WHITE PAPER

Oral Health Integration in the Patient-Centered Medical Home (PCMH) Environment

Case Studies from Community Health Centers

September 10, 2012

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Acknowledgments

MEMBER FOUNDATIONS INCLUDE:

1) American Dental Partners
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3) Blue Cross Blue Shield of North Carolina Foundation
4) Caring for Colorado Foundation
5) Community Health Foundation of Western &Central New York
6) Connecticut Health Foundation
7) Delta Dental of Iowa
8) Delta Dental Plan of Colorado Foundation
9) Delta Dental Plan of South Dakota Foundation
10) DentaQuest Foundation
11) Endowment for Health
12) Health Care Foundation of Greater Kansas City
13) HealthPath Foundation of Ohio
14) Kaiser Permanente Northwest Community Benefit Program
15) Maine Health Access Foundation
16) Methodist Health Ministries
17) Northwest Health Foundation
18) Pew Charitable Trusts
19) Rasmuson Foundation
20) REACH Healthcare Foundation
21) Robert Wood Johnson Foundation
22) United Methodist Health Ministry Fund
23) W.K. Kellogg Foundation
24) Washington Dental Service Foundation

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INTRODUCTION

Background

Access to oral health care for the uninsured, underinsured, and underserved continues to perplex advocates, providers, funders and policy makers, and appears to be growing scarcer with time. Contributing to the access issue is the known shortage of dental providers in underserved communities, both urban and rural, with 46 million people living in federally designated Dental Health Professional Shortage Areas (DHPSA), an estimated 30 million of whom lack access to a dentist.[1]

In addition, most low income people rely on Medicaid to support their dental health care needs; however, many states do not provide adult dental benefits while other states are reducing budgets and severely cutting or eliminating adult dental benefits in their effort to reduce costs. Many dentists do not participate in their state Medicaid programs because of burdensome paperwork and low reimbursement rates. According to the 2008 Pew Center study, [1] state Medicaid programs reimburse less than 60.5 cents of every $1 billed by a dentist.

Over the years, the Funders Oral Health Policy Group (FOHPG) and many others have identified a number of promising strategies to better meet the oral health needs of the underserved population. Several opportunities exist to expand oral health services in state Medicaid benefit plans, and range from covering women receiving prenatal care; screening and risk assessments for 0-3 year old children, and full scope dental services for adults with chronic conditions such as diabetes or cardiovascular disease. Another promising strategy is to incorporate oral health competencies into primary care practice settings. Our approach to health professional education must be modified in order to prepare new graduates for their role in the co-management of medical and oral health care for children and adults. New models of reimbursement must also be considered so that fully integrated models can emerge and thrive.

FOHPG members identified a number of key drivers, resources, and emerging models that motivated them to explore options supporting a more optimal, integrated medical-dental care framework. These are also excellent resources for others interested in learning more about the topic. They include:

- **The 2000 Report of the Surgeon General:** Oral Health in America**.** "Oral health is part of general health."
  http://www.surgeongeneral.gov/library/reports/oralhealth

- **CMS Oral Health Strategy:** CMS is working to ensure that oral health is included in its medical home initiative and the Accountable Care Organization demonstration as required by the Accountable Care Act[2].
  http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Quality-of-Care/Downloads/CMS-Oral-Health-Strategy.pdf

- **HRSA Interprofessional Oral Health Core Competencies (IPOHCC) Initiative:** In response to the two 2011 Institute of Medicine oral health reports[3,4] which call for the identification of oral health core competencies to be integrated into primary care practice, HRSA sponsored three convenings in 2012 of key stakeholders from the public and private sector. Core oral health competencies applicable to many professions including physicians, nurses, midwives and physician assistants were identified. Through this

> A promising strategy to meet the dental care needs of the underserved population is to incorporate oral health competencies into primary care practice settings.

process, HRSA received multiple suggestions regarding how to integrate these core competencies into education and practice so as to expand the availability of oral health services and improve health for the safety net population by leveraging the existing primary care workforce.

- **Safety Net Medical Home Initiative:** Qualis Health and the MacColl Center for Health Care Innovation at the Group Health Research Institute are directing a 5-year initiative to help 65 primary care safety net sites in five states (Oregon, Idaho, Colorado, Massachusetts, and Pennsylvania) become high-performing patient-centered medical homes (PCMHs) and achieve benchmark levels of quality, efficiency, and patient experience. The goal of the Safety Net Medical Home Initiative is to develop and demonstrate a replicable and sustainable implementation model for medical home transformation. The Initiative calls for partnerships between safety net providers and community stakeholders to work together towards a new model of primary care delivery that is recognized and rewarded for its holistic approach to patient care. Policy activation is critical in this transformation, and all partners in this Initiative are actively participating in Medicaid and other policy reform efforts in their respective regions. The Initiative is sponsored by The Commonwealth Fund.
  http://www.safetynetmedicalhome.org

