Compendium of Rural Oral Health Best Practices

National Rural Health Association

NATIONAL RURAL HEALTH ASSOCIATION

COMPENDIUM OF
RURAL ORAL HEALTH BEST PRACTICES

A document developed as part of the
National Rural Oral Health Initiative

PREFACE

The National Rural Oral Health Initiative is the combined effort of the National Rural Health Association and the DentaQuest Foundation to improve oral health disparities in rural America through policy, communications, education and research. As oral health issues have long impacted those living in rural communities, the activities included in this initiative are designed to enhance access to quality oral health care. This Compendium of Rural Oral Health Best Practices is a product of that collaboration. The initiative's effort is primarly intended to share and highlight best practices, models, research, and policies from around the country that can be built upon.

The compendium is representative of the specific purpose of the National Rural Oral Health Initiative: To provide leadership on rural oral health care with the intent to establish oral health care as part of primary care, thereby increasing health care access for all rural Americans.

Healthy Smiles for All: Oral Health Care for Uninsured/Underinsured Residents of Two Rural Oregon Communities

STATE: OREGON

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Purpose: The goal of the Healthy Smiles for All Project is to improve the oral health of uninsured, underinsured, and low-income adult residents of east Linn and Lincoln Counties. It has five objectives, which are: 1) develop a regional oral health strategic plan; 2) integrate oral health care into primary care settings; 3) facilitate access to comprehensive oral health training for health care providers; 4) collect evaluation data to support continuous quality improvement of project processes; and 5) conduct an education-focused oral health public awareness campaign.

Summary: Healthy Smiles for All is a strong collaboration of the partners and coalitions working to improve oral health for adults in east Linn and Lincoln counties in Oregon. The overall collaboration is under the Coast to Cascades Community Wellness Network, the Linn County Oral Health Coalition, Samaritan Lebanon Community Hospital, Samaritan Health Services, Capitol Dental Care, the River Center, East Linn-Benton Federally Qualified Health Center, Private Practice Dentists, and Medical Teams International with organizations serving in varying roles including overseeing the federal grant, monitoring program progress, providing treatment and prevention services and conducting program evaluation. Additional collaborators with the HFSA are non-profit agencies in the community who support low-income adults such as Community Outreach Inc., Community Services Consortium, Fish of Lebanon and local foodbanks that provide information to clients about the program.

The HSFA consists of three components; an adult emergency voucher program, dental van services and co-location of dental providers into medical clinics.

- The first component of the HSFA program is the Linn County Adult Emergency Dental Voucher program, which provides emergency dental treatment by a local dentist who would accept a $100 dental voucher as payment for service to low-income, uninsured and underinsured adults.

- The second component of the program is the emergency dental van services which provides emergency dental treatment to remote portions of east Linn and Lincoln Counties and targets the most vulnerable residents in the community. Volunteer dental teams staff the van and can serve up to 15 patients each visit. Clients who visit local food banks, soup kitchens, veteran services agencies and homeless sites are offered free dental services once a month at locations throughout east Linn and Lincoln County.

- The third component of HSFA is the prevention leg of the project, the co-location of an Expanded Practice Dental Hygienists (EPDH) into rural medical clinics who offer free dental care services including screenings, full exams, x-rays and cleanings to low income, uninsured, and underinsured adults in the community. Currently, there are four sites in east Linn County and expansion into Lincoln County will begin in 2017. Additionally, a dental van is available to address emergency needs one day a week at two sites and on a quarterly basis at one site.

The HSFA Project has several successes including, but not limited to:

- The “Clean Smiles = Healthy Bodies” public awareness campaign to promote oral health in our region.

- The HSFA Project has been presented as a workshop at the national Association of Community Health Improvement Conference on March 5, 2015 and as a plenary session at the National Rural Health Associations 12th Annual Rural Quality and Clinical Conference on July 14, 2016.

- The Benton, Lincoln, Linn Counties of Oregon Regional Oral Health Coalition created and distributed a regional needs assessment and community strategic plan for oral health.

- The Oregon Oral Health Coalition has noted our Regional and Local Coalitions as leaders, most active, and as models for other Coalitions around the state of Oregon.

- Unique partnership and collaboration of a Health Care System and Dental Care Organization working together to provide care to the most vulnerable residents in the community. Instead of hiring a dentist or an Expanded Practice Dental Hygienists to provide the care, Samaritan Lebanon Community Hospital initiated the partnership with the Capitol Dental Care to house the dental professionals in the clinic to provide care. The agencies worked together to overcome Stark Laws as Capitol Dental Care is a Medicaid provider in the state and recognized the importance of offering treatment to patients in one location.

Some HSFA Challenges included:

- Locating permanent space for the Expanded Practice Dental Hygienists (EPDH) in each medical clinic that is appropriate for dental care.
  Resolution: The clinic manager identified a permanent exam room for the EPDH to practice in two of the three sites.

- Scheduling enough patients to make sure the EPDH did not have open appointments.
  Resolution: We did a mass advertisement and which dramatically increased the number of patients seen daily at the clinic for oral health care.

- Getting appropriate referrals from the emergency department.
  Resolution: We met with the Vice President of Patient Care to discuss and clarify the referral process and provide updated resource information to be distributed to patients.

- Patient discomfort with the portable dental chair in our Sweet Home Clinic.
  Resolution: Capitol Dental Care and Samaritan North Lincoln Hospital/HRSA Grant shared the cost in the purchase of a permanent dental chair.

The challenges were learning opportunities through joint problem-solving the HSFA Project continues to serve those in need.

Program Effectiveness:

<u>Educate and Build Capacity</u>
One of the objectives of the Healthy Smiles for All Program is to educate community members and providers about effective oral health practices and the link between oral health and overall physical health.

Some ways this has been accomplished include:

- The meetings and activities of the three local oral health coalitions, i.e, the Medical-Dental Integration and Co-Location Summits in Linn and Lincoln County.

- Educational presentations to emergency room staff about the co-locations and dental vans.

- Distribution of educational materials, oral health resources and products at local health and county fairs, senior centers, churches, libraries, post offices, and schools. Additionally, web-based methods were developed including the Healthy Smiles for All Brush4Health.org website, Newport fluoridation Facebook page, and the Benton, Lincoln and Linn Oral Health Coalition Facebook page.

<u>Facilitate Delivery of Direct Clinical Services</u>
This past year 724 uninsured and underinsured adults received clinical dental care as a result of this project, with 463 of those patients receiving preventive services where an EPDH is co-located in a primary care setting. An additional 192 patients received dental treatment by a dentist in dental vans and 69 patients were screened at the River Center and referred to a local dentist where they received emergency treatment services.

Compared to the first year of the grant, there has been an increase in the amount of services that were provided. The total number of people served increased from 296 last year to 724 this year (250% increase). In the co-locations, the number of people served increased from 208 last year to 463 this year (223% increase). In dental vans, the number of people served increased from 51 last year to 192 this year (376% increase). The number served at the River Center increased from 37 last year to 69 this year (186% increase).

Most services (90%) were provided in East Linn County, which has four co-locations, a community location

(River Center), and dental vans. Lincoln County is just ramping up its clinical service activities and at the time of this report had served 71 patients in dental vans. Co-locations in Lincoln County will be functioning within the next several months.

Patient Satisfaction with Clinical Services

Patients were invited (but not required) to participate in an anonymous satisfaction survey (available in English and Spanish), which was distributed in co-locations and on dental vans during late spring. 289 surveys were completed. Most of these surveys (n=252) were completed by patients who received services in Linn County, where services were provided in both co-locations and on dental vans. Patients in Lincoln County, where services were provided on dental vans only, completed only 37 surveys. The vast majority of patients who were served during this time period completed the survey.

Cost savings

Combined, nearly 150 patients who were served in the co-locations and on the dental vans who had sought emergency care at their local ED (n=82) and urgent care (n=64). Access to regular dental services could reduce the number of high-cost visits to the ED and UC.

