Executive Summary

In May 2011, the Peninsula Health Care District (“PHCD”) awarded a grant to Apple Tree Dental (“Apple Tree”) to conduct a needs assessment in the San Mateo County service area examining the changing demographics of the area, the expected needs for dental care, particularly among the frail elderly, and whether or not current gaps exist in available dental services.

The 2007 PHCD Strategic Plan identified oral health care as one of the most acute unmet needs among older adults and that San Mateo County is one of the most rapidly aging counties in the United States. In 2009, at a meeting of the Burlingame Rotary Club, Ms. Cheryl Fama, CEO of the PHCD, connected with Dr. Dick Gregory (“Dr. Gregory”), a local dental leader who has been exploring dental access issues in the area, particularly for the elderly. Dr. Gregory identified Apple Tree as a leading national model for access to care, again, particularly for the elderly. This conversation marked the beginning of a joint effort to study the dental access problems in the San Mateo County service area in order to identify potential solutions and build broad community support for such efforts.

The needs assessment was designed to identify the target populations of elderly nursing facility residents and individuals with special dental access needs living in a surrounding service area centered in San Mateo County and to survey long-term care facilities and dental providers to identify gaps in access to dental care for the target populations. In addition, over the same timeframe, Apple Tree participated in the development of a Center for Medicare & Medicaid Health Care Innovations grant proposal with Dr. Paul Glassman at the University of the Pacific Arthur A. Dugoni School of Dentistry, which produced significant business operations, economic, and financial analysis, greatly expanding the needs assessment report.

This report provides detailed information about the growing geriatric population in the area, outlines survey data regarding gaps in dental services from long-term care facilities and area dental providers, and identifies the need for additional geriatric and special care services in the area. Finally, given existing gaps and broad local stakeholder interest in planning an Apple Tree program, this report recommends funding a formal business planning process leading to the establishment of a new program in the San Mateo County service area, located on the PHCD campus.
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Introduction

The San Mateo County service area has one of the nation’s fastest growing populations of older adults, seniors, and frail elders according to Health Management Associates’ 2008 Assessment of Strategic Priorities for San Mateo Health Services report. Older populations are typically high consumers of health care services, yet significant gaps in the availability of geriatric and special needs dental services are leaving many older adults without access to necessary dental care. This problem is increasingly significant given the growing body of medical and dental research demonstrating strong links between untreated mouth infections and costly complications from diabetes, increased risks for aspiration pneumonia among nursing facility residents, and other health consequences. At the same time, there is very strong evidence that mouth infections can be dramatically reduced or prevented by proactive new oral health care delivery programs. This needs assessment report describes the availability of geriatric and special care dentistry in the San Mateo County service area and provides a framework to address the unmet needs. The unmet needs identified in this report are intended to serve as a catalyst to further inform and engage local stakeholders in a collaborative planning process needed to establish a sustainable new program serving the San Mateo County service area.

Background Leading to Needs Assessment: Peninsula Health Care District and San Mateo County Dental Community Eldercare Involvement

In 2005, Dr. Dick Gregory (“Dr. Gregory”) participated in a Senior Dental Task Force (“Task Force”) led by the San Mateo County Dental Society. This investigative project was intended to examine the problems of oral health care access among elderly residents living in skilled nursing facilities. It was at this time that Dr. Gregory became aware of Apple Tree Dental (“Apple Tree”) (see Apple Tree Dental Organization below). Shortly thereafter, Dr. Gregory visited Apple Tree in Minneapolis, Minnesota. During his visit and first-hand observation of its clinic and mobile delivery systems, he was very impressed with Apple Tree’s program and proposed that the Task Force consider implementing something similar in the San Mateo County service area.

During this time frame, the Senior Dental Task Force helped establish the Geriatric Oral Health Access Project, a pilot project to develop solutions to complex issues confronting seniors in long-term care facilities, using Registered Dental Hygienists in Alternative Practice (“RDHAP”) in collaboration with dentists. This project involved the California Dental Association (“CDA”), the San Mateo County Dental Society, and the California Dental Hygiene Association, and was funded by the San Francisco Foundation, the American Dental Association Foundation, and Mills-Peninsula Health Services. The principal investigator for this project was Dr. Paul Glassman, a nationally
recognized expert in the field of geriatric and special care dentistry from the University of the Pacific Arthur A. Dugoni School of Dentistry (“University of the Pacific”) in San Francisco. Suzanne Valente, DDS, and Lisa Handa, RDHAP, were the two primary researchers.

Dr. Gregory began volunteering at Samaritan House in San Mateo County to provide dental care for low-income children and adults. In 2008, he became the Dental Clinics Director (“Director”). As Director, he became increasingly aware of the full scope of access to dental care problems in the San Mateo County service area, such as individuals having to wait over a year to obtain an appointment. In order to take a more active role, in 2009, Dr. Gregory agreed to co-chair the San Mateo Dental Coalition with Dr. Ann Marie Silvestri (“Dr. Silvestri”), Dental Director at the San Mateo County Medical Center. To help address dental access problems in the San Mateo County service area, Dr. Gregory and Dr. Silvestri organized key stakeholders in the community to increase awareness and communication and renamed the organization the San Mateo County Oral Health Coalition.