- **Strengthening the Oral Health Safety Net Initiative:** In June 2011, the DentaQuest Foundation began the Strengthening the Oral Health Safety Net Initiative with a grant to the National Association of Community Health Centers, in association with the National Network for Oral Health Access and the Massachusetts League of Community Health Centers (the Massachusetts primary care association), to develop oral health capacity as a national resource for Primary Care Associations. The DentaQuest Foundation also awarded grants to five primary care associations (Arizona Association of Community Health Centers, Georgia Association for Primary Health Care, Illinois Primary Health Care Association, Kansas Association for the Medically Underserved, and Pennsylvania Association of Community Health Centers) to develop oral health capacity as a resource to their regions and their CHC members. Funding supports oral health technical assistance and leadership development for community health centers in their respective states to expand oral health services. www.dentaquestfoundation.org

- **National Interprofessional Initiative on Oral Health:** The Interprofessional Initiative is a consortium of funders and health professionals focused on engaging primary care clinicians to be alert to the oral health needs of their patients, deliver oral health preventive services, consult with and refer to dental specialists as needed. Since 2009, the Interprofessional Initiative (NIIOH) has invested in the development of a national curriculum, Smiles for Life (www.smilesforlifeoralhealth.org), designed by and for primary care clinicians, that enables faculty, students and practitioners to acquire oral health competencies. The Initiative has also supported work of individual professions to embed oral health in the education and practice of physicians, nurses, physician assistants, and pharmacists. NIIOH encourages its participant leaders to work across professions to learn with, from and about each other with respect to each profession's unique contributions to patients' oral health. This concept is evident in the interprofessional make-up of the Smiles for Life Steering Committee as well as in the official endorsements of SFL that reflect support from a broad range of medical and dental professional organizations for a common curricular tool.
  http://www.niioh.org

- **National Network for Oral Health Access (NNOHA):** Oral Health and the Patient-Centered Health Home Action Guide, 2012. NNOHA conducted a needs assessment with community health center dental directors and interviewed nine "early adopter" organizations that have made substantial progress with integrated oral health care. Promising practices related to integrating oral health with other health center services were identified as well as barriers that hinder integration efforts. www.nnoha.org

- **Healthy People 2020/Oral Health Objectives:** These national health objectives are designed to guide national health promotion and disease prevention efforts to improve the health of all people in the United States. The section on oral health contains 17 objectives, each with defined metrics and identified data sources and a 10-year target for meeting each objective. One oral health goal (OH-7) has been designated by HHS as a Leading Health Indicator: "Increase the proportion of children, adolescents, and adults who used the oral health care system in the past 12 months."[5] http://www.healthypeople.gov/2020/topicsobjectives2020/default.aspx

- **Patient-Centered Medical Home (PCMH):** A number of national medical professional associations have endorsed the PCMH model of primary care delivery. This model of comprehensive, coordinated care assures: a patient-centered approach to care delivery; enhanced access to services; a holistic view of the patient; continuity of care; and a focus on continuous performance measurement and improvement. National credentialing entities (National Committee for Quality Assurance, The Joint Commission, AAAHC, and URAC) have developed operational standards for the PCMH and offer accreditation for practices achieving specified levels of performance in patient-centered care. http://www.pcpcc.net/content/joint-principles-patient-centered-medical-home

In addition, published data indicates that the need for improvements in our approach to oral health service delivery and availability is profound:

- The American Dental Association has estimated that around 30% of the population has difficulty accessing dental services through the current private dental care delivery system.[6]
- The California Healthcare Foundation reported in 2008 that 24% of all children ages 0-11 in California had never seen a dentist.[7]
- A national analysis by the GAO in 2010 revealed that only about one-third of children enrolled in Medicaid received any dental service during the 2008 fiscal year.[8]
- Forty-four percent (44%) of 5 year olds already have cavities.[9]

44% of 5 year olds already have cavities

This paper documents four community health center case studies where steps have been taken to have the medical and dental delivery systems work more closely together and to incorporate oral health in their quality improvement processes. Community health center medical/dental integration efforts are the focus of this paper because this system:

1) serves populations where oral disease and other chronic conditions are prevalent;
2) delivers both medical and dental services, often on a co-located basis, but not necessarily fully integrated;

3) was designed from its inception as the front end of the health system, providing screening, risk assessment, health education, intervention and referrals to specialists as needed and;
4) is currently engaged in processes to achieve PCMH accreditation which involves identifying opportunities to improve health outcomes and reduce costs.