Funding:

1. Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS);HRSA Rural Network Development Grant(D06RH27789)
2. Samaritan North Lincoln Hospital
3. Samaritan Health Services
4. Capitol Dental Care, Inc.
5. The River Center (In-Kind)
6. Benton-Linn Federally Qualified Health Center (In-Kind)
7. Medical Teams International (In-Kind)

Link to program: Http://Brush4Health.org

MOrE Care Collaborative

STATE: SOUTH CAROLINA

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Purpose: The purpose of the program Medical Oral Expanded Care in South Carolina Initiative (MOrE Care) is to support Rural Health Clinics (RHCs) with the integration of oral health practices into their primary care clinics. Oral health integration includes rural primary care practices providing both primary and secondary preventive oral health services to their patients. It also aims to expand primary care and dental care team partnerships to increase access for rural patients to dental services and test optimal patient-centered referral system between primary care and dental care teams.

Summary: The MOrE Care Collaborative is an improvement initiative focused on the integration of oral health care in rural primary care practices and the development of collaborative care models through the development of referral networks in rural primary care practices in South Carolina. This initiative includes two populations of focus: 1) children 0-12 years of age and 2) adults with a diagnosis of diabetes. The initiative includes the incorporation of rural health experts from other states throughout the development process to ensure that all methods and tools can be spread to other rural communities.

The Collaborative brought together participants from six rural primary care practices in South Carolina and representatives from the SC Offices of Rural Health, Medical University of South Carolina College of Dental Medicine and the DentaQuest Institute. The six participating practices included four family medicine practices and two pediatric practices. Five of the practices are rural health clinics (RHCs) and the remaining practice is a non-RHC/non-FQHC rural practice. The practices are located in three different communities in South Carolina (two practices in each geographic area).

Each practice site team worked collaboratively with the MOrE Care team to develop, test and implement methods for increasing their core competencies around oral health care delivery and systems of care that promote oral health delivery and coordination with dental providers.

The MOrE Care Collaborative followed the structure of the Breakthrough Series (BTS) Learning Collaborative Model.i The BTS Model provides a systematic approach to quality improvement. A BTS collaborative brings together different practice teams to focus on achieving measured improvements around a specific topic – in this case oral health integration.

During the MOrE Care Collaborative, teams met regularly, on webinars and in four face-to-face learning sessions, to learn together, share ideas, compare methods, and celebrate results over the course of the 15-month Collaborative. Training for providers and staff was provided during the face-to-face meetings but on-site training sessions were also provided to reach the maximum number of staff members and providers. Teams collected and shared monthly data to manage care and track improvements. The collaborative faculty supported learning through regular coaching, assessments, and webinars. Participating practices also received on-site support and coaching from a MOrE Care practice coach/facilitator.

Measurement was a key component of successful improvement. Participating teams were assisted in the collection of specific quality measures and other data that were used to support their improvement work as well as evaluate the MOrE Care Collaborative. Practices were provided monthly feedback on their quality measures. An evaluation team from the Medical

University of South Carolina College of Dental Medicine is currently completing a formal qualitative and quantitative evaluation.

Teams implemented change strategies in the following domains:

- Oral Health Risk Assessment (both children and adults)
- Oral Health Exam (both children and adults)
- Fluoride Varnish Application (children only)
- Anticipatory Guidance/Patient Self-Management
- Referral Management

The MOrE Care team and especially the practice coach assisted practices with training staff and providers, developing oral health processes, optimizing their electronic health records, billing and coding for oral health services and developing collaborative relationships with rural dental practices. In addition, the MOrE Care team developed tools, resources and a change package, which includes an inventory of change/improvement strategies by domain that were used by the practices and can now be disseminated to other rural health practices and organizations. Participating practices were largely successful with developing and implementing changes for children. South Carolina provides reimbursement for fluoride varnish for children up to 12 years of age. Initial barriers to oral health integration included training needs for providers and staff, ensuring proper billing practice for fluoride varnish, patient acceptance, limited electronic health record functionality and developing processes of care. Practice coaching was able to overcome many of these barriers for participating practices.

There was more limited success related to oral health integration for adults with diabetes due to the lack of reimbursement for these services, significant competing priorities for these patients who most often have multiple comorbidities and continued access issues to appropriate periodontal care in many rural communities.

The active component of the Collaborative was completed in December 2016; however, data collection and continued work related to developing rural primary care practice and dental practice partnerships continues in each of the participating practices and communities.

Program effectiveness: As referenced, a formal evaluation is currently underway and led by health services researchers at the Medical University of South Carolina College of Dental Medicine. The qualitative evaluation includes stakeholder interviews at multiple points in the Collaborative, a review of PDSA activity by practices and review of coaching activities. The quantitative evaluation will include both an assessment of practice-collected quality process measures but will also include an evaluation of the impact or outcome of the oral health integration on health outcomes and healthcare utilization. This formal evaluation will be completed in the coming months.

Pending the outcome of the formal evaluation, the initiative was effective in training providers and staff from all participating practices in oral health practices. Practices were successful in developing new processes related to completing oral health risk assessments, oral health examinations, application of fluoride varnish and providing patient education to their pediatric patients and their families. 5/6 practices showed improvement in these domains over the course of the Collaborative. 2/6 practices demonstrated improvements in addressing oral health (patient self-management and oral health risk assessment) for patients with diabetes. 2/6 practices were able to modify their electronic health record to provide enhanced decision support related to oral health. Additionally, 4/6 practices have established new partnerships with dental practices in their communities, which should increase access to needed dental care for patients.

I The Breakthrough Series: IHI's Collaborative Model for Achieving Breakthrough Improvement. IHI Innovation Series white paper. Boston: Institute for Healthcare Improvement; 2003, 5. (Available on IHI.org).

Funding: DentaQuest Institute

Link: www.scorh.net

Eastern Kentucky's First Regional Dental Program

STATE: KENTUCKY

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Purpose: In 2004, the University of Kentucky opened its first regional dental program in rural southeastern Kentucky at the UK Center of Excellence in Rural Health (CERH). A state-wide survey of children's oral health in 2001 had revealed a much greater burden of tooth decay in the Appalachian counties, and this new program was designed to combat this problem through an evidence-based approach including a mobile dental outreach program, partnerships with regional pediatric dentists, an oral health literacy campaign, and a fixed dental clinic base at the CERH that could serve as a site for dental students/residents to do rotations/ externships.

Summary: Poor oral health has been a reality in Appalachia for decades and Kentucky actually ranked number one in the nation in toothless adults in the years surrounding the establishment of this first regional dental program. Although the University of Kentucky's College of Dentistry (UKCD) had always had a strong outreach mission, there had not been a strategic approach to combat tooth decay in the eastern region. UKCD had a mobile dental unit that was able to provide sporadic care to select high need schools in the region, but there was no established, brick-and-mortar presence in the region, a huge 50+ county region with a limited dental workforce, few safety net programs, and the heaviest burden of disease in the state.

In 1990, the UK Center of Excellence in Rural Health had been established by the General Assembly as a legislative mandate to provide a University presence in Appalachia via earmarked monies to combat the extensive health disparities in Appalachia. This Center was located in Hazard, Perry County, in the heart of the Appalachian coalfields and housed a family medicine residency program and clinic (now named the UK North Fork Valley Community Health Center) among other programs and activities including workforce development and research as well as housing the State Office of Rural Health. It was when funding was secured for a new building in 2004 that dentistry became a part of the CERH. Plans included a co-located dental suite that would be an "on-going, integral" part of the family medicine clinic. In addition, an application was made to the Ronald McDonald House Charities – Global for a mobile dental unit to be stationed full time there in eastern Kentucky.

A growing awareness of the importance of oral health was taking place, spawned by the 2000 Surgeon General's report and highlighted by the 2001 Kentucky state-wide survey of children's oral health. Then Governor Steve Beshear dubbed poor oral health one of the "Kentucky Uglies" that his administration would attempt to combat during his tenure. All of this together with the leadership within the Colleges of Medicine and Dentistry provided the framework to establish UK's first regional dental program.

The original goal of the program was "to improve and maintain the oral health status of children in Eastern Kentucky." This would be achieved through several stated objectives, including:

1. To increase access to early and regular dental prevention, treatment, and maintenance (recall) services for underserved preschool and school children (including uninsured, homeless, Medicaid, and KCHIP children).

