohort Properties of the Cohort

| | | | | DoNothing | œ | | | | | DoSomethir | o DRMF | hancedFee | | | | | 4.1 | 20%Utilizati | ion | | |
|---------------------------|----------------------------|----------------------------|---------------------|----------------------------|-------------------|----------------------------|--------------|--|------------------|----------------------------|------------------|--------------------------|------------------|-------------------------|-----------------|---------------|---------------------|--------------|--------------|--------------|-------------------------------------|
| | | | | Year1 | Year2 | Year3 | Year4 | DoSomethingDBMEnhancedFees Year1 Year2 Year3 Year4 | | | | | | Year1 Year2 Year3 Year4 | | | | | | | |
| PMPM | SFY12 | SFY13 | SFY14 | SFY15 | SFY16 | SFY17 | | SFY12 | SFY13 | SFY14 | SFY15 | SFY16 | SFY17 | SFY18 | SFY12 | SFY13 | SFY14 | SFY15 | SFY16 | SFY17 | SFY18 |
| | \$8.24 | | | | | \$8.45 | \$8.49 | \$8.24 | \$8.28 | | | | | | \$8.24 | \$8.28 | | | | | |
| LTC/Waiver | | \$8.28 | \$8.32 | \$8.36 | \$8.40 | | | ľ | | \$8.32 | \$13.16 | \$13.22 | \$13.29 | \$13.36 | | | \$8.32 | \$14.51 | \$14.58 | \$14.66 | \$14.73 |
| MRDD/SPMI/Com | \$10.31 | | 70.0- | | | \$10.57 | \$10.63 | \$10.31 | \$10.36 | **** | | | | | \$10.31 | \$10.36 | 10.0- | | , | | |
| RHP | | \$10.36 | \$10.41 | \$10.47 | \$10.52 | | | ψ10.51 | | \$10.41 | \$10.47 | \$16.40 | \$16.49 | \$16.57 | Q10.51 | Q10.50 | \$10.41 | \$10.47 | \$18.11 | \$18.20 | \$18.29 |
| RC/RS/AS/SC | \$11.92 | | \$10.41 | \$10.47 | \$10.52 | \$12.23 | \$12.29 | \$11.02 | \$11.98 | \$10.41 | \$10.47 | \$10.40 | \$10.47 | \$10.57 | \$11.92 | \$11.98 | \$10.41 | \$10.47 | \$10.11 | \$10.20 | \$10.27 |
| | \$11.72 | 2 | | | | 912.2. | 912.27 | \$11.92 | Ģ11.70 | | | | | | \$11.92 | \$11.70 | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| | 0.50 | , | | | | | | . . | | | | | | | I | | | | | | |
| Trend | 0.5% | 0 | | | | | | ABDAdult | FeeAdjustm | <u>ent</u> :seetab Dent | 1EESwithEn | nanced Feesl | | | Enhanced 39% | Fee+20%Uti | <u>lızatıonAdjı</u> | istment | | | |
| | | | | | | | Re | C/RS/AS/S | | .scctab[Dent | ui i owitii ii | ianecui ces _j | | | 44% | | | | | | |
| | | | | Ava | erageEligible | es | 10 | S, -W/ 110/ 0 | 5 21,70 | | | | | | 1 | | | | | | |
| LTC/Waiver | 10,429 | 10,640 | 10,854 | 11,073 | 11,297 | 11,524 | 11,757 | 10,429 | 10,640 | 10,854 | 11,073 | 11,297 | 11,524 | 11,757 | 10,429 | 10,640 | 10,854 | 11,073 | 11,297 | 11,524 | 11,757 |
| MRDD/SPMI/Com | 24,558 | 25,053 | 25,558 | 26,074 | 26,600 | 27,137 | | 24,558 | 25,053 | 25,558 | 26,074 | 26,600 | 27,137 | 27,684 | 24,558 | 25,053 | 25,558 | 26,074 | 26,600 | 27,137 | 27,684 |
| RHP | 13,295 | 13,563 | 13,836 | 14,116 | 14,400 | 14,691 | 14,987 | 13,295 | 13,563 | 13,836 | 14,116 | 14,400 | 14,691 | 14,987 | 13,295 | 13,563 | 13,836 | 14,116 | 14,400 | 14,691 | 14,987 |
| RC/RS/AS/SC | 47,009 | 48,668 | 50,385 | 52,163 | 54,003 | 55,908 | 57,881 | 47,009 | 48,668 | 50,385 | 52,163 | 54,003 | 55,908 | 57,881 | 47,009 | 48,668 | 50,385 | 52,163 | 54,003 | 55,908 | 57,881 |