Drawing on insights from these case studies as well as national literature on this subject, this paper identifies "Lessons Learned". The intent of the paper is to provide guidance to those interested in supporting health center oral health improvement efforts, including funders and health center leaders.

The vision or "ideal state" underlying this examination is one where both medical and dental providers would address oral health needs of patients so that:

1) young children would receive oral health preventive services as a part of routine well child care;
2) pregnant women would have dental treatment needs addressed prior to delivery;
3) patients with oral disease resulting from, influenced or exacerbated by chronic diseases would receive dental treatment as part of their comprehensive care plan.

All providers would possess a basic understanding of the oral disease process, known causes, prevention and effective interventions. Interventions including risk assessment, counseling on diet and hygiene, consultation with and referral to dental care for treatment would be part of the standard of comprehensive care provided to all patients. Quality improvement processes would test for the optimum design for the delivery of these services, either in a medical or a dental setting, ensuring that patients receive the right service, at the right time, in the right context.

The historical separation of medicine and dentistry in education, practice and financing has resulted in delivery systems that fail to:

1) prevent oral disease and;
2) address the interplay between oral disease and other health issues.

Community health centers are in a better position to overcome the problems associated with the historical separation because they are engaged in the delivery of both medical and dental care. This paper examines what it would take to have this health delivery system succeed at preventing oral disease and at addressing the oral health needs of patients whose other health conditions are affected by oral disease.

The following key questions are addressed:

- What models exist for integrating oral health care into the primary care setting?
- What findings on oral health care delivery in the safety net can influence the funder's work towards the patient-centered medical home or health home model?
- What changes in health policy and healthcare reimbursement are needed to support integrated oral health and primary care?

Description of the PCMH Model of Care

The PCMH Model of Care is at the center of the healthcare reform movement in the United States. This model of care delivery places the responsibility of comprehensive, coordinated care in the hands of the primary care provider. Patient safety and quality of care are hallmarks of the model, and require the direct attention of a care team and care coordinator to understand the patient's healthcare needs, engage the patient in healthcare decision-making and self-management, and guide and follow the patient between healthcare venues.

Inherent in the care coordination effort is a shared commitment to and responsibility for population health management. Health centers must implement evidence-based guidelines and quality improvement strategies to ensure that subpopulations at risk are identified, standards of care are implemented, and patients are engaged and informed. Consistent follow-up and outreach strategies are deployed to ensure that patients receive the care that they need to optimize their health status.

The Surgeon General's Report on the silent epidemic of oral health in 2000 clearly states that poor oral health in childhood can escalate into far more serious problems later in life. There is a growing body of research that indicates that periodontal (gum) disease is linked to cardiovascular disease, diabetes and stroke.[10] Severe gum disease in older Americans is linked to increased risk of death from pneumonia.[11] Diabetes is known to be linked to worsening gum disease, and uncontrolled gum disease makes it harder for diabetics to control their blood sugar.[12] In addition, several studies have suggested an association between untreated gum disease and increased likelihood of preterm labor and low birth weight.[13] The dental health of pregnant women and new mothers is critically important because cavity-causing bacteria are passed from parents to their children.[14]

Patients experiencing xerostomia (dry mouth) are also at increased risk of oral infection, a higher rate of caries, increased dental expenses, and deceased quality of life. Decreased salivary flow most commonly occurs as an adverse effect of medications, but is also associated with head and neck radiation, psychological affective disorders, systemic diseases including diabetes and HIV infection, and less frequently with graft-vs.-host disease. It can also occur as part of autoimmune disorders, including lupus, scleroderma, and Sjogren syndrome.[15]

With the documented evidence of the impact of oral health on an individual's overall health, the role of the care team and the care coordinator should include educating patients about the importance of good oral hygiene, good eating habits and regular oral health care, and also to guiding patients into oral health services. Embracing comprehensive care, the PCMH model provides the perfect environment for strengthening access to oral health care, improving provider and patient understanding of oral health, and providing the needed oral health care screening, preventive and restorative services that are essential to optimal health status.

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METHODOLOGY

Interviews

Interviews were conducted with the following individuals to ascertain field experience with integrated models of care and to identify barriers to full adoption of an integrated care model.

- Mark Doherty, DDS, DentaQuest Safety Net Solutions; Former Dental Director, Dorchester House Multi Service Center, Boston MA
- Tracy Garland, DentaQuest Foundation
- Jaime Hirschfeld, National Association of Community Health Centers
- Marty Lieberman DDS, Dental Director, Neighborcare, Seattle WA
- Greg Nycz, Executive Director, Family Health Center of Marshfield, Marshfield WI
- Shannon Quirk, Massachusetts League of Community Health Centers
- Andrew Snyder, National Academy of State Health Policy, Washington DC
- Dan Watt, DDS, Dental Director, Terry Reilly Health Services, Boise ID

FOHPG Forum, February 10, 2012

The Funders Oral Health Policy Group hosted a forum of foundation representatives in Kansas City on February 10, 2012, to expand their knowledge around service models of patient-centered integrated oral health care, and to understand from the healthcare presenters the role of philanthropy in supporting successful, integrated models of care and advancing the policy agenda to ensure their sustainability.