2. To coordinate and link dental services and health education activities with local dentists, local physicians, public health programs, and other community-based support services.

3. To provide "science-based" dental health education activities targeting families, caregivers, teachers, and children.

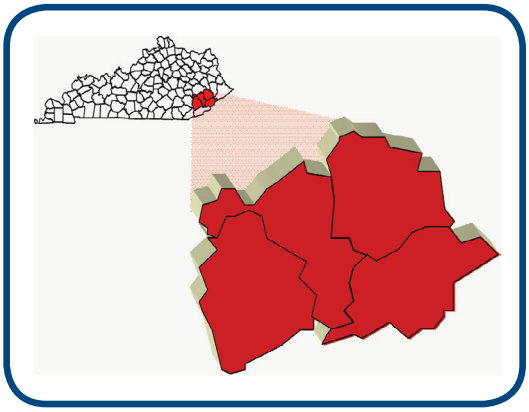
4. To provide educational experiences in dental pediatrics for general dentistry and family medicine residents, student dentists, and others.

Specifically, the fixed dental clinic opened in July of 2004 as part of the family medicine residency clinic and provided care to both children and adults in a multi-disciplinary approach to care, with referrals back and forth between medical and dental. Dental residents from UKCD spent five-week rotations serving in this clinic alongside the family medicine residents who were now receiving oral health lectures from the national Smiles for Life curriculum via the on-site, local, full-time dental faculty.

Then in May of 2005, the donated Ronald McDonald Care Mobile arrived and contracts were secured with local Head Start programs, daycare centers, and multiple public school boards. Mobile dental services began in the fall of 2006. Over time, partnerships were established with other local entities and practitioners, the most significant of which was a four-way partnership between: 1) the dental outreach program; 2) the local four-county Head Start program; 3) a regional pediatric dentist; and 4) the Hazard Appalachian Regional Hospital. Grant funding through the University allowed for the purchase of dental equipment for the operating room, and the hospital made time once a week for the pediatric dentist to bring very young children with extensive and urgent dental needs into the local O.R. so that they didn't have to drive several hours away for hospital care.

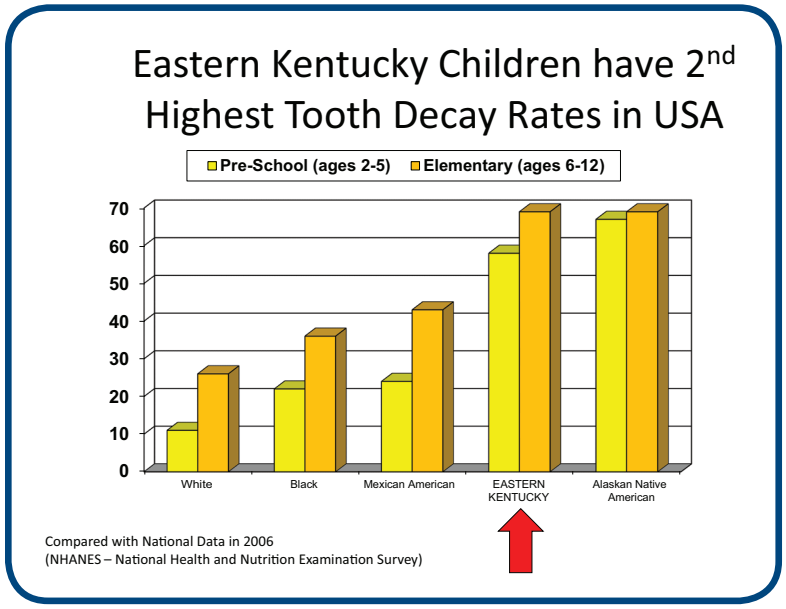
The Head Start provided both case management and transportation when needed, and the dental outreach program was able to identify and case manage the children who needed this specialty care. Prior to that partnership, only 8% of children with those extensive/urgent needs were able to find transportation and get care outside the region, but after the partnership, over 60% were able to get care in Hazard.

Program effectiveness: Data has been collected on children seen via the Ronald McDonald Care Mobile program since the program's inception in school year 2006/07, and, to date, well over 10,000 individual children have been seen. Around 500 Head Start/preschool children are seen each year at 20 different centers scattered across the contiguous Perry, Knott, Leslie, and Letcher counties each school year. In addition, nearly 2,000 elementary children ranging from Kindergarten through 8th grade are seen in schools in nearly 20 elementary schools in Perry and Knott counties, including the Hazard city school system, each school year. Participation rates have been very high in the Head Start population, approaching 70% overall, and have remained steady in the elementary schools at around 40%. Care is provided at other community events and health fairs as well.

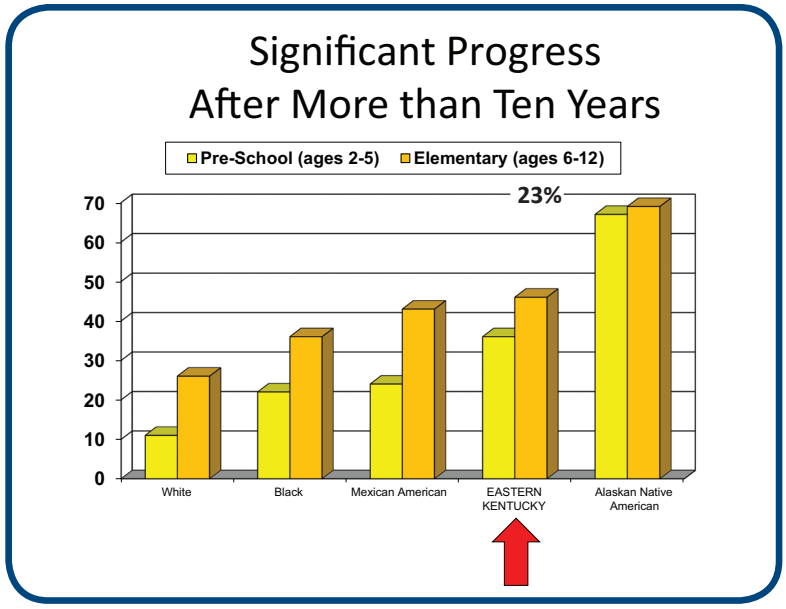


All care provided through the mobile program is preventive in nature but also includes individualized and group education as well as extensive case management and referral. Each Head Start child receives a dental exam, a cleaning, and a fluoride varnish treatment twice each year. Each elementary child receives a dental exam, a cleaning, fluoride varnish treatment, individualized oral hygiene instruction, and sealants on permanent molars, once per school year.

Baseline data indicated very high untreated tooth decay rates. National data provided by the National Health and Nutrition Examination Survey (NHANES) showed U.S. untreated tooth decay rates for elementary children at 26% (for white children), Kentucky's survey showed those rates at 29%, and this program's local county-level data revealed rates in Perry and surrounding counties at 69%. In preschool children, the data showed similar trends with 11% for US white children compared to 58% for eastern Kentucky. Overall, eastern Kentucky's children had the second highest rates of untreated tooth decay in the nation, second only to Alaskan Native/American Indian populations.



Each year of the program, those rates have dropped by a few percentage points at a time. As of last school year, 2015/16, ten years after program inception, the **untreated tooth decay rates in elementary children have come down a total of 23 percentage points** from 69% to 46%, and the rates in **preschoolers have come down a total of 22 percentage points** from 58% to 36%. In addition, rates of urgent dental needs (pain, infection, rampant tooth decay) have dropped in both groups from 22% down to only 8% through extensive case management efforts and partnerships with regional pediatric dental specialists.



In 2013, the Robert Wood Johnson Foundation did a nation-wide search for workforce innovations in the provision of preventive oral health services. The dental outreach program in Hazard was one of 25 programs identified by RWJ as one of those promising preventive programs. We have a long way to go to reach the national goal for good oral health in eastern Kentucky, but clearly a well-established and stable prevention program located regionally, even in an area of huge disparity, can have a very significant and positive impact on improving the oral health of children in rural America.