In late 2009, Dr. Gregory and Dr. Silvestri attended the California Statewide Task Force on Oral Health for People with Disabilities and Aging Californians. Here, experts and panelists asserted that the traditional oral healthcare delivery model in California was not capable of meeting the diverse needs of the underserved. Furthermore, a capacity analysis study conducted by the CDA as part of its research on access to care concluded that, aside from the financial disincentives and the numerous barriers to delivering oral health to vulnerable populations, there are not enough dentists and community dental clinics to meet the needs of vulnerable individuals in California. These studies further validated Dr. Gregory’s original thought that an Apple Tree program might offer a sustainable solution for the San Mateo County area.

At a meeting of the Burlingame Rotary Club, Ms. Cheryl Fama (“Ms. Fama”), CEO of the Peninsula Health Care District (“PHCD”) approached Dr. Gregory regarding the gaps in care for the vulnerable elderly in San Mateo County. She explained that the PHCD’s 2007 Strategic Plan had identified oral health care as one of the most acute unmet needs among seniors, and also that San Mateo County is one of the most rapidly aging counties in the United States. This conversation marked the beginning of a joint effort to study the dental access problems in the San Mateo County service area in order to identify potential solutions and build broad community support for such efforts.

In March 2009, Dr. Gregory delivered a presentation to the PHCD Board of Directors (“PHCD Board”) highlighting the disproportionately high costs of treating medical conditions stemming from mouth infections in elderly individuals. The PHCD Board determined the evidence warranted further discussions regarding the Apple Tree model and asked Dr. Helgeson to deliver a presentation at the following PHCD Board meeting, which also included dental leaders, healthcare professionals, and elected
officials. Dr. Helgeson was also introduced to the San Mateo County Dental Society leadership, individuals from the University of the Pacific Arthur A. Dugoni School of Dentistry, local physicians and hospital representatives, Ombudsman Services of San Mateo County (“Ombudsman”), and nursing facility owners and administrators.

Dr. Helgeson was impressed by his visit to San Mateo County, both by PHCD’s knowledge, motivation, and Strategic Plans and the broad local support to address dental access problems. The San Mateo County Dental Society, Ombudsman, and Dr. Glassman, Director of the Pacific Center for Special Care, were particularly supportive and eager to make dental access a priority. Dr. Helgeson was confident that a unique San Mateo iteration of the Apple Tree model was not only consistent with Apple Tree’s mission, but also worthy of a planning effort in the San Mateo County service area.

The California Dental Association (“CDA”), recognizing the importance of dental access issues in the San Mateo County service area, provided funding for Dr. Gregory to make a presentation to Apple Tree’s Board of Directors (“Apple Tree Board”) seeking support for a joint planning effort. Dr. Gregory presented several letters of support from all parties previously mentioned as well as Congresswoman Jackie Speier and Assemblyman Jerry Hill. Apple Tree’s Board determined that a planning effort in the San Mateo County service area was consistent with Apple Tree’s mission and would be an opportunity to accelerate national progress in geriatric and special care dentistry.

In 2011, the CDA House of Delegates accepted the Access Report: Phased Strategies for Reducing the Barriers to Dental Care in California (“Access Report”), the result of two years of evidence-based research by its Access Workgroup and the Workforce and Forecasting Research Task Force. The recommendations included in the Access Report were so well aligned with the work being done in San Mateo County during the same timeframe that the Access Workgroup invited Dr. Helgeson and Dr. Gregory to present the Apple Tree model and their plans for a San Mateo County needs assessment during a full day of meetings with CDA leadership in January of 2011.

In May 2011, PHCD approved funding for a dental needs assessment, the first phase of the San Mateo County Elder Care Dental Project. The PHCD Fall/Winter 2011 Newsletter (“Newsletter”) featured the project-funding announcement in a front-page article entitled Dental Health and General Health: New Studies Cite Strong Links. The article stated that, “The American Dental Association comments that Apple Tree is a unique organization designed to meet the needs of specific populations in specific places. But its mission, services and business model are adaptable to any number of settings, using revenue margins from privately insured or Medicaid patients to provide substantial amounts of care to people who otherwise would not receive any.”

The Newsletter also described new oral health recommendations in reports released by the Institute of Medicine and the California Dental Association during 2011.
According to the Newsletter:

“Consistent with the recommendations made by the Institute of Medicine are the Phased Strategies for Reducing the Barriers to Dental Care in California, the result of two years of evidence-based research conducted by the California Dental Association. On the subject of Adult Dental Care, the report recommends the identification and support of initiatives that expand care to institutionalized, medically compromised and frail elderly, and points out that nonprofit and public partnerships at the local level become especially important in optimizing resources necessary for sustainability of nontraditional delivery models that provide care to impacted populations (e.g., Apple Tree Model in Minnesota).”