The findings from the interviews and forum dialog have been synthesized into the content of this paper.

CASE STUDIES

Neighborcare Health, Seattle WA

For 40 years, Neighborcare Health has served as a leading health care safety net resource in the Seattle area. Neighborcare Health is a designated FQHC and operates 18 service locations. The organization supports five dental sites, three of which are co-located with medical facilities. Registered Dental Assistants function in an expanded role, applying sealants and fluoride varnish, and Expanded Function Dental Assistants now place restorations.

Leaders at Neighborcare Heath report that the Seattle metropolitan area does not have adequate access to dental services for adults, and patients travel for many miles to receive their dental care at Neighborcare. The traditional dental service delivery model in place at Neighborcare Health could not care for all the people in the region who wanted and needed care. Realizing that the organization was inundated with new patients and could not service their existing patients, they boldly stopped the flow of new patients into the dental clinic and partnered with their medical clinics to develop a program of care for existing patients. The dental program continues to see emergency patients, and is an

active partner with local hospitals for emergency department diversion related to oral health problems.

The Neighborcare integrated oral health program has several areas of focus. Dr. Martin Lieberman, Dental Director, started with pediatrics, establishing referral protocols from primary care, seeing children with a positive oral risk assessment. Special populations were then targeted, with an in-reach program designed to bring pregnant women into dental care early in pregnancy for education and hygiene. In addition, Dr. Lieberman developed a partnership with King County Public Health Department on an oral health protocol for HIV patients. This program was then expanded to adult medicine, treating existing diabetic patients with HbA1c greater than 9. It is planned to extend the service to those patients with cardiovascular disease, once a positive risk assessment is determined using the Framingham measure.

A bi-directional cross-referral process was implemented which supports referrals from medical care to dental services, and from dental care to medical services. Referral requests are initiated as an order in the EMR, which can be accessed by either service. There is a Process Improvement team in place to work out the details of this workflow.

The dental program has a medical champion. Medical providers accept the model as a tool to lower HbA1c levels for their diabetic patients. Dental providers have trained medical providers on how to conduct oral screenings on pediatric patients, but not on adults as of yet.

In the dental setting, blood pressure measurements are taken on all patients. Those with an elevated blood pressure reading and/or history of hypertension without documentation of a primary care provider are referred to the medical clinic. Staff initially used the state Immunization Registry to review immunization status for children; now, the electronic medical record data is reviewed, and those children with an incomplete immunization status are referred to the medical clinic for vaccination updates.

The Neighborcare Health program is now conducting oral health screenings in schools. Grant funding allowed purchase of mobile equipment which can be set up in a school setting. Each Neighborcare dental clinic has adopted a school and conducts screenings at the beginning and end of each school year in order to identify children at risk. Dental clinic staff attends Head Start meetings and sends printed materials home with children to educate the parents. This "in-reach" program has offset lost revenue due to State budget cuts for adult dental services. The children are generally covered by Medicaid, so the school-based outreach is effective at bringing insured patients into care as a balance to uninsured adult services.

Quality metrics were established for Neighborcare's oral health program, including the percent of pregnant women receiving dental care prior to delivery. Performance data on this metric is reported for each Neighborcare health center (see graph). Neighborcare has selected this performance improvement project as an example of continuous quality improvement in its NCQA PCMH Recognition Survey application.

% of Pregnant Women Seen in Dental
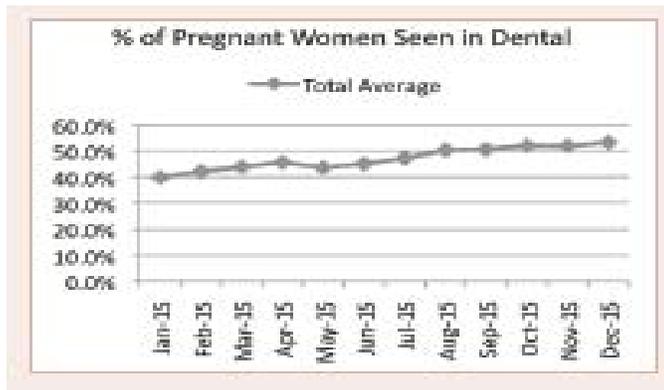
Percent of pregnant women receiving dental care prior to delivery, 2011

While the integrated oral health program has shown promise in providing access to care for the Neighborcare Health's patient population, the community still experiences a problem with access to dental care for adults. There is no reimbursement mechanism at the current time that will pay for integrated medical and dental services. Dr. Lieberman states that programs such as this "will need a bold insurance company to start this as a pilot."