| Total | 95,291 | 97,923 | 100,634 | 103,425 | 106,300 | 109,260 | 112,309 | 95,291 | 97,923 | 100,634 | 103,425 | 106,300 | 109,260 | 112,309 | 95,291 | 97,923 | 100,634 | 103,425 | 106,300 | 109,260 | 112,309 |
| Trend | ABDAdults | s 2.0% | 0 | | | | | | | | | | | | | | | | | | |
| RC/RS/AS/ | 3.5% | | | | | | | <u> </u> | | | | | | | | | | | | | |
| Expense | | | | | | | | L | | | | | | | In | | | | | | |
| , | | \$1,057,031 | | | | | | | | | | | | \$1,884,528 | | | | | | | |
| MRDD/SPMI/Com | | | | | | | | | | | | | | \$5,504,394 | | | | | | | |
| | | \$1,950,311 \$5,611,171 | | | | | | | | - / / | | | | \$3,463,766 | | | | | | - , , | \$3,821,216 \$12,233,269 |
| | | | | | | | | | - / / | | | | | | | | | | | | \$12,233,269 \$24,208,085 |
| 1 Otai | \$11,304,233 | \$11,733,700 | \$12,113,043 | \$12,511,100 | \$12,919,930 | \$13,342,000 | \$13,700,400 | \$11,304,233 | φ11,/33,/00 | 912,113,043 | \$13,140,304 | φ13,431,39 <i>1</i> | \$17,101,524 | \$21,7/1,11/ | \$11,304,233 | φ11,/33,/00 | \$12,113,043 | \$13,320,041 | \$10,170,774 | \$10,233,930 | \$24,200,005 |
| | | | | | | | | | | | | | | | | | | | | | |
| | | | | Pha | sed-InExper | nse | | | | | | | | | • | | | | | | |
| LTC/Waiver | | | | | | | | \$ 0 | \$0 | \$0 | \$637,204 | \$653,328 | \$669,861 | \$686,812 | \$0 | \$0 | \$0 | \$816,941 | \$837,614 | \$858,810 | \$880,543 |
| MRDD/SPMI/Comi | m | | | | | | | \$ 0 | \$0 | \$0 | \$ | \$1,878,319 | \$1,925,850 | \$1,974,585 | \$ 0 | \$0 | \$0 | \$0 | \$2,421,430 | \$2,482,706 | \$2,545,532 |
| RHP | | | | | | | | \$ 0 | \$0 | \$0 | \$ |) \$(| \$1,222,932 | \$1,253,879 | \$0 | \$0 | \$0 | \$0 | \$(| \$1,571,560 | \$1,611,329 |
| RC/RS/AS/SC | | | | | | | | \$ 0 | \$0 | \$0 | \$ | | | \$4,275,440 | | \$0 | \$0 | \$0 |) \$(|) \$ | 0 \$5,390,281 |
| Total | | | | | | | | \$ 0 | \$0 | \$0 | \$637,204 | \$2,531,647 | \$3,818,644 | \$8,190,716 | \$0 | \$0 | \$0 | \$816,941 | \$3,259,045 | \$4,913,076 | \$10,427,684 |
| | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| FYIforestimatesabove | | | | | 202 FF 1 OF | 77.74.0 | | 0.000.440 | OFFICE | OFFICA 4 | 0.777.74.7 | OFFIX 4 | OFFICE | OFF MO | | | | | | | |
| Periodontal LTC/Waiver | perio \$273,448 | mr | mrperio % | netperio 1 0 \$273,448 | DBMEnhanSI 32% | \$360,997 | | \$FY12 \$2.88 | \$FY13 \$2.90 | SFY14 \$2.91 | \$FY15 \$2.93 | \$FY16 \$2.94 | \$FY17 \$2.96 | \$FY18 \$2.97 | l | | | | | | |
| -,, | , , | 2,831 | \$32,295 | \$773,588 | 3270 | \$1,021,267 | | \$3.47 | \$3.48 | \$3.50 | \$3.52 | \$3.54 | \$3.55 | \$3.57 | | | | | | | |
| RHP | | 763 | \$8,702 | \$495,832 | | \$654,582 | | \$4.10 | \$4.12 | \$4.14 | \$4.17 | \$4.19 | \$4.21 | \$4.23 | | | | | | | |
| RC/RS/AS/SC | \$1,430,393 | | | \$1,430,164 | | \$1,888,057 | | \$3.35 | \$3.36 | \$3.38 | \$3.40 | \$3.41 | \$3.43 | \$3.45 | | | | | | | |
| | | _ | | | | - / / | | \$3.43 | | | | \$3.50 | | | | | | | | | |
| RC/RS/AS/SC Total | \$1,430,393 \$3,014,258 | _ | 9 \$229 \$41,226 | \$1,430,164 \$2,973,031 | | \$1,888,057 \$3,924,902 | | | \$3.36 \$3.45 | \$3.38 \$3.47 | \$3.40 \$3.48 | | \$3.43 \$3.52 | \$3.45 \$3.53 | | | | | | | |