Apple Tree Dental’s executive staff and Dr. Dick Gregory have been working closely since that time to complete this report and present a summary of key findings and recommendations.

Apple Tree Dental Organization

Apple Tree is a non-profit staff model group dental practice inspired by the Mayo Clinic and was created in 1985 to address the unmet dental needs of nursing facility residents in the Twin Cities. For 27 years, Apple Tree has been developing innovative new methods to deliver on-site dental services to individuals who face barriers to care. As a result of creating and sustaining successful geriatric dental programs, Apple Tree was enlisted to help address the needs of low-income children, underserved adults in rural and urban areas, and individuals with disabilities, along with frail elders living in nursing and long-term care facilities. Today, Apple Tree provides dental care at clinics in the Twin Cities, Hawley, Madelia, Rochester, and Fergus Falls (see map below). Apple Tree also provides year-round on-site dental services at more than 125 community oral health care sites, including Head Start centers, schools, nursing homes, and group homes.

The mission of Apple Tree is to improve the oral health of people with special dental access needs who face barriers to care. We envision a future without barriers, where all vulnerable people, from the very young to the very old, are able to obtain the care they need. Apple Tree’s staff works to achieve its mission by designing, testing, and scaling innovative oral health delivery models for underserved populations, partnering with educational programs and researchers to advance the practice of special care and community dentistry, and carrying out policy development and advocacy programs to create equity in access to dental care across the lifespan in our communities and in the nation.

Apple Tree’s model establishes year-round dental homes for individuals that deliver a comprehensive range of oral health care services to vulnerable populations, including diagnostic consultations, preventive, educational, and restorative services, as well as advanced services such as periodontics, endodontics, prosthodontics, dental implants, IV sedation, and oral surgery. In 2011, Apple Tree provided 67,447 dental
Target Populations and Gaps in Available Dental Services

Due to the rapid growth of elderly individuals living the San Mateo County service area, this needs assessment report focuses on the older adult population and its access to age appropriate dental services. The rapidly growing elderly population living in the area faces economic barriers to dental care because most older adults lose private dental insurance when they retire, live on fixed incomes, and must make out-of-pocket payments for medications and other medical services. Many older adults become dependent on Medi-Cal and Denti-Cal, particularly when they need home health services or long-term care. In addition to these economic barriers, many older adults experience chronic diseases that impair daily living activities that lead to increasing reliance upon caregivers. Senior housing, assisted living facilities and skilled nursing facilities provide
a range of residential services for older adults and frail elders. Frail elders who receive long-term care services face some of the greatest barriers to dental care, and are the central focus of this needs assessment report.

Approximately 90% of nursing facility residents in the region are Medi-Cal and Denti-Cal recipients. Denti-Cal provides limited dental coverage for dental services, and its reimbursements are far below typical dental fees in San Mateo County. Nearly everyone who reaches 65 years of age receives Medicare coverage for physician, hospital, and drug costs. However, Medicare provides virtually no coverage for dental care. Similar to skilled nursing facility residents, disabled adults living in group homes are also generally dependent on Medi-Cal and Denti-Cal coverage. However, unlike dental coverage for elders in nursing facilities, Denti-Cal has recently cut most dental coverage for younger disabled adults.

**San Mateo County**

<table>
<thead>
<tr>
<th>Target Populations</th>
<th>San Mateo County Alone</th>
<th>Surrounding Service Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geriatric (65 and over)</td>
<td>91,000</td>
<td>575,000</td>
</tr>
<tr>
<td>Old-Old (over 85)</td>
<td>11,000</td>
<td>61,000</td>
</tr>
<tr>
<td>Nursing Facility Beds</td>
<td>5,227</td>
<td>25,217</td>
</tr>
<tr>
<td>Nursing Facilities</td>
<td>321</td>
<td>1,122</td>
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The table above provides an overview of older adult population statistics in San Mateo County and in the surrounding service area. For the purpose of assessing the need for a potential new Apple Tree Clinic and mobile delivery program headquartered near the PHCD’s office in Burlingame, populations and facilities within a one-hour drive time from Burlingame could be served.

The older adult population in San Mateo County currently totals 91,000, and the region includes 575,000 older adults. These older adult populations, particularly the “Old-Old” populations, are projected to increase rapidly over the next few decades. There are 61,000 people over 85 years of age in the San Mateo County service area where PHCD is headquartered. San Mateo County itself has 12 large skilled nursing facilities with 100 or more beds with a total of 2,153 residents. In addition, there are 309 smaller nursing facilities with fewer than 100 beds with another 3,074 residents. The surrounding area includes four counties. These counties have a total of 65 large skilled nursing facilities with 100 or more beds with a total of 13,463 residents. In addition, there are 1,057 smaller nursing facilities with less than 100 beds with another 11,754 residents.
San Mateo Region Eldercare Population Highlights

- There are more than half a million older adults living in San Mateo County and its surrounding service area.
- There are 91,000 people 65 and older in San Mateo County alone.
- There are 321 nursing facilities in San Mateo County alone, and 1,122 in the surrounding service area.
- There are 5,227 nursing facility residents in San Mateo County alone, and 25,217 living in the surrounding service area.