Funding:

Training GPR Residents to Treat Underserved Children 2004-2007
"Training In Primary Care Medicine and Dentistry"
Health Resources and Services Administration (HRSA D59HP04084)
PI: Ted Raybould
Co-PI: Nikki Stone, et. al.

Ky-CARAT Early Childhood Caries Surveillance Project 2005-2007
"Kentucky-Consortium for Applied Oral Health Research"
National Center for Research Resources/NIH (D1ARH05653-01-00)
PI: Jeffrey Ebersole and Gerald Ferretti
Co-PI: Nikki Stone, et. al.

Youth Oral Health Diabetes Surveillance Pilot Project 2006-2007
UK Center for Rural Health/UK North Fork Valley Community Health Center
PI: Baretta Casey
Co-PI: Nikki Stone

Health Center Cluster 2006-2007
New Access Point to Service Low Income Perry, Knott, and Leslie Counties
Health Resources and Services Administration
PI: Michael W. Stanley
Dental Program Director: Nikki Stone

GPR Training in Pediatric Advocacy and Care Disparities 2007-2010 (Co-PI)
Grants for Training in Primary Care Medicine and Dentistry
Health Resources and Services Administration
5D59HP08625
PI: Ted Raybould
Co-PI: Nikki Stone, et. al.

Health Center Cluster 2008-2011
Health Resources and Services Administration
PI: Michael W. Stanley
Dental Program Director: Nikki Stone

Designated Health Projects: Kentucky Oral Health Network Scope 2008-2010
Health Resources and Services Administration
PI: Jeff Ebersole
Co-PI: Nikki Stone

Honorable Order of Kentucky Colonels 2009
Approved funding to improve and expand dental outreach services

Oral Health Navigator 2009-2010
Hazard Perry County Community Foundation & Foundation for a Healthy Kentucky
PI: Nikki Stone

Health Center Cluster 2012-2015
Health Resources and Services Administration
PI: Joe Kingery
Co-PI: Nikki Stone

Appalachian Rural Dental Education Program – Phase II 2013-2014
Morehead State University
PI: Sharon P. Turner, Sharon P
Co-PI: Nikki Stone

Health Center Cluster 2015-2017
Health Resources and Services Administration
PI: Joe Kingery
Co-PI: Nikki Stone

Health Center Oral Health Expansion 2016-2018
Health Resources and Services Administration
PI: Joe Kingery – Larry Quillen
Co-PI: Nikki Stone (grant writer)

Links: http://uknow.uky.edu/uk-healthcare/dr-nikki-stone-leading-uks-mobile-dental-program-serve-children-eastern-kentucky
http://ukhealthcare.uky.edu/northfork/
http://ukhealthcare.uky.edu/Physicians/Physicianprofile.aspx?id=7463 https://ruralhealth.med.uky.edu/CrhDentalOutreachNews
http://rmhclexington.com/what-we-do/ronald-mcdonald-care-mobile/

Medical Oral Expanded Care (MORE) Care

STATES: PENNSYLVANIA, COLORADO and SOUTH CAROLINA

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Purpose: The goal of MORE Care is to integrate primary and secondary preventive oral health services in primary care medical offices, specifically Rural Health Clinics in three states: Pennsylvania, Colorado, and South Carolina. This integration reaches dentally underserved populations with an initial emphasis on children. MORE Care is testing optimal patient-centered referral systems between primary care and dental care teams. Presented in a learning collaborative format, Rural Health Clinic teams are coached by staff at State Offices of Rural Health as well as state-based and national faculty.

Summary: The Medical Oral Expanded (MORE) Care initiative was first introduced in a group of six Rural Health Clinics in South Carolina in 2015. This initial pilot expanded to include Rural Health Clinics in Colorado and Pennsylvania in 2016. To date, MORE Care has been introduced to staff at eighteen Rural Health Clinics.

Using the Smiles for Life national curriculum, as well as state-based oral health curriculum such as Cavity Free at Three and Healthy Teeth, Healthy Children, medical providers are introduced to oral health. After this initial introduction, clinic staff is taught about change and how to create change within their clinics using the "Plan, Do, Study, Act" (PDSA) cycles established through the Institute for Healthcare Improvement's Breakthrough Series framework for health care transformation.

Clinic staff have incorporated oral health risk assessments into their well child visits. Not only are these care providers discussing a child's risk for dental disease, they also are offering preventive oral health guidance. Providers are helping patients and their parents set self-management goals. For children who are considered to be at high risk for dental disease, providers have been trained to apply topical fluoride varnish. Finally, patients are referred to dental providers for comprehensive treatment. Ideally, a referral pathway will be in place for oral health much like it is for other medical specialties such as cardiology. A medical provider will refer a patient to a dental provider, and the dental provider will then provide a report about the patient's oral health care to the referring medical provider.

In Pennsylvania, all nine participating Rural Health Clinics have created a digital oral health risk assessment which was been incorporated into their electronic medical records (EMR). Medical providers find the electronic risk assessment more time efficient.

Providers also have become more comfortable with time and practice in discussing oral health with patients and parents, including anticipatory guidance and self-management goal setting. Teams at the Rural Health Clinics are working to become more comfortable and consistent with fluoride varnish application. The greatest resistance from providers seems to be related only to having ample time within each visit.

In Colorado, three Rural Health Clinics have also integrated oral health risk assessment and documentation of self-management goals into their EMR. Making these documents available electronically has streamlined workflow for providers and staff, serving as a reminder for providers to conduct the assessments during well child visits. One of the major challenges providers have faced is parents' resistance to fluoride varnish due to lack of information, or misinformation, about the effects of fluoride. To address this issue, Rural Health Clinic teams have received targeted education and training on motivational interviewing, as well as fluoride education and talking points to use with parents.

In South Carolina, six Rural Health Clinics have integrated oral health interventions into the well child visit and sustained those improvements over an 18-month period. Some participating clinics began expanding oral health interventions into additional populations, such as adults with diabetes. Several of the clinics are also have achieved some success with developing more formal referral relationships with a community dental provider, which provides a higher level of interprofessional collaboration between primary care and dentistry.

One of the challenges the clinics addressed was developing long-term sustainability plans to ensure that new staff were provided with the oral health training necessary to sustain the provision of oral health care services. In addition, practices pursued the alteration of their electronic health record to provide templates, clinical decision support, and quality reporting related to their oral health integration. One third of the practices have been successful in optimizing their electronic health record for oral health care.

Program effectiveness: After implementation in nineteen Rural Health Clinics across three states, MORE Care has changed the scope of practice of primary care professionals. Teaching primary care providers about oral health and coaching them to incorporate oral health into their well visits has increased patient satisfaction and oral health awareness.

Patients and parents are learning more about oral health at each well child visit. They have increased their understanding about oral health and its importance in overall health and well-being. Patients are receiving preventive oral health services (fluoride varnish and oral health screenings) in these medical offices. Over time, it is expected that increased oral health prevention will lead to a decrease in dental disease.

Clinics participating in MORE Care collected process measures on the completion of an oral health evaluation, development of self-management goals, provision of fluoride varnish, and completion of a referral to a dental provider. Clinics showed significant improvement in the percentage of children receiving these oral health services at the well child visit. Data also showed that improvement in the completion of the dental referral component required the most time to become evident, as this measure required change from both internal participants (the Rural Health Clinics) as well as external entities (dental providers, who were in most cases, not affiliated with the Rural Health Clinic).

Funding: DentaQuest Institute

Link: https://www.dentaquestinstitute.org/learn/quality-improvement-initiatives/medical_oral_expanded_care

ROADS - Rural Oral Health Advancement in Delivery System

STATE: SOUTH CAROLINA

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Purpose: The purpose of ROADS is to reduce rural oral health disparities experienced by children and high-risk adults with diabetes through medical-dental integration that emphasizes system performance improvements. Our purpose is achieved through two goals:

- Improvements in collaborative referral management partnerships between primary care and dental practices in rural communities, resulting in the completion of dental treatment plans and continuous, ongoing care; and

- Improvements in dental practice management competencies, in ways that optimize efficiencies and create new sustainable capacity for safety net patient populations.

It was developed as the dental care companion effort to More Care in South Carolina.