<u>Appendix</u>

Adults>=21DentalFFSwithEnhancedFees

Purpose: the purpose of the following is to estimate the impact of enhancing the current dental fees chedule. The following reflects SFY12FFS claims only, ie. excludes Dental DBM expense

| se:thepurposeofthefollowing | istoestimatetrie | ampactoreman | enigniceurren | tucitaireesen | FFSDental,ex | 0 | | | CSDCITAIDDI | viexpense | | | | | |
|-----------------------------|------------------|---------------|---------------|-----------------|------------------|-------------|---------------|-------------------|-------------|-----------|---------|------|---------|----------|------|
| | | | ChecknBala | EnhancedFee | | | +20%Utiliza | | | Enhance | dFees | | +20%Uti | lization | |
| RowLabels | PdAmt | | FFSEst | | NEMemEsNI | EUCREst | DBM+ | NEMem+ N | IEUCR+ | DBM | NEMemNI | EUCR | | EMemNEU | CR |
| | | | Adults>=21 | • | | | • | | | | | | • | | |
| ABDAdults | \$5,955,329 | \$5,992,750 | \$5,987,231 | \$7,324,015 | 9,461,080\$14,1 | .55,492 | \$8,292,450\$ | 10,856,929\$16,4 | 190,222 | 22% | 58% | 136% | 39% | 81% | 175% |
| RiteCare | \$5,328,301 | \$5,347,739 | \$5,332,176 | \$6,797,038 \$ | 8,013,390\$11,9 | 004,773 | \$7,665,852 | \$9,125,474\$13,7 | 795,133 | 27% | 50% | 123% | 44% | 71% | 159% |
| AdoptionSub | \$748 | \$749 | \$748 | \$748 | \$779 | \$845 | \$754 | \$791 | \$870 | 0% | 4% | 13% | 1% | 6% | 16% |
| FosterCare | \$37 | \$37 | \$37 | \$ 60 | \$77 | \$117 | \$72 | \$92 | \$140 | 62% | 108% | 216% | 95% | 150% | 279% |
| GrandTotal | \$11,284,415 | \$11,341,276 | \$11,320,192 | \$14,121,861\$ | 17,475,327\$26, | 061,226 | \$15,959,128 | \$19,983,286\$30 | ,286,366 | 25% | 54% | 130% | 41% | 77% | 168% |
| RC/AS/FC | | | Addt'lExpen | \$2,801,669 \$6 | 5,155,134\$14,74 | 11,034 | \$4,638,936 | \$8,663,094\$18,9 | 066,174 | 27% | 50% | 123% | 44% | 71% | 159% |
| | | ByProvio | derandCatego: | ryofCare | | | | | | | | | | | |
| Private | \$6,348,888 | \$6,395,697 | \$6,384,665 | \$9,186,334\$1 | 2,539,799\$21,1 | 25,699 | \$11,023,601 | \$15,047,759\$25, | ,350,838 | 44% | 96% | 231% | 73% | 136% | 297% |
| RestorativeServices | \$1,544,02 | 8 \$1,554,196 | \$1,546,571 | \$2,777,27 | 6 \$3,381,918 \$ | \$5,242,253 | \$3,332,73 | 31 \$4,058,302 \$ | \$6,290,703 | 80% | 119% | 239% | 115% | 162% | 307% |
| OralSurgery Dentures | \$1,386,39 | 2 \$1,396,408 | \$1,386,759 | \$2,273,26 | 9 \$2,588,489 \$ | \$4,430,681 | \$2,727,92 | 23 \$3,106,186 \$ | \$5,316,817 | 64% | 87% | 219% | 97% | 124% | 283% |
| DiagnosticServices | \$1,118,74 | 5 \$1,128,170 | \$1,125,189 | \$1,128,33 | 1 \$3,025,425 \$ | 5,184,152 | \$1,353,99 | 7 \$3,630,510 \$ | \$6,220,982 | 0% | 169% | 361% | 20% | 223% | 453% |
| PreventiveServices | \$961,075 | \$967,594 | \$961,262 | \$1,559,10 | 8 \$1,370,998 \$ | \$2,495,364 | \$1,870,93 | 30 \$1,645,198 \$ | \$2,994,437 | 62% | 43% | 160% | 95% | 71% | 212% |