The San Mateo County service area’s older adult population can be compared with the Twin Cities region located in Minnesota. Apple Tree’s Twin Cities program serves an area with nursing facilities and group homes that have a total of approximately 13,000 residents. Similar to San Mateo County, the vast majority of these residents are also dependent on Medicare and Medicaid. During 2010, Apple Tree’s on-site program in the Twin Cities served a total of 75 nursing facilities, assisted living centers, and group homes. Collaborative practice hygienists provided a total of 5,500 admission visits at these sites. In San Mateo County, Registered Dental Hygienists in Alternative Practice (RDHAP’s) are able to deliver similar front-line services for nursing facility residents. These visits include oral health assessments at the time of admission, routine and emergency care triaging, preventive services, and daily oral care planning. In addition to admission services provided by dental hygienists, Apple Tree’s on-site oral healthcare teams in the Twin Cities provided comprehensive dental care to 4,275 individual nursing facility residents during 11,623 on-site dental visits, and provided services valued at over $3.2 million during 2010.

The number of older adults and institutionalized elders who live in the San Mateo County service area is nearly twice as large as a comparable population in the Twin Cities region served by Apple Tree’s Twin Cities Center for Dental Health.

Nursing Facility and Dental Providers Surveys

To ensure that the oral health care needs of a growing older adult population were accurately assessed, key stakeholders from the PHCD’s long-term and dental care communities were fully engaged in gathering needs assessment data. For example, input from the dental community was obtained from leaders and members of the San Mateo County Dental Society, the Peninsula Dental Hygiene Association, and the San Mateo County Oral Health Coalition. The active participation of local dental professionals helped accurately identify and describe existing dental services, and gaps in access to dental care for geriatric and special needs population groups.
Survey Methods

Two electronic needs assessment surveys were created – one to evaluate the needs of area nursing facilities and the second to describe the scope of existing dental services available to disabled adults and nursing facility residents. The Nursing Facility Survey was created with input and review from Ombudsman, area nursing facility administrators, and the San Mateo County Office of Aging and Adult Services. The Dental Provider Survey was created with input and review from members of the San Mateo County Dental Society in private practice as well as dentists providing mobile care in nursing facilities. Each survey was reviewed and edited by research faculty at the University of California San Francisco Center for the Health Professions and the San Francisco State University Department of Public Administration. Each survey was then finalized, converted to electronic format, and replicated in print versions by Murdoch Johnson of UpFront Consulting, a Minnesota based firm specializing in electronic survey data analysis and reporting (see www.upfrontconsultingmn.com for more information).

The Ombudsman administered the Nursing Facility Survey in electronic format to nursing facilities that had e-mail access and through personal interviews using an identical print version of the electronic survey instrument. The Ombudsman volunteers delivered the survey to a total of 174 facilities out of 321 in the San Mateo County service area.

The Dental Provider Survey was delivered with the endorsement of both the San Mateo County Dental Society and the Mid-Peninsula Dental Society in electronic format to dental practices with available e-mail addresses. Five additional dental organizations known to provide mobile or on-site dental care in the region were also contacted by telephone and asked to complete the Dental Provider Survey. These included the San Mateo County Medical Center, Home Care Dentist, Lumina Health Care, Oral Healthcare US, and the Blende Dental Group.

Endorsements from dental and long-term care organizations, combined with administrative efforts, were used to maximize the response rates to both surveys. Because nursing facilities are required to provide routine dental services under both federal and state laws and regulations, nursing facilities that are not meeting these requirements are sometimes reluctant to complete dental care surveys, despite the assurance of confidentiality. For these reasons, respondents to the survey may actually offer their residents greater access to dental services than facilities that did not respond to the survey at all.

For reasons similar to those cited above pertaining to nursing facilities, dentists who are not actively involved in providing services to older adults and nursing facility residents are somewhat less likely to respond to a survey on that topic than dentists or
hygienists who are actively treating these populations. Special efforts were made to secure survey responses from individuals and practices that were known to provide nursing home services, yet whose offices are not located within San Mateo County. Because of these two factors, it is possible that the dental survey respondents provide more care to disabled adults and frail elders than dental practices that did not respond to the survey at all.

As a result of the likely response biases among nursing facilities and dental practices that chose to respond to the surveys, it can be inferred that the survey results underestimate existing gaps in the availability of geriatric and special needs dental services in the San Mateo County service area.