Summary:
Effort: Since 2015, the Division of Population Oral Health (DPOH) at the MUSC has worked with the SC Office of Rural Health and partners to support the integration of oral health services at independent rural health clinics in three market areas as a part of the DentaQuest Institute's More Care initiative. Priority has been placed on getting at-risk children into ongoing dental care and adults with diabetes into a diabetes management plan that includes dental care.

ROADS is focused on developing the dental delivery component of More Care by supporting rural community dentists in innovative collaborative referral management partnerships with RHCs. While we have a network of excellent federally qualified health center dental programs, their distribution does not penetrate many rural markets in our states. As such, our emphasis has been on the private dental practice.

Dentists participating on ROADS are expected to:

1. Practice Management. Participate in dental safety net practice management training conducted by the Safety Net Solutions Program of the DentaQuest Institute to strengthen business protocols as they expand capacity.

2. Enhancement Planning. Develop a practice enhancement plan that identifies financial and clinical goals for performance improvement and capacity growth. This serves as the 'roadmap' for their quality improvement work.

3. Staffing Models. Optimize staffing models for expanding capacity and liaising with RHCs. All (n=6) are using dental hygienists in this capacity within the state's scope of hygiene practice.

4. Quality Improvement. Conduct quality improvement activities internal to their practice that address their enhancement plan goals. They also agree to collaborate with RHCs on shared quality improvement goals such as patient 'handoff' and HEDIS measures such as reduction in hemoglobin A1c levels.

5. Shared Care Planning. Partner with RHCs on care planning activities for priority patients to ensure oral health needs are met. Examples include shared responsibility to diabetes management and reducing HbA1c levels.

6. Referral Management. Accept at least 50 new patients of record through RHC partnerships and referrals through the broader rural health system. Referrals should be managed using electronic means such as encrypted direct messaging if electronic health exchange is not possible.

7. Learning Community. Participate in monthly webinars and site visits where they debrief and share their quality improvement activities, what is working for their dental practices, and how to leverage lessons learned from other sites and practitioners.

Challenges: While ROADS has proven to be a successful proof of concept, we have had challenges facilitating our approach to integrated care. Our most successful tool has also proven to be the most challenging — a facilitating electronic health record. It is costly to modify existing EHR configurations in RHCs to support the data collection needed to facilitate referral management. Compounding this challenge is the absence of EHRs in many private dental practices. Most rural community dentists use practice management software and none participated in electronic health exchange prior to participating in ROADS. Through their enhancement plans we are working to overcome these obstacles with our dentists.

The second challenge has been the calibration of quality improvement language. While quality improvement has been acculturated into primary care for many years, dental practices have historically approached it from more of a risk management perspective. Calibrating terminology, reporting and monitoring, and improvement strategies had to become a part of our readiness intervention work.

The third challenge has been the dwindling availability of primary care in our market areas. Our ROADS dentists are able and willing to accept referrals from primary care partners in addition to their partnering RHCs. We are finding in one of our three markets a retraction of primary care practices due to hospital acquisitions, mergers and retirements.

Barriers: Our biggest barrier is the absence of periodontal treatment as a benefit in South Carolina's adult dental benefit program. Given one of our two priority populations is adults with diabetes, periodontal care is needed. It is an evidence-based intervention for improving their oral health and glycemic index. We are exploring how periodontal care fits into a managed care structure and how it could be incentivized through MCO diabetes management programs.

Program effectiveness: We are still analyzing claims data to measure improvements in utilization, decreases in emergency room visits due to dental, and decreases in inpatient admissions for uncontrolled diabetes as a result of ROADS and More Care. From a systems development perspective, two of the three dentists have achieved their referral goals and continue to accept new safety net patients of record. One of three practices began seeing Medicaid enrollees as a result of the project creating access in a rural county where no dentists accept Medicaid. Two of the three are exploring referral partnerships with public health entities. All have hired dental hygienists to strengthen referral relationships and outreach with primary care providers.

Funding: Funding from ROADS is from the Health Resources and Services Administration, Oral Health Workforce Grant #T12HP28882, with a match from the DentaQuest Institute as a part of More Care implementation. We recently received additional funding from The Duke Endowment to expand ROADS in a fourth rural market.

Smile Partners

STATE: MAINE

Submitted by: Becca Matusovich
Program: Greater Portland Refugee & Immigrant Health Collaborative

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Purpose: The SmilePartners model is a collaborative initiative developed in Portland Maine, which marries oral health and financial literacy education, matched savings accounts, and navigated entry to a dental home with support of Community Health Workers. The goal is to assist participants – uninsured low-income adults, including a special focus on immigrant community members and young adults who grew up in poverty, with overcoming the barriers blocking entry to the dental care system. It is not a traditional "program", but rather brings together multiple organizational partners and delivers an integrated comprehensive intervention that works collectively to address the community need.

Summary: Dental disease, in spite of being largely preventable, is a major cause of lost school and work days, and one of Maine's leading causes of avoidable emergency room visits for pain infection, especially among adults living in poverty. About 1/3 of the US population has no dental insurance benefits, and almost a quarter of those with dental benefits get them through public programs like Medicare or Medicaid, which rarely cover preventive and restorative care. Refugees and immigrants, and young adults who grew up in the foster care system or in families living in poverty are among the most likely to lack access to dental coverage.

For people with limited income and without employer-sponsored dental benefits, to establish yourself as a patient of a dental practice requires a new patient appointment (including an exam, X-Rays, and treatment plan). These appointments typically cost at least $120, even at the bottom on the sliding fee scale at a non-profit dental clinic or federally qualified health center. A cleaning and recommended follow-up for fillings, root canals, periodontal scaling, etc, then costs more. Once a person is an established patient and has restored their baseline oral health, it is more affordable to keep up with ongoing check-ups and preventive care over time.

The crux of the challenge is that for those who have been locked out of the dental care system, ongoing routine care may be affordable but the cost of gaining entry to the system is financially out of reach. It is possible for people to avoid dental emergencies, but they need equitable access to the tools to prevent dental disease and to treat it early. SmilePartners is a collaborative initiative to address this challenge through creation of an alternative "doorway" into dental care system. The project is focused on refugees/immigrants and young adults who grew up in poverty.

SmilePartners is not a traditional program, but rather aligns multiple organizational partners to deliver their existing functions through an integrated comprehensive intervention to address the community need. The first SmilePartners design, now referred to as "SmilePartners 1.0", was implemented three years ago with a demonstration grant from the DentaQuest Foundation. The barriers were extreme, and while the partners eventually settled on a feasible model, our consensus was that it was not cost-effective and was too labor-intensive as designed. Based on learnings from this experience, an entirely different model emerged as the best potential solution to the dental access challenges facing the refugee and immigrant community, leading to SmilePartners 2.0.

This revised SmilePartners 2.0 model was tested and evaluated in a small pilot in 2015-16, still focused on the immigrant community in Portland. The core partners in this pilot included University of Southern Maine (USM), University of New England (UNE), Maine Access Immigrant Network, the City of Portland Minority Health Program, Community Financial Literacy, Community Dental, cPort Credit Union, and Partnerships for Health.

The SmilePartners 2.0 model integrated three core components:

1. Navigation support and oral health literacy teaching by Community Health Workers (CHWs). The CHWs orient participants to how to use a dental home and routine preventive care, avoid urgent treatment needs, increase "patient activation" levels, and establish preventive oral health self-care habits.

2. Financial literacy education and coaching delivered by a community organization with expertise in this field. The financial literacy component was designed to assist participants to establish a savings account and build saving habits, through which they would then be able to implement an affordable plan to self-fund ongoing routine & preventive dental care. Saving habits are incentivized through matching funds to help cover the cost of the new patient appointment and completion of the recommended treatment plan.

3. Affordable entry to a dental home – this begins with a new patient appointment, including X-Rays & exam, a cleaning, and then is followed by completion of all appointments recommended in the treatment plan. After this entry stage, i.e. once oral health is restored, future ongoing preventive care can be affordable with participants saving to self-pay for regular check-ups and cleanings, particularly since they are typically eligible for a sliding fee scale at a non-profit dental center or Federally Qualified Health Center.