| EncounterFee | \$823,282 | \$828,933 | \$823,404 | \$823,404 | \$1,491,082 \$2 | 2,901,821 | \$988,08 | 5 \$1,789,298 \$3 | 3,482,185 | 0% | 81% | 252% | 20% | 117% | 323% |
| AdjunctiveServices | \$293,799 | \$297,197 | \$319,872 | \$319,872 | \$319,872 | \$319,872 | \$383,846 | \$383,846 | \$383,846 | 0% | 0% | 0% | 20% | 20% | 20% |
| Endodontics | \$135,852 | \$136,883 | \$135,892 | \$135,708 | \$170,662 | \$247,156 | \$162,850 | \$204,795 | \$296,588 | 0% | 26% | 82% | 20% | 51% | 118% |
| Orthodontics (blank) | \$83,650 | \$84,249 | \$83,650 | \$167,300 | \$189,288 | \$302,335 | \$200,760 | \$227,146 | \$362,802 | 100% | 126% | 261% | 140% | 172% | 334% |
| Periodontics | \$1,580 | \$1,581 | \$1,580 | \$1,580 | \$1,580 | \$1,580 | \$1,896 | \$1,896 | \$1,896 | 0% | 0% | 0% | 20% | 20% | 20% |
| | \$315 | \$315 | \$315 | \$315 | \$315 | \$315 | \$378 | \$378 | \$378 | 0% | 0% | 0% | 20% | 20% | 20% |
| | \$170 | \$170 | \$170 | \$170 | \$170 | \$170 | \$204 | \$204 | \$204 | 0% | 0% | 0% | 20% | 20% | 20% |
| FQHC | \$4,562,58 | 4 \$4,569,256 | \$4,562,584 | \$4,562,58 | 4 \$4,562,584 \$ | 64,562,584 | \$4,562,58 | 84 \$4,562,584 \$ | \$4,562,584 | 0% | 0% | 0% | 0% | 0% | 0% |
| RIHospital | \$360,097 | \$363,297 | \$360,097 | \$360,097 | \$360,097 | \$360,097 | \$360,097 | \$360,097 | \$360,097 | 0% | 0% | 0% | 0% | 0% | 0% |
| StJosephs | \$12,847 | \$13,026 | | \$12,847 | \$12,847 | | \$12,847 | \$12,847 | \$12,847 | | 0% | 0% | 0% | 0% | 0% |
| GrandTotal | \$11,284,415 | \$11,341,276 | \$11,320,192 | \$14,121,861\$ | 17,475,327\$26, | 061,226 | \$15,959,128 | \$19,983,286\$30 | ,286,366 | 25% | 54% | 130% | 41% | 77% | 168% |
| Private | | | Additional | \$2,801,669 | 6,155,134\$14,7 | 741,034 | \$4,638,936 | \$8,663,094\$18,9 | 966,174 | | | | | | |
| RestorativeServices | | | Expense | | 5 \$1,835,347 \$ | | | 50 \$2,511,731 \$ | | | | | | | |
| OralSurgery Dentures | | | | | \$1,201,729 \$ | | | 54 \$1,719,427 \$ | | | | | | | |
| DiagnosticServices | | | | \$3,142 | \$1,900,236 \$4 | | | 8 \$2,505,321 \$ | | | | | | | |
| PreventiveServices | | | | \$597,846 | | \$1,534,102 | \$909,668 | | \$2,033,175 | | | | | | |
| EncounterFee | | | | \$0 | | \$2,078,417 | \$164,681 | | \$2,658,781 | | | | | | |
| AdjunctiveServices | | | | \$ 0 | \$0 | | \$63,974 | \$63,974 | \$63,974 | | | | | | |
| Endodontics | | | | -\$184 | \$34,770 | \$111,264 | | \$68,902 | \$160,695 | | | | | | |
| Orthodontics (blank) | | | | \$83,650 | \$105,638 | | \$117,110 | \$143,496 | \$279,152 | | | | | | |
| Periodontics | | | | \$ 0 | \$0 | | \$316 | \$316 | \$316 | | | | | | |
| FQHC | | | | \$ 0 | \$0 | | \$63 | \$63 | \$63 | | | | | | |
| | | | | \$ 0 | \$0 | 11 - | \$34 | \$34 | \$34 | | | | | | |
| | | | | \$0 | \$0 | | \$0 | \$0 | \$0 | | | | | | |
| RIHospdbaJoSam | | | | \$0 | \$0 | | \$0 | \$0 | \$0 | | | | | | |
| StJosHosdbaPed&Fam | | | | \$0 | \$0 | | \$0 | \$0 | \$0 | | | | | | |
| GrandTotal | | | | \$2,801,669 \$ | 6,155,134\$14,7 | 41.034 | \$4,638,936 | \$8,663,094\$18,9 | 966,174 | I | | | | | |