Nursing Facility Survey Results

The facilities responding to the Nursing Facility Survey ranged in size from 5 to 338 beds and accounted for a total of 1,353 beds. A total of 36 out of 321 licensed facilities in San Mateo County responded to the survey and follow-up efforts for an 11% response rate by facility or alternatively, a 26% response rate based on the total number of licensed beds (1,353 out of 5,227) in the county.

Key Findings

Access to dental care for residents:

• 69% of the responding facilities did not have any contracted dental provider. (Having a contracted dental provider is a federal requirement.)

• 78% of the responding facilities did not have on-site dental care available for their residents.

• 89% of the responding facilities reported needing to transport residents to dental offices for dental care.

Comments by respondents:

○ “Transportation is often expensive and is (not) always reliable. A family member is not always available to go with the resident to the dentist and we often have to send a staff member who is then away from the floor for several hours at a time.”

○ “We recently had a demented resident whose bridge was hanging in her mouth because the anchor tooth on one side broke off. We could not get one of our dentists in on an emergency basis, so we had to send two staff members with her and her sister to a family dentist in Burlingame. She
could not understand why she was in pain and was not cooperative. They left our building at 10 AM and did not return until 5:30 PM. It was a very expensive day for us as it took away two staff, and it was extremely stressful for the resident and her family. I’m sure it was also stressful for the dentist and his office staff!”

Description of the on-site dental services (22% of facilities had on-site care):

- 86% of contracted dental providers assist with managing patients with urgent needs.
- Responding facilities named four dental practices and one Registered Dental Hygienist in Alternative Practice that delivered on-site care: Lumina, Oral Health Care, UCSF School of Dentistry, Peter Kawamura, DDS and Lisa Handa, RDHAP.
- 88% of facilities reported that their on-site dental provider brought only limited dental supplies.
- 62% of facilities report that on-site providers do not assess or triage patients at the time of admission.
- 25% of facilities report that contracted dental providers do not assist with routine care (periodic dental examinations, x-rays and cleanings, fillings, crowns, root canals, periodontal therapy, dentures and partial dentures, extractions and other surgical services).
- Only 50% of providers offer educational information for patients and families.
- A majority of respondents with an on-site dental provider report being satisfied with the services provided.

Comments by respondents:

- “Dr. Suzanne Valente, Chair San Mateo County Dental Society NEEDS Program, was instrumental in getting us dental supplies, and has told us that we could call on her in an emergency. We are currently using Lumina as well as Dipa Mehta, DDS to provide dental services to our building. We participated in the GOHAP Dental project, but are not using the forms that were helpful to us at that time because we had a huge disconnect with dental services for a while. Our new social worker has ironed out most of the issues and now has both dentists coming at regularly scheduled times”
- “Family usually needs to come during the visit of the dentist. Often times, they are not available because of their work. There is a limited time dentists can stay because of their schedule also.”
Patient care challenges reported by responding facilities:

- 58% of respondents reported that some or all of their residents on Denti-Cal face challenges to care. These challenges were reported to include long waiting periods before being appointed, very limited coverage of services, Treatment Authorization Report process takes a long time and many requests for treatment are denied. One respondent commented that the closest oral surgeon accepting Denti-Cal was in Sunnyvale, which makes transportation difficult.

- 58% of facilities report that their patients exhibit behavioral problems including agitation, verbal outbursts and aggressive behavior.

- Only one respondent reported using oral sedation to manage patient behavior; none reported the availability of IV sedation.

- Only 4 of the 36 facilities have providers that have protocols for behavioral challenges; none offer residents a full range protocols.

Comments by respondents:

- “Residents with dementia often refuse invasive procedures. They won’t open their mouth; they cannot understand or tolerate the process for making dental molds; their anxiety causes them to bite, hit, scratch etc. This also makes it difficult for our staff to provide routine oral hygiene care at times.”

- “I would like to end by saying our staff is very aware that poor dental health leads to all kinds of illnesses, including heart problems and pneumonias. It’s the reality of dealing with resistive residents who make giving quality care is difficult at times.”

- “Client has verbal aggression because of toothache.”

- “Tooth came out and was almost swallowed.”

- “With toothache, resident usually doesn’t eat regardless of giving him/her pain medication and changing the diet that will be more tolerable.”

- “Resident with dental problem will exhibit behaviors such as screaming or asking for help.”

- “Agitated dementia resident was unable to tell us she was in pain. When she refused to eat, we discovered she had a tooth abscess.”
Interest in improving access to dental services:

• 89% of respondents reported being interested in post-admission assessment, regular check-ups, routine dental care, urgent care, and specialty care.

Comments by Respondents:

○ “There has to be a better way to ensure understanding and cohesion between ideals and everyday reality!”