Innovative Solutions:

- In-reach program targeting pediatrics, prenatal patients, and adults with chronic disease
- Cross-referral process
- Partnership with public health for HIV-subpopulation
- School-based screenings as outreach strategy with positive impact on revenue
- Training of primary care clinicians on oral health
- Identification of quality improvement initiatives and metrics

Dorchester House Multi Service Center, Boston MA

Dorchester House has long been a community anchor in Boston, established in 1909 as an organization for industrial, educational and charity work, providing classes on gardening and shoe repair, offering a library, meeting space, and other limited social services. In 1974, the organization added a comprehensive health center (now an FQHC) to its community service mission. It has undergone several physical and programmatic expansions, initiating dental services in 1979.

Dorchester House
Multi-Service Center

A few years ago, a Dorchester House pediatrician noted that she was unable to get dental appointments for her patients with obvious oral disease. While comprehensive oral health care was available, the services were primarily adult-focused, with less than 7% of dental patients in the pediatric age range.

Recognizing the problem with limited pediatric dental service availability, the pediatrician and former dental director Dr. Mark Doherty met to create a strategy for closing the gap in pediatric dentistry. A five-year strategic plan was developed; Dorchester House applied for, and received, a federal grant to assure that all children seen in the pediatrics clinic and/or family medicine would have the opportunity to have their oral health needs met at the Dorchester House dental clinic.

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The current program design specifies that all children 0-5 years old who are seen in the pediatric clinic will get an oral health screening and risk assessment, anticipatory guidance is given to the parent/caregiver, and the child is prioritized for treatment based on the status of the risk assessment. Each child receives fluoride varnish and a timely dental appointment.

Improvement metrics include: the number of children 0-5 years of age seen in the pediatric clinic; numbers of children getting any or all of the above services; the number of children referred to dental treatment; the number of children treated in the dental clinic; and the numbers of children with dental treatment completion.

The level of acceptance of this program by dental providers is mixed. The model required a change agent to champion the program, and also special training for dentists to become comfortable treating pediatric patients.

Access to dental appointments was a problem, and it was necessary to revise the dental schedule templates to accommodate referrals from the medical clinic. In time, the organization built a pediatric dental suite in the pediatric clinic, perceived as a big "win", providing more direct and effective access to dental care.

When the model was developed, it was recognized that medical providers had not been educated on oral health in their clinical training and thus were uncomfortable with this model until training was instituted. Non-dental professionals in the pediatric clinic were cross-trained on oral health screening protocols. All general dentists and assistants were trained on the integrated service delivery model.

The medical providers still cite time pressure with productivity goals and also reimbursement issues as barriers to full adoption of the integrated model. In addition, past experience with inability to get a dental referral reinforced the practice of not looking into the mouth as part of the standard physical exam.

While successful from a programmatic perspective, the model was considered non-sustainable without the reimbursement for fluoride varnish services provided in the medical clinic. Revenue in the dental clinic has been positively affected by the new model due to high numbers of Medicaid-covered children who are now brought into care.

Ongoing barriers which threaten the success of this model include continued problems meeting ideal staffing ratios, training needs, and changes in leadership. Changes in state regulations and policy are required to provide revisions to the reimbursement plans to adequately compensate for the provided care. The dental director considers it important to provide more detailed communication about best practices in integrated care, as well as the value of integrated services, to the dental industry. The business case can be based on the utility of prevention and its rewards in terms of savings of dollars and time.

Innovative Solutions:

- Education and motivation for medical and dental providers
- A revised dental reimbursement system in Massachusetts to support fluoride varnish applied by non-dental professionals
- Creation of simple Caries Risk Assessment template in the EMR

- Effective case management and referral process
- Multi-language anticipatory guidance with low literacy messaging and tools
- Placement of a dental suite in the pediatric clinic

The Marshfield Clinic, Marshfield WI

The Marshfield Clinic was founded in 1916 and has steadily grown to become one of the largest private multispecialty group practices in the United States. It has 54 locations throughout Wisconsin. In 2002, Marshfield Clinic expanded its partnership with Family Health Center of Marshfield, Inc. to address dental access issues, medical/dental integration, and dental workforce concerns. They recently opened their 8th dental clinic with the support of a New Access Point grant and will begin construction of their 9th dental center in collaboration with the Ho-Chunk Health Care Center with the support of a Capital Development-Building Capacity grant. The 9th dental center is planned to open in July 2013.