Participation in SmilePartners is not designed to be ongoing - it is a one-time intervention to establish successful entry to the dental system, which takes about 12-18 months for a cohort to complete. Upon "graduating" from the program, participants have a "clean" bill of oral health, understand how to use their dental home and oral hygiene self-care techniques, and have a plan for how they will continue saving to self-fund regular check-ups and cleanings.

Program effectiveness: The SmilePartners 2.0 pilot demonstrated results that surpassed the partners' expectations. For example, the evaluation findings include: an 80% participant completion rate and accomplishment of savings goals, an appointment-keeping rate of 97.7%, and measurable increases in patient activation levels among most participants who completed the pilot. All participants who completed the program planned to continue saving and utilizing preventive dental care. The results have sparked a shared desire by partners and a broader stakeholder group to explore a sustainable business model for delivery at a larger scale. A report summarizing the findings of the pilot evaluation is available.

Funding: The primary original funder of SmilePartners 1.0 was the DentaQuest Foundation. Additionally, the Community Health Worker component of the initial SmilePartners demonstration project was designed and implemented in partnership with the University of New England's CHANNELS project, which was funded by a grant from the Department of Health and Human Services, Health Resources and Services Administration (DHHS/HRSA), Nurse Education, Practice, Quality, and Retention - Interprofessional Collaborative Practice Grant program. HRSA UD7HP25065-02-01.

The SmilePartners 2.0 pilot was funded by grants from Northeast Delta Dental Foundation and Maine Health Access Foundation, private fundraising, and in-kind contributions from the core partners.

Link: N/A

Mountain Health Alliance

STATE: MARYLAND

Submitted by: Susan Stewart
Program: AHEC West

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Purpose: The Mountain Health Alliance (MHA) is a network of health care providers, hospitals, health departments, an Area Health Education Center and other agencies dedicated to increasing access to affordable, comprehensive, quality dental health care in a tri-state five-county rural Appalachian region. MHA also works to reduce costs and improve care through integration of oral health into primary care, diversion from emergency department treatment, and below-market dental provider fee agreements for services provided to low-income, uninsured patients.

Summary: MHA partners assist low income adults in finding the oral health care they need and educates local providers on the benefits of integrating oral health screenings into the primary care setting. MHA has established an Emergency Department (ED) referral/diversion program with two area hospitals, through which patients seeking dental assistance in the ED are asked to sign a release form allowing the hospital to send their patient-contact information to MHA's Community Health Workers (CHW) for follow-up. The CHWs then contact the patients and help them find the dental care they need through local health department clinics or private dental practitioners who volunteer to provide services to MHA referrals at a reduced hourly rate.

CHW efforts extend beyond lining up necessary oral health care. They also work with patients to alter unhealthy lifestyle choices, and help them navigate resource agencies in order to obtain the assistance they need to lead healthier, more productive lives. When encountering post-procedure apathy – "Crisis past, problem solved" – CHWs employ friendly persistence in ensuring that patients adopt lifestyle changes that can prevent future crises.

The majority of dentists approached by MHA about taking referrals have agreed to provide services at an hourly rate of $150, rather than charging by procedure. All MHA-referred patient care is paid for via MHA's direct service dollars. The network of dentists participating in the program has allowed MHA to greatly stretch those dollars to serve far more patients than would have been possible under regular dental care pricing. In fiscal year 2016, MHA coordinated direct oral health services for 72 patients over more than 130 appointments. The value of services provided totaled $72,500, with dentists donating $49,000, for a donation rate of 67 percent.

In addition to the hospital EDs, MHA also receives referrals for dental care from the Federally Qualified Health Centers in its area, and through a variety of other sources, including Potomac State College (an MHA partner), and private practitioners.

Through the Maryland Area Health Education Center West (AHEC West), MHA has provided Continuing Medical Education (CME) and training courses for hospital-affiliated primary care providers (PCPs) and other PCPs on the integration of oral health exams into the primary care setting. Such efforts help identify oral-health problems so they can be treated earlier before a crisis sends the patient to the emergency room for dental care, which is both more expensive and less effective than regular oral health care. Over the course of one year, MHA trained 59 primary care providers from 18 practice sites on conducing oral health exams. As is often the case with new ways of thinking, MHA staff sometimes encounter resistance to such innovative practices, but persistence and education on the benefits of such integration usually prevail.

Since MHA's inception in 2011, the network has actively supported three Mission of Mercy (MOM) dental

events. The first two MOMs were two-day emergent free dental care clinics. MHA conducted pre- and post-treatment surveys to profile those seeking care. MHA also acted as the principal fundraising organization in support of the MOM events. At the first two events, more than 2,200 adults received dental care valued at over $2.4 million. The more recent one-day clinic, for which full financial details are not available, served about 400 people and provided over $400,000 in free care.

After the MOM events, CHWs provided follow-up with patients by reviewing healthy oral practices and assisting them in finding dental resources such as free cleanings available at dental hygienist schools in the area. Finding dental homes for the MOM patients is difficult, however, as most seek care at the free clinic because they cannot pay out-of-pocket costs or have no dental insurance. Medicaid programs in Maryland and West Virginia cover only emergency dental services; Pennsylvania, the third state in the MHA service area, has more extensive coverage.

In August, 2016, MHA spearheaded a free denture clinic, the first of its kind in Maryland, which provided dentures to 16 low-income patients, most of whom had been without teeth for many years. In the spirit of cooperation that is a hallmark of MHA, a team of specially trained dentists and technicians from Virginia worked with dentist-volunteers from Western Maryland to install and fit dentures in one day. Those who received the dentures described the experience as life-changing, boosting their self-confidence and employability, as well as their ability to eat nuts, meat and other hard-to-chew foods – to say nothing of the new smiles they sported upon leaving the clinic.

Program Effectiveness: In a collaborative effort involving more than a dozen partner agencies engaged in a common goal to improve health outcomes, it is often difficult to disentangle cooperative, complementary programs, gauge their individual effectiveness and allocate "credit" proportionately.

Mountain Health Alliance can reasonably lay claim to having spearheaded the Mission of Mercy dental clinics, which provided tangible, immediate care to more than 2,500 residents of its rural service area. However, that service would not have been possible without the volunteer efforts of dozens of dentists, or the supportive efforts of other partners in promoting and conducting the clinics. Similarly, MHA took the lead in providing dentures to 16 low-income residents, but cannot take credit alone for the life-changing procedures.

MHA's ongoing efforts to integrate oral health care into the primary care setting pays dividends that are more difficult to measure, but no less significant in preventing the kinds of oral health problems that in time can leave low-income residents without any teeth at all. A denture clinic is splashier, but the day-to-day, behind the scenes efforts of promoting proper oral health, eating the right foods and working with primary care providers to identify oral health issues provide even greater healthcare benefits to the community as a whole.

Allegany Health Right, a Mountain Health Alliance partner-agency, recently detailed the effectiveness of community dental access programs providing urgent dental care to low-income residents of rural Western Maryland in an article published in the American Journal of Public Health. According to the article, such programs served approximately 1,600 unique clients across 2,700 visits from fiscal year 2011 through fiscal 2015. If those programs had not been in place, the article states, about 670 more dental related visits to the ED would have occurred during that time, resulting in $215,000 in additional healthcare costs.

The article concluded that "effective ED dental diversion programs can result in substantial cost savings to taxpayers, and more appropriate and cost-effective care for the patient."

Based on our experience at Mountain Health Alliance in working six years to improve access to oral healthcare in our rural service region, we wholeheartedly agree with that conclusion. Expansion of dental programs like those spearheaded by MHA would extend such benefits wherever those programs reach, not only saving money, but improving lives.

Funding: In addition to the in-kind services provided by dental-care providers who donate their time and routinely provide cost savings of 50 percent or more over normal fees, Mountain Health Alliance is funded through a Health Resources and Services Administration (HRSA), Federal Office of Rural Health Policy grant, (D06H27794).