Dental Provider Survey Results

Approximately 700 dentists are listed as practicing in San Mateo County. The Dental Provider Survey was sent by e-mail to 431 private practice dentists with membership in either of the two component dental societies. Five additional dental organizations known to provide mobile or on-site dental care in San Mateo County were also contacted by telephone to explain the project and asked to complete the Dental Provider Survey. These practices include the San Mateo County Medical Center, Home Care Dentist, Lumina Health Care, Oral Healthcare US, and the Blende Dental Group. With the exception of the nonprofit San Mateo County Medical Center, the other four dental practices solicited to participate in the survey operate as for-profit businesses and are located outside of San Mateo County. The San Mateo County Medical Center began operating a four-operatory Winnebago-style mobile dental van in 2012, but that van does not provide on-site care for disabled adults or nursing facility residents.

Of the 36 dental providers who responded to the survey, 32 are dentists in private practice, one is Miles of Smiles operated by RDHAP, Lisa Handa, and the remaining three are Lumina Health Care, San Mateo County Medical Center and Samaritan House Dental Clinics.

In the dental practice survey, Special Needs Adults are defined to include nursing facility residents, frail elders who live at home and disabled adults including group home residents.

Key Findings:

• 45% of the dental providers responding to the survey report that they neither treat nor refer special needs patients.

• The only two “Special Care” dental clinics available for referral of special needs patients were the UCSF School of Dentistry and the University of Pacific Arthur A. Dugoni School of Dentistry, both located in San Francisco. No special care dentistry
A clinic located in the Peninsula Health Care District was identified by respondents.

- The average number of patients seen per week by private practice dentists responding to the survey is 43. Average Nursing Facility Patients 1.4, Frail Elders 2.7 and Disabled Adults .9.
- The average number of patients seen per week by the practices performing on-site care is 140. Average number of Nursing Facility Patients is 88, Frail Elders 10 and Disabled Adults 28.
- 65% of respondents do not provide alternative fee schedules or alternative payment arrangements for low-income special needs patients.
- 75% of respondents do not provide on-site services at nursing facilities.
- Two respondents report providing complete mobile or portable dental office on-site at nursing facility, and no Winnebago-type mobile dental services were reported to be visiting nursing facilities in the district.

When asked to comment on gaps in care for Frail Elderly and Special Needs Patients, dentists provided the following comments:

- “Sedation Dentistry.”
- “Lack of interest by dentist(s) and their understanding of providing care to this population.”
- “Home or facility care. Care giver providing oral hygiene care especially in care facilities.”
- “Difficulty in delivering dental care in a quality manner if too compromised.”
- “Special needs patients are being underserved. It's difficult for them and their families to find the information about dental offices(s) which will accept them and provide urgent care if needed.”
- “Lack of training.”
- “Home care for patients in assisted living and inadequate training or time on the care giving staff to perform oral hygiene procedures on their patients. Daily maintenance is very lacking for my patients in institutional care facilities.”
- “If no insurance, no treatment plan fully accepted.”
- “I have treated many elders who live in care homes, nursing facilities. The biggest problem, as I see it, is the lack of daily care that the elderly need. The caregivers are not knowledgeable and, from what I've seen, really don't want to help these people with their oral health care even after we've given them health care instruction.”
• “There is no facility where we can refer patients whom we cannot serve because of the severity of their disabilities. UCSF and UOP are the only facilities we refer these severely disabled people who we cannot treat at the office, but these patients come back because they say or their caregivers report to us that they have no access to care where we referred them.”

• “Inability to pay for needed services due to lack of coverage from Medi-Cal and other public assistance programs.”

• “If they need sedation, there is a long list to get into UCSF. I have no idea if we provide this service in San Mateo.”

When asked to describe a special needs adult that they had treated whose dental problems were causing general health or behavior problems, dentists described the following situations:

• “I have a 41-year-old locked-in stroke and she can't open her mouth to have impression for night guard or do a simple class II composite. She has 24 hour care giver who brushes & flosses for her but she still has lots of plaque b/u. This is only one of many who can't use their hands for their own hygiene.”

• “About a year ago, our office was contacted by an assisted living facility nurse on behalf of the resident with multiple health problems as well as dental pain. We saw the patient for an emergency exam the same day. Due to poor oral hygiene, multiple medications intake patient had severe dry mouth that caused rampant decay. Patient was referred to the oral surgeon for multiple surgical extractions. After oral surgery consultation his dental fear elevated even more. He refused to be treated by oral surgeon. Patient's son asked our office to proceed with the treatment plan. Patient was offered extractions to be performed in 4 visits (1 quadrant at a time) to make it less stressful. Hygiene and restorative work was performed as well. Patient was comfortable and returned to the office for routine dental work."

• “Severe periodontitis that increased the CRP's and then increased the instability of her diabetes. She also suffered with multiple trips to the hospital for pneumonia, most probably from the aspiration of her oral bacteria. She eventually passed with respiratory failure.”