With a strong commitment to providing high quality care, and also to education and public service, the Marshfield Clinic has developed partnerships with medical and dental teaching institutions. 6 of the 9 dental clinics have dedicated space and equipment to each train 4th year dental students as part of a planned new rural dental school. Dental students will be taught in an environment that: 1) is supported by a combined medical/dental EHR; 2) provides shared learning experiences with medical students; and 3) prepares them for integrative practice with medicine.

Under the direction of Joseph Kilsdonk, Administrator of the Division of Education, and with the support of Family Health Center under the direction of Greg Nycz, Executive Director, and the Marshfield Clinic is starting a rural-based, CHC-embedded dental school with a strong component of service learning for the students. The first year of training will be didactic, the 2nd year simulation, the 3rd and 4th years experiential, with the entire 3rd and 4th years spent working in Family Health Center's growing community dental clinic infrastructure. Students will be recruited from, trained in, and then will assume professional practice in rural and underserved community settings. The first students are targeted to matriculate in 2015 or 2016.

According to the Marshfield leadership, in the community health service arena, approximately 400 vacant dentist positions are noted every day in the United States. With a training model that emphasizes service to the underserved, it is hoped that this new school can become a recruitment pool for rural safety net clinics regionally, if not nationwide.

In its current practice, the Marshfield Clinic utilizes a customized bi-directional EMR to support both dental and medical services. This application facilitates "virtual teaming" and allows communication between the two disciplines. Dental staff can review patient's immunizations and encourage clinical preventive services. Medical clinicians can review dental records and encourage dental services at the appropriate intervals.

The organization's leadership plans to develop decision support tools assisted by a contribution from Delta Dental (who also supported work on the combined EHR) to facilitate seamless integration and efficiently support bi-directional referrals.

The Marshfield initiative has had challenges in recruiting and hiring experienced dental clinic managers as they continue to expand capacity to address unmet need. Because Marshfield Clinic is such a large medical system, adequate dental capacity must be in place and accessible before fully adopting a formal evidence-based integrated, decision-supported, bi-directional referral system that focuses on early detection and prevention in both medicine and dentistry.

Innovative Solutions:

- Design of a rural-based dental professional training approach which has a community service base and an emphasis on collaboration with medicine
- Population-based health planning designed to achieve a geographic distribution of oral health infrastructure that can be flexed to meet an improving oral health profile in the target population and is sufficient in scope to reverse access disparities
- Custom-designed integrated electronic record system to support medical and oral health disciplines simultaneously

Terry Reilly Health Services, Boise ID

Terry Reilly Health Services (TRHS) was founded in 1971 to meet the needs of people in and around Nampa, Idaho - a rural town with a large migrant and seasonal farmworker population. Many of the farmworkers lived in sub-standard conditions and had no access to healthcare services. The 41–year- old FQHC is now a strong health system providing quality services to more than 30,000 persons annually. Terry Reilly Health Services now has five dental clinics, plus seven medical and behavioral health clinics.

In 2009, TRHS initiated a diabetes collaborative that included a dental screening exam. They received a grant to fund an exam, review of oral disease risk factors, and a microscopy periodontal assessment for pregnant women and diabetics. Dental Director Dan Watt DDS believes that efforts must be directed at identifying caries and applying therapy to eliminate the target bacteria, rather than repairs and restorative dentistry.

In order to facilitate the referral of medical patients to the dental clinic, the medical staff designed a prompt in the EMR to initiate the referral. When seen in the dental clinic, patients were provided a view of their oral health status using a Phase Contrast microscope. This 30-second review demonstrated to patients the clear presence of bacteria and other indicators of poor oral health. This review is noted to contribute to patient's engagement in self therapy measures. Unfortunately, because the medical and dental services were not co-located, patients found it inconvenient to travel to the off-site dental clinic, which resulted in 30-40% incomplete referrals. However, of those patients completing dental care, 40% showed a decrease in their oral health risk factors.

The program currently does not pay for itself. There remains a need for diagnostic codes, uniform risk factors, and ability for medical service to charge an additional fee for oral screening.

Other persistent barriers include the need for billable codes, gaining buy-in from medical providers to make oral screening a priority, changing funding sources to make it financially feasible for medical personal to include oral health in preventive programs, convincing organized dentistry that medical involvement

will increase the number of referrals, conducting research to design appropriate risk factor measures, and encouraging insurance to cover the cost.

The dental professionals have made presentations to medical staff, and now the medical providers are realizing that oral health is an integral part of their job as they cannot control diabetes, cardiovascular disease or abnormal pregnancies without attention to oral health. This new knowledge creates buy-in and the integrated model is gaining ground. Dr. Watt states "I see a day where the primary care provider has a team that looks at the risks, scores and targets, and applies interventions including oral health care to reduce the rate of heart disease, improve blood glucose control, and achieve other improvements for specific subpopulations."