Link: ahecwest.org (Mountain Health Alliance under "Our Programs")

East Carolina University School of Dental Medicine

STATE: NORTH CAROLINA

Submitted by: Gregory Chadwick
Program: East Carolina University School of Dental Medicine

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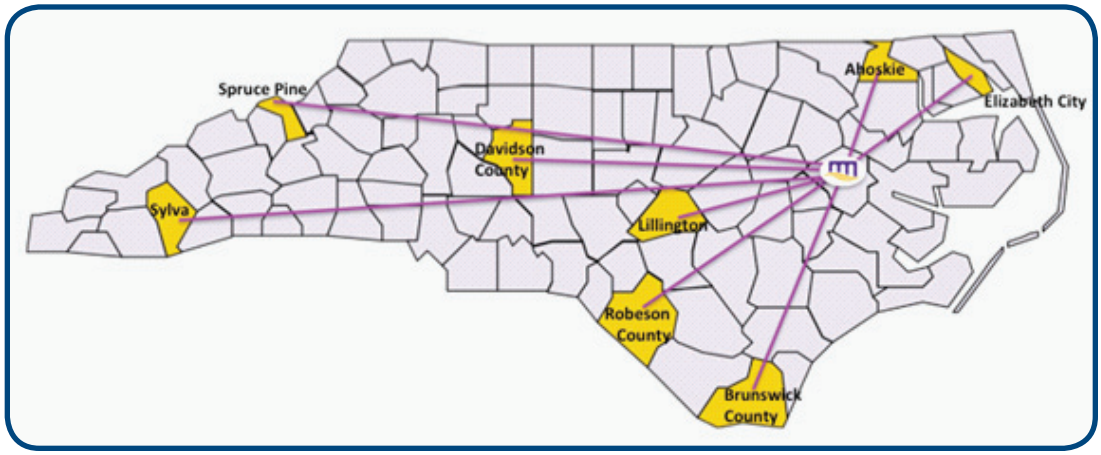
Purpose: The East Carolina University (ECU) School of Dental Medicine (SoDM) has implemented an innovative model of community-based dental education to meet the oral health challenges within North Carolina. The focus of the SoDM is to improve the oral health of the people of North Carolina by educating the next generation of primary care dentists (general dentists and pediatric dentists) while providing care for rural and underserved areas of the State.

Summary: At the heart of ECU's innovative educational and patient care model is the School's network of eight Community Service Learning Centers (CSLCs), located in Ahoskie, Brunswick County, Davidson County, Elizabeth City, Lillington, Robeson County, Spruce Pine and Sylva. Advanced Education in General Dentistry (AEGD) residents and fourth year dental students work alongside dental faculty in University owned and operated centers to provide care in the very same communities where we aspire for our graduates to practice. The robust use of technology (video teleconferencing, axiUm, and teledentistry) enables the SoDM and CSLCs to function as one unit, seamlessly linked while extending the reach of the SoDM across the State.

The CSLC network meets three inter-related goals: 1) providing comprehensive educational experiences for the students and residents; 2) enhancing access to oral health care services within the community; and 3) achieving financial and educational sustainability.

Educational sustainability is particularly important because students and residents require advanced experiences, in addition to the basic safety-net procedures often provided in underserved areas. While the CSLCs expand oral health care resources, the greater impact of the CSLCs comes from recruiting, educating and returning well-qualified primary care dentists to rural and underserved areas for a lifetime of practice.



The SoDM seeks to admit fifty students annually who reflect the diversity of the State. In addition to race, ethnicity and gender, the SoDM considers "rurality" as an important dimension of diversity, given the mission of the School. Health professionals who come from disadvantaged backgrounds or are members of under-represented groups are more likely to provide care in communities of need, but at the same time, these students face disproportionately greater cultural, educational and financial challenges. Continuing to make progress toward a state population parity goal of 33%, the most recently admitted class has 26.4% underrepresented minorities (URMs) while the average of the four currently enrolled classes is 25.6% URMs and 51.6% women, with DMD students hailing from 75 of the State's 100 counties.

The School's curriculum develops students who can meet the changing oral health needs within the underserved communities in North Carolina, where they will serve as primary care dentists and leaders. This curriculum includes a comprehensive approach to public and population health, an appreciation for the role of research and real-life clinical experiences designed to prepare graduates to serve diverse, underserved populations with complex medical and oral health needs.

The school's integral network of eight CSLCs is located strategically across the State. Each CSLC is a state-of-the-art, fully functional, 16 operatory dental care delivery facility and is approximately 7700 sq. ft. Each CSLC is equipped with cone beam capability, dental microscope, wheel chair lift, student/resident office and seminar room. During the senior year, each student's community based experience consists of three, eight-week rotations to three separate sites for a total community-based experience of 24 weeks. Students and residents work with permanent and adjunct faculty in an actual practice setting based on a medical education model, gaining rich clinical and robust practice management experiences. Since 2012 our network provided care for 40,419 patients, 23,291 of these patients were seen in a CSLC and include many who might not have received care otherwise. These numbers will only increase as the CSLCs mature.

Research, a pillar of the school's mission, moved to a new level in October 2016 when the SoDM opened its Research Center to complement the current Clinical Research Center and CSLC research network. The faculty and students engage in translational and clinical research, health services research, as well as behavioral, educational and community and population studies, while helping our students and residents understand the value of research and the importance of continuing to be life-long students of science.

Inherent in the ECU Model is graduating students with a low debt burden so they have the freedom to practice in areas of need. The SoDM's tuition and fees are in the lower quintile of all US dental schools, allowing graduates the opportunity for a wider range of practice opportunities.

The SoDM pre-doctoral program has graduated two classes for a total of 101 graduates. Although it is too early to draw conclusions, the majority of our first two graduating classes are providing care in rural or underserved areas of our State, affording early indications of progress in fulfilling our promises to the people of North Carolina.

Program effectiveness: Tens of thousands of North Carolinians do not have access to adequate oral health care services and do not have a dental home. In fact, North Carolina's dentist-to-population ratio currently ranks 47th among the 50 states. We are pressed to meet the evolving oral health care needs of an increasingly diverse population, with particular emphasis on providing care for vulnerable populations. Acknowledging this challenge, the School of Dental Medicine (SoDM) has successfully implemented a contemporary and innovative model of community-based dental education to meet these oral health challenges in our State. To date, the SoDM has graduated 101 dentists, all from NC, and in the process the School has provided a dental home for more than 40,000 patients from the mountains to the coast. Just imagine the impact as the school matures and the graduates begin practice.

Funding: Funding sources over $1M:
North Carolina State Legislature, Clinical Revenue, Tuition and Fees, Contracts and HRSA Grants
(HRSA 10-070 Grants to States to Support Oral Health Workforce Activities - Sponsor ID: T12HP19337-010-00; CODE Creating Opportunities for Dental Education - Sponsor ID's: D85HP2265140 and 15D85HP22651)

Link: www.ecu.edu/dental

Mariposa Integrated Task Force (ITF)

STATE: ARIZONA

Submitted by: Susan Kunz
Program: Mariposa Community Health Center's Dental, Medical and Community Health Services Departments

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Purpose: Mariposa Community Health Center is a Federally Qualified Health Center in Nogales, Arizona on the U.S.-México border. We established the Integrated Task Force (ITF) in 2016 to increase communication and collaboration across health center departments in order to increase overall access to oral health care among current Mariposa patients and to attract more community members to Mariposa as an oral health care home. The ITF meets monthly and is coordinated by the Community Health Services Department (Platicamos Salud/Let's Talk Health), to bring together medical, dental and other support staff to identify gaps and close gaps in communication and services.

Summary: The Integration Task Force's first step was to host a series of information sessions so that staff members from various departments could share the work they do, the needs they see and ideas to address them in a more coordinated way to benefit patients and improve health outcomes. It is amazing how departments in one organization can function in silos! A decision was made to meet monthly to identify and track action items. Four priority areas were identified for collaboration: 1) increase oral health care for adults with Type 2 diabetes; 2) increase oral health for women during pregnancy; 3) get more children to begin to see the dentist at their first birthday; and 4) get more children with Medicaid dental coverage into Mariposa or another dental provider as an oral health home. Although the goal was to better use existing resources in terms of Mariposa's personnel and infrastructure, private funding opportunities were also identified to build our capacity to meet our goals.