• “Poor oral hygiene and severe dry mouth led to rampant decay. Pt needed 11 teeth to be extracted. He was referred to the oral surgeon. Due to the dental fear refused to go to the Oral Surgeon. Extractions were done in our office in 4 visits (one quadrant at a time). Partial dentures are currently being made. Food consumption and digestion are obviously were affected due to multiple teeth lost.”

• “Severely disabled adults cannot properly eat because they have severely decayed teeth and they do not have access to dental care where they can be safely treated and
managed. Their case is too complicated to be handled in our dental office but then they do not have any resources to pay for dental treatment in a specialized setting, nor do they have any treatment facility to go to because no one takes them.”

**Conclusions**

With a current population of 575,000 people over 65 in the San Mateo County service area, and increased growth projected in the next few decades, particularly for the “old-old” age group over 85 years, there is clearly a growing need for geriatric and special care dental services in the area. Since the majority of older adults are community dwelling and not living in nursing facilities, there is a need in the PHCD for a conveniently located dental clinic with geriatric and special needs expertise. Meetings with local stakeholders and the survey results did not identify any dental clinics located in the San Mateo County service area that offer a full range of dental services to geriatric and special needs patients. As older adults age, they increasingly receive home health services and move into various senior living settings, including assisted living and skilled nursing facilities. The San Mateo County service area lacks an integrated program located in the area that offers continuous services to older adults, both through clinics and on-site care delivery.

Finally, the gaps in the availability of comprehensive on-site dental care services for nursing facility residents make it clear that a new on-site program targeting these population groups, and designed to address a range of dental access problems in a financially sustainable way, is needed in the San Mateo County service area.

*In sum, the needs assessment report findings confirm the need for a program to fill the gaps in services as described in the survey findings, as well as supports the establishment of a nonprofit group practice that integrates both on-site and clinic based care in a proactive model.*

**Center for Medicare & Medicaid Services Health Care Innovations Grant**

*Unexpected Planning for a Federal Grant:* During the needs assessment process, the Center for Medicare & Medicaid (“CMS”) announced a $1 billion funding opportunity for innovative health care delivery programs designed to achieve the “triple aim” of improving health care delivery, improving health outcomes, and driving down total healthcare costs (“CMS Innovations Grant”). In response to this rare opportunity for multi-year, multi-million dollar federal funding, Apple Tree teamed up with the University of the Pacific’s Center for Special Care and the University of California at San Francisco’s Center on the Health Professions to propose a “Virtual Dental Home” project that would fund the launch of a new Apple Tree Special Care Dental Clinic in San Mateo. The CMS Innovations Grant triggered an unexpected and accelerated business planning
process with full proposals due at the end of January 2012. Apple Tree’s Executive Team worked closely with Dr. Gregory to move beyond the needs assessment phase and into a very rapid business planning effort. This provided additional information that compliments the PHCD’s Needs Assessment effort, providing insights on how to effectively launch a new sustainable Apple Tree program in San Mateo County.

**San Mateo Region and Twin Cities Comparison:** The San Mateo region has twice the number of elderly and low access individuals as compared to the Twin Cities of Minneapolis and St. Paul (“Twin Cities”). Existing dental provider capacity in the San Mateo region is comparable to that in the Twin Cities, but lacks a staff-model nonprofit organization with hub and spoke delivery capabilities like Apple Tree. Given the size of the target population (see Target Population and Demographic Region for reference), Apple Tree proposed to establish a Special Care Dental Clinic with mobile delivery systems of a size and scope equal to the existing Twin Cities Center for Dental Health in Minneapolis. Based on the target population and gaps in services, a program comparable to the Twin Cities in size and scope is more than sustainable in the San Mateo region. Complete service delivery statistics, staffing details, and financial data are available for Apple Tree’s Twin Cities Center for Dental Health as well. This unique data source provides a nearly identical model for planning a similar program in San Mateo County.

**Apple Tree Special Care Dental Clinic Goals:** The CMS Innovations Grant proposal involved establishing a new Apple Tree Special Care Dental Clinic that would grow over a five-year period to reach its maximum service and staffing capacity. After five years of growth, the new San Mateo program would be delivering approximately $7 million of dental care each year at approximately 30,000 dental visits.

For the CMS proposal’s financial plans, Apple Tree studied each of the key financial elements required to launch a financially sustainable new program. This included studies of regulatory requirements, building, equipment and remodeling costs, and projections of revenues, personnel costs, and financial break-even scenarios.

**Startup and Capital Costs:** The aforementioned financial plans revealed that the total capital and start-up costs to launch a new Apple Tree Special Care Dental Clinic near the Mills Peninsula Hospital would be approximately twice the costs to build a similar clinic and mobile delivery system in the Twin Cities. While these higher start-up costs are “one-time” costs, there are also higher ongoing operating costs due to generally higher costs of living in the region and employment regulations. The CMS Innovations Grant proposal contained a budget for the first phases of the clinic and mobile delivery system, with local matching funding being sought to complete the facility during the second and third years following the program’s launch.