MethodologyNotes

Pd@100% is depicted as FYI only; no IBNR is estimated in the enhanced amounts, but is estimated to be < 0.5%. FFS and DBMF ee Levels were determined by the claims data, i.e. the mode "allowed amount".

FQHCs, St. Joseph s and RIHospital fees remain unchanged; only Private Practice fees are enhanced.

Periodontal

Incurred SFY12 as of 5/13

Purpose: the purpose of the following is to estimate the impact of including Periodontics as abenefit. The MRDDP opulation is already receiving these benefits through an authorization process. The following reflects SFY12 FFS claims only, i.e. excludes Dental DBM expense.

| | TotalMedica | TotalMedicaid | | | MRDD | | | | NonMRDD | | | Estimate | |
|------------------|-------------|----------------|-----|-----------|--------------|-----|----------------|-----------|--------------|-----|-------------------------|----------|--|
| | Medicaid | | | Medicaid | | | | Medicaid | | | | | |
| >=21NoDentalTPL | Eligibles | DentalUsers% | | Eligibles | DentalUsers% | | Periodontics % | Eligibles | DentalUsers% | | Periodonti ^o | % | |
| UniqueEligibles | 112,394 | 35,199 | 31% | 3,571 | 2,015 | 56% | 334 9.4% | 109,063 | 33,192 | 30% | 12,905 | 11.8% | |
| AverageEligibles | 94,332 | 32,8 70 | 35% | 3,434 | 1,983 | 58% | 331 9.6% | 90,898 | 30,871 | 34% | | | |
| FTE | 84% | 93% | | 96% | 98% | | 99% | 83% | 93% | | | | |

Note:MRDDplusNonMRDDUniqueEligibleswillnottallyexactlytoTotal.ThesamerecipientmaybeMRDDandNonMRDDduringSFY12.Moreover,theymayhaveutilizedasaMRDDand/orNonMRDDrecipient.