Dr. Watt reports regularly to the Board Quality Committee. Metrics include: number of completed cases, percentage of class I procedures, wait time for appointments, wait time from arrival to seating, trends in incident reports, trends in patient experience, and trends in employee satisfaction surveys. TRHS is planning to build reports on trends/percentage of patients that have lowered their disease risk factors as a result of the integrated program.

Innovative Solutions:

- Medical staff designed a prompt in the EMR to make a referral to the dental clinic
- Microscopic analysis of oral pathogens is nit only a patient motivator, but provides easily quantifiable risk factors to better assess risk improvement.
- Dental professionals assist in cross-training medical staff so they realize that oral health is an integral part of their job
- TRHS is building reports that will assist in quality improvement

LESSONS LEARNED

Infrastructure

1) A population health management approach to community oral health and dentistry is needed. Quality improvement is a relatively new undertaking in the dental industry as former efforts were designed around quality assurance, limited to ensuring that specific elements were documented in the dental record. Additionally, dental school curricula focus on caring for one person at a time via the treatment plan, rather than fostering an understanding of the importance, utility and benefits of looking at a population, or subpopulation, of patients. Understanding the patient profile in terms of disease burden can vastly improve the health --- medical, dental, behavioral --- of an entire population of patients, or a subset based on specific clinical parameters such as diabetes or pregnancy.

2) Strong dental leadership is needed to champion the messaging and actions required to develop and implement an oral health program that is fully integrated into primary care. Efforts must be made to educate their medical care counterparts about the significant impact of poor oral health on an individual's overall health status, and collaboration must be developed in order to effectively support the health center's patient population for all

> "I see a day where the primary care provider has a team that looks at the risks, scores and targets, and applies interventions including oral health care to reduce the rate of heart disease, improve blood glucose control, and achieve other improvements for specific subpopulations."
> *Dan Watt DDS*

> Strong dental leadership is needed to champion the messaging and actions required to develop and implement an oral health program that is fully integrated into primary care.

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service needs and to achieve health center goals of improved health outcomes and reduced costs.

3) With the current impetus towards electronic health records, dental practices are noting that the current technology is not designed to "talk to" the electronic medical record. Without an integrated information system for patient demographics, clinical profiles, and treatment records for medical and dental care, full service integration is more difficult.

4) Primary care medical team members (including nurses, nurse practitioners, and physician assistants) need to be trained to conduct risk assessments, perform oral health screenings, counsel patients on diet and hygiene practices, and apply fluoride varnish. Because patients often choose to forgo these important services due to limited access to dental care or financial means, and noting that a child has contact with a medical provider 13 times in the first 36 months (if the well-child visit schedule as recommended by the American Academy of Pediatrics is followed), primary care medical team members in innovative practices are conducting these services effectively in the medical clinic setting. Smiles for Life, a nationally recognized oral health curriculum designed by and for primary care clinicians, is available as an on-line training tool.[16]

5) Physicians and dentists are trained and licensed separately, and practice independently. The current culture of bifurcated health care does not support comprehensive high quality care. While medical and dental services are frequently co-located, being housed in the same physical structure does not assure integration of services. Co-location supports integrated care, but much planning is required to achieve fully integrated services in which bi-directional handoffs are made and care is well coordinated. The two professional disciplines must unite to ensure that care planning and service delivery approaches are aligned to ensure that patients receive the right service, at the right time, in the right context.

> The two professional disciplines must unite to ensure that care planning and service delivery approaches come together so that patients receive the right service, at the right time, in the right context.

Program Design

1) Integrated oral health care must start with in-reach to the organization's current patient population. The demand on and scarcity of community dentists is so great as to be unmanageable in many geographic locations. Concentrated efforts directed first to those patients currently seeking medical care in the health center will provide a foundation for the fully integrated program of the future.

2) Cross-training of dentists and medical providers on standards of care for oral health, as well as the impact of poor oral hygiene on overall heath, is critical in order to successfully accomplish the goals of early childhood caries prevention, risk assessment, and effective disease management for adults.

Reimbursement

1) Revisions to the Federally Qualified Heath Centers' prospective payment rate may be necessary in order to secure adequate reimbursement for the provision of oral health preventive services provided in the medical clinic setting by primary care medical staff during or adjacent to the clinical wellness exam. Currently, the payment structure for Federally Qualified Health Centers restricts billing for more than one visit in a given day.

2) Many states have severely reduced the Medicaid dental benefit for adults. This trend has resulted in individuals opting out of dental care as they become entirely responsible for payment. The poor reimbursement picture

has also caused dentists to exit the Medicaid provider rosters, contributing to the shortage of available dentists to meet community oral health needs, particularly for low-income and uninsured patients.