**Operating Revenues:** Preparing operating budgets for the CMS Innovations Grant proposal required detailed projections of program revenues – both from public program
Denti-Cal) and private sources. While private revenues for dental services in the San Mateo region are significantly higher than those in the Twin Cities, Denti-Cal reimbursements are actually slightly lower. This creates a larger ongoing public versus private funding gap than currently exists in Minnesota. Filling this larger gap requires either increased public funding (such as potentially available through the CMS Innovations Grant) or increased revenues from privately funded services.

Operating Expenses: At Apple Tree, salaries and related costs, such as benefits, for staff account for more than 70% of ongoing expenses. Salary surveys for dental professionals were obtained for the San Mateo region. These surveys highlighted that salaries in the San Mateo region are generally higher than comparable salaries in the Twin Cities. Facility expenses, dental supplies and lab fees and other operating expenses are also higher, resulting in higher overall ongoing operating expenses.

Reaching Financial Break-Even and Sustainability Considerations: As a result of a larger public/private revenue gap and higher operating expenses due to costs of living in the region, the design of a sustainable new Apple Tree program in San Mateo County needs to be modified to reach a financial break-even point. Fortunately, under the CMS Innovations Grant proposal, CMS would provide sufficient funding not only to provide one-time capital and start-up costs, but also enough gap funding to cover operating costs over a three-year period. Beyond that time frame, Denti-Cal funding would need to be enhanced or the program would not continue to be self-supporting. The likelihood of significant Denti-Cal policy changes that would enhance payments for adult services is questionable and cannot be relied upon. For these reasons, it will prudent to design a tailored new San Mateo program to produce sufficient non-government earned revenues to sustain its ongoing operational costs.

Announcements of CMS Innovations Grants have been delayed and are now expected by summer of 2012.

Summary and Recommendations

Gaps in Availability of Dental Services for Special Needs Adults

With a current population of 575,000 people over 65 in the San Mateo County service area, and with rapid growth of this age group occurring in the next few decades, particularly for the “old-old” age group over 85 years, there is clearly a growing need for geriatric and special care dental services. Since most older adults are community dwelling, and not living in nursing facilities, there is a need in the Peninsula Health Care District for a conveniently located dental clinic with geriatric and special needs expertise. Meetings with stakeholders and the surveys did not identify any dental clinics located in San Mateo County that offer a full range of dental services to geriatric and special needs.
patients. As older adults age, they increasingly receive home health services, move into various senior living settings, including assisted living and skilled nursing facilities. The San Mateo County service area lacks an integrated program located in the county that offers continuous services to older adults both through clinics and on-site care delivery.

**Key findings regarding gaps in available services for geriatric and special needs patients in the San Mateo County service area include:**

- One third of the nursing facilities responding to the survey don’t have a contract with a dental provider. Such contracts are required under federal regulations.

- One quarter of the facilities that do have a contract with a dental provider report that the provider doesn’t assist them in providing routine dental care.

- Only a third of facilities with a dental provider under contract receive any dental services on-site.

- Most facilities that do have on-site dental care, report that their provider brings only limited supplies and provides limited care.

- Almost all the nursing facilities report multiple barriers when transporting residents to off-site dental offices and clinics.

- Most facilities report that dental providers are ill equipped to handle the behavioral challenges posed by their patients. Several describe dental infection and pain as a cause of the behavior, or the behavior as an impediment to receiving care.

- Most nursing facilities have residents who are covered by Denti-Cal benefits and have difficulty obtaining dental care.

- Private practice dentists who responded to the survey report seeing very few geriatric and special needs patients.

- Of the providers responding to the survey that offer on-site care in nursing facilities, the only one based in San Mateo County is Miles of Smiles.

- With the exception of three private practice dentists that occasionally perform care on-site, all dental providers offering on-site care are based outside of San Mateo County.

- When asked about their interest in a new on-site program offering the full scope of services offered in Apple Tree’s model, 89% of the nursing facilities expressed interest in the program for their residents.
Next Steps

This Eldercare Dental Needs Assessment Report describes growing gaps in age and health status appropriate dental services in the San Mateo County service area and confirms the need to develop a new program to meet those needs.

Apple Tree recommends that a sustainable dental care program be designed which includes an outpatient clinic with geriatric and special care dentistry expertise, a on-site dental care delivery operations center, several mobile dental delivery system, and an on-site dental lab to meet growing geriatric and special care dentistry needs. As indicated in the preliminary financial analysis carried out in connection with the CMS Innovations grant proposal, this new dental care program must also be designed to provide a wider scope of dental services and serve a more diverse mix of patient population groups in order to ensure long-term financial sustainability given the wide gap in public and private dental care funding in the region.

With this needs assessment completed, the next step is to prepare a detailed business plan for a new dental care program that fills the growing gaps in dental services for geriatric and special needs populations in the Peninsula Health Care District while garnering broad support from key health care stakeholders.