 $\label{prevalence} \textbf{PrevalenceofPeriodontitisinAdultsintheUnitedStates:} 2009 and 2010 \label{prevalence} Abstract: This study estimated the prevalence, severity, and extent of periodontitis in the adult U.S. population, with data from the 2009 and 2010 \label{prevalence} National Health and Nutrition Examination Survey (NHANES) cycle. Estimates were derived from a sample of 3,742 adults aged 30 years and older, of the civilian non-institution alized population, having 1 ormore natural teeth. Attachment loss (AL) and probing depth (PD) were measured at 6 sites per too thon all teeth (except the third molars). Over 47% of the sample, representing 64.7 million adults, had periodontitis, distributed as 8.7%, 30.0%, and 8.5% with mild, moderate, and severe periodontitis, respectively. For adults aged 65 years and older, 64% had either moderate or severe periodontitis. Eighty-six and 40.9% had 1 ormore teeth with AL <math>\geq$ 3 mm and PD \geq 4 mm, respectively. With respective extent of disease, 56% and 18% of the adult population had 5% ormore periodon tall sites with \geq 3 mm AL and \geq 4 mm PD, respectively. Periodontitis was highest inmen, Mexican Americans, adults with less than a high schooled ucation, adults below 100% Federal Poverty Levels (FPL), and current smokers. This survey has provided direct evidence for a high burden of periodontitis in the adult U.S. population.

PeriodontalEstimate...Assumptions:theMildwilluse2x/yr,theModerate3xandtheSevere4x.

| | ouring tromovener the w | , , , | , | ondirective ever | | |
|--------------------|-------------------------|--------|-------------|------------------|-------------|-------------|
| Periodontics | | | FFSPrivate | DBMFee | NEMember | NEUCR |
| D4341 | | | \$76 | \$100 | \$110 | \$209 |
| 30+yrolds,inclMRDD | 28,049UniqueDenta | lUsers | | | | |
| | Est.Visits %Un | ique | | EstimatedExp | ense | |
| Mild | 2 | 8.7% | \$370,920 | \$488,053 | \$536,858 | \$1,020,030 |
| Moderate | 3 | 30.0% | \$1,918,552 | \$2,524,410 | \$2,776,851 | \$5,276,017 |
| Severe | 4 | 8.5% | \$724,786 | \$953,666 | \$1,049,033 | \$1,993,162 |
| Total | 13,239users | | \$3,014,258 | \$3,966,129 | \$4,362,741 | \$8,289,209 |
| | AvgCost/Person/Yr | r | \$228 | \$300 | \$330 | \$626 |
| Total,netMRDD | | | \$2,973,031 | \$3,924,902 | \$4,321,515 | \$8,247,983 |

DBMFeeImpact 32%

| MRDD | 334Unique | \$41,226 | 13199.34215 | | |
|------|------------------------|----------|-------------|--|--|
| | \$123AvgCost/Person/Yr | | | | |

| Summary | Cost/Person | PerioUsers | DentalUsersEligi | bles | %Perio:Denta%Perio:T | otal%Der | ntal:Total |
|------------|-------------|------------|------------------|---------|----------------------|----------|------------|
| MRDD | \$123 | 334 | 4 2,015 | 3,571 | 17% | 9% | 56% |
| NonMRDDEst | \$228 | 12,905 | 33,192 | 109,063 | 39% | 12% | 30% |

NonMRDD+DBMMRDD \$2,931,805 \$3,883,676 \$13,199 26.0% 34.5% 0.1%