3) Primary care clinicians are more likely to see children at an earlier age than dentists, and more frequently as they typically follow a recommended periodicity schedule. This places them in an advantageous position to provide early oral health screening services. Some of the models reviewed in this paper describe the use of physicians and other primary care providers to conduct oral health screenings and counsel patients on good diet and hygiene practices during well child exams. Currently, 45 state Medicaid programs reimburse medical providers for services to help prevent tooth decay.[17]

IMPERATIVES FOR FUNDERS

Based on the lessons learned from the literature review and the case studies, the following imperatives are proposed to support foundations as they strive to be effective grant-makers in advancing access to oral health care in the United States.

Support for Integrated Service Programs

1) Create an initiative to incorporate oral health into medical home transformation efforts. This could be modeled after other safety net initiatives and could include technical assistance to individual health centers as well as policy activation regarding Medicaid payment reform.

2) Encourage grant applications which focus on increasing access to oral health care for children and adults. Explore options for service integration with applicants. Require a plan for cross-pollination of medical and dental patient populations. Review opportunities for bi-directional referrals, outreach and follow-up, particularly with specific populations of focus where oral health care has a direct impact on general health outcomes (prenatal, diabetics, well child, etc.). Identify metrics which indicate success, and require report-back on these metrics.

3) Be flexible when evaluating staffing models in the grant applications presented to you. Understand the scope of practice for a variety of practitioners and encourage the use of staff with the skill sets which meet the needs of the population.

4) Consider supporting capital costs as needed to support new build-outs for co-location. Co-location does not ensure integrated care, but increases the possibility of integration.

5) Support integration/interface of health center electronic dental and medical records systems. Bi-directional sharing of dental and medical records will allow the care teams in both services to better address the needs of their patient population(s) and enable fully coordinated care.

Support for Advancements in Health Professional Education

1) Investigate ways in which your foundation can support the advancement of dental school curriculum which includes training on population health management, a culture of quality, and patient-centered care.

2) Support initiatives by educators to integrate oral health competencies in the education and training of primary care clinicians.

3) Support initiatives by educators which enhance dental school curricula to more adequately prepare dentists to deal with medically complex patients and the accompanying oral health complications. Encourage trainings which include the language of medicine, diagnostic processes, and concepts related to integration of the community of medical and dental healers in integrative practice settings.

4) Consider joining the philanthropy-sponsored National Interprofessional Initiative on Oral Health.[18]

Develop a Community Pilot Project

1) Commit resources to examine the utilization of emergency departments for non-traumatic dental care issues. Encourage local health plans to study and review the costs associated with these ED visits and to see the value in a reimbursement structure which supports integrated medical and dental care.

2) Consider building a pilot project in your community. Bring key stakeholders together, including the local public health department, health plans, hospitals, health professional associations, community health partners, and private practice. Develop partnerships to pilot one or more innovative models and share results publically.

3) Be prepared to support "spread projects" of innovative models. Many organizations are learning from early demonstration projects and need financial support for training and perhaps facilitation of community forums to disseminate lessons learned and enable the spread of integrated care models.

Advocacy

1) Help develop the business case for integrated medical and oral health care in your community, state, and region.

2) Advocate for inclusion of oral health in national accreditation standards developed by The Joint Commission (TJC), the National Committee on Quality Assurance (NCQA), and the Accreditation Association for Ambulatory Heath Care (AAAHC). Encourage these bodies to explore, adopt and include oral health metrics in their standards of excellence for patient-centered care.

3) Explore the possibility of payment reform through Medicaid State Plan Amendments that incentivize health centers to increase the delivery of oral health prevention services and to address the oral health needs of chronic disease and pregnant patients. Advocate for or defend existing funding for adult dental services, especially for these target populations.

4) Ensure that policymakers in state and local government are informed of the oral health needs of their constituents. Seek out venues that enable the dissemination of information gleaned from pilot projects and develop recommendations for future service delivery models.

5) Examine the Dental Practice Act in your state to determine if it poses any barriers to integration of oral health into primary care. Advocate for changes in state law, either directly or through collaborative efforts which bring dental and medical constituencies together to craft solutions.

Bring key stakeholders together, including the local public health department, health plans, hospitals, processional health associations, community health partners, private practice.

CONCLUSION

The philanthropic community can contribute to improved access to oral health care and reduction of oral health care disparities by targeting investment dollars towards programs which support integrated models of care. Many of the key findings represented in this paper are operational in nature and can be implemented in health centers where there is a vision and will to move towards integrated care. Grant dollars are needed to invest in pilot programs which develop collaborative models in which dental and medical providers work together to support their patients' wellness and chronic care needs.

Grant dollars are needed to invest in pilot programs

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