Mariposa's ITF has established a strong referral loop so that adults with diabetes are referred to the dental department and their care is documented in the patient's medical record via both the dental and medical electronic medical record (EMR) systems that are unique. If the referred adult diabetic patients do not take advantage of recommended oral health services due to cost, eligibility staff work one-on-one with patients to determine if they qualify for Mariposa's sliding fee discount program. Mariposa also added two dental visits to its prenatal package so that all pregnant women may receive oral health care as a part of their pregnancy journey. We believe that this is a significant preventative strategy, given the growing evidence of the importance of oral health to positive pregnancy outcomes and the fact that mothers are gatekeepers for health behaviors and health care patterns for their children.

Mariposa's Maternal-Child Health Managers (Community Health Workers/CHWs) now provide storybooks in Spanish and English as a part of their home visitation services with families of children under age two to promote scheduling the child's first dental visit at her/his first birthday, and also provide parents with sippy cups to avoid extended baby bottle use and avoid early tooth decay. We also worked with local Medicaid health plans to determine how many children and adolescents are eligible for dental services but do not appear to be accessing them in order to design an outreach campaign that involves the Santa Cruz County Superintendent of schools and all major schools districts in the county. The campaign will encourage parents and school personnel to take advantage of the dental health services that their children are eligible for via Arizona's Medicaid program, the Arizona Health Care Cost Containment System (AHCCCS). We will be hosting our first Give Kids a Smile Day in February 2017 to provide free care to uninsured children referred by school personnel. Mariposa received a grant in February also from the Delta Dental Foundation of Arizona to establish a county-wide, multi-sector oral health coalition that will include local businesses to promote good oral health hygiene and access to dental health services for all ages.

Program effectiveness: Given the recent establishment of the ITF, most results are qualitative thus far. Most obvious and very important to sustainability is the higher level of communication between departments and certain staff members that has created a very positive environment for change and quality improvement. The new norm is here to stay. We are currently collecting data on the number of priority patients (adults with diabetes, pregnant women, infants turning one year of age, children under two years of age and children/adolescents) who are accessing care for the first time or improving their oral health habits, but implementation time has been too short to reflect longer-term results. Such data is being collected via our EMR systems, data bases established for grant-funded programs and via ITF meeting minutes. For example, the policy to add two dental visits to the prenatal care package was just approved in December 2016. We will be taking a look at data soon in order to make course corrections and to celebrate our success!

Funding: The American Dental Association Samuel Harris Fund awarded Mariposa $5,000 for the purchase of oral health kits, sippy cups and children's books in Spanish and English about a child's first trip to the dentist for use by Maternal-Child Health Case Managers in home visitation with mothers and children under two years of age served by the Healthy Start (federal) and Health Start (state) programs.

The Delta Dental Foundation of Arizona awarded $18,758 to Mariposa to support a new Santa Cruz County Oral Health Coalition that will raise cross-sector awareness of the importance of good oral health and regular oral health care, as well as expand Mariposa's network to reach underserved groups in the county.

Link: N/A

Engaging Rural Dental Providers in Cardiovascular Disease Prevention

STATE: MINNESOTA

Submitted by: Derek Hersch
Program: Hearts Beat Back: The Heart of New Ulm Project

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Purpose: In an effort to expand heart disease prevention efforts within rural Brown County, Minnesota, we engaged with local dental clinics. The objectives for this project were: 1) understand the knowledge, attitudes and behaviors of dental providers in Brown County, Minnesota, as they relate to patients' sugar-sweetened beverage intake and tobacco use; 2) identify dental clinics' current policies and practices related to tobacco use and sugar-sweetened beverage intake assessments, counseling guidelines and tobacco cessation referral processes; 3) create an educational and referral resource that can be shared with patients; and; 4) provide a continuing education event.

Summary:

Clinic and Provider Surveys

The first two objectives were accomplished through the distribution and collection of baseline and follow-up clinic and provider surveys. Of the ten original clinics that were identified in Brown County, one was excluded due to their specialization in oral surgery, and not general dental practice. Out of the nine clinics invited to participate, eight opted in and completed the baseline clinic survey, and six completed the follow-up survey. Among the participating clinics at baseline we received surveys from 51 out of 59 dental providers—a response rate of 86%, which is 36 points higher than the average rate for health professionals. At follow-up, 36 providers completed the surveys, a response rate of 61%. From the clinic and provider surveys, we are able to describe the knowledge, attitudes, behaviors, policies and practices surrounding tobacco cessation and sugar-sweetened beverage consumption in Brown County.

Resource guide

Shortly after the baseline assessments, a patient resource guide was created and 1,000 copies were disseminated to participating clinics. This guide was designed to help providers give their patients useful advice, and additional resources to take action on their behaviors. Our guide contains regional and national resources on tobacco cessation, oral health, and cardiovascular health. Additionally, strategies for improving one's oral and cardiovascular health are provided, with emphasis on tobacco cessation, healthful eating, and physical activity. This guide was created with input from Brown County dental clinics, as well as Delta Dental of Minnesota.

Continuing Education Events

The fourth objective of this project was to provide three continuing education events for dental providers in Brown County. The overall goal of these events was to increase Brown County's dental providers' knowledge and self-efficacy for addressing tobacco-use and sugar-sweetened beverage intake among their patients. Based on the baseline assessments, it was determined that the most useful topic for this event would be tobacco cessation counseling. Based on provider feedback (i.e. scheduling conflicts due to travel or clinic operations), we determined that holding one event in New Ulm was the most feasible. To reach providers unable to make the event, and disseminate the information outside of Brown County, we digitally recorded the presentation and posted it on the Hearts Beat Back website and the Minnesota Dental Association's Provider Education Portal.

On September 29th, 2015, the continuing education event was held and 31 providers were in attendance. Speakers included Derek Hersch from the Minneapolis Heart Institute Foundation, who provided an overview of the project and the baseline survey results, Merry Jo Thoele, MPH, RDH, Director of the Minnesota Department of Health's Oral Health Program, who presented, "Coaching Patients to a Brighter Smile and Healthier Heart," and Brianna Longeway, administrator of the Minnesota Department of Health's "Call it Quits Referral Program."

Learning objectives for this event were:

- Describe the impact of tobacco use and sugar-sweetened beverage intake on CVD risk and oral health
- Confidently discuss tobacco-use and sugar-sweetened beverage intake with patients
- Identify strategies for referring patients to appropriate resources and follow up

Overall the project identified several key areas of improvements within the dental clinic setting to improve providers' adherence to the 5 A's. The findings suggest a major need to inform providers and clinics on the benefits of cessation training and encourage clinics to support providers' taking an active role in counseling. Participation in the project has also resulted in several clinics being more engaged with the community-wide Heart of New Ulm Project.

Lessons Learned

Several unexpected observations were made since the beginning of the project:

1. The contact person at the clinic (usually the office manager) appeared to have a significant influence on how the study was received. Some office managers were at the clinics, while others were located at their main office in a larger city.

2. Business hours varied greatly. Some clinics were open five days a week while others were only open a few days a week or month; logistically this was challenging for dropping off surveys and resource guides.

3. Clinic schedules varied, thus scheduling a continuing education was a challenge. Barriers cited to attending an event included: they were too busy, and New Ulm was too far away. The clinic with the most resistance said that their staff gets all their continuing education units at the annual MN Dental Conference, so they would likely not attend our event. In a rural area, travel appeared to be a major barrier.

Program effectiveness:

Survey Results

Baseline surveys with clinics and their providers have provided several notable results. All eight of the clinics have patients complete a health intake form, though only six ask about tobacco use, and only one asks about sugar-sweetened beverage intake. Half of the clinics have their providers verbally assess patients' tobacco use and sugar-sweetened beverage intake, however only one clinic offers provider training for addressing these behaviors. At follow-up, two additional clinics reported they assess patients' current tobacco use with a health intake form. Two other clinics also began having providers ask about patients' sugar-sweetened beverage consumption, with one also discussing the health effects.

Of the providers surveyed at baseline, 67% regularly ask their patients about tobacco use, 61% advise them to start a cessation program, 29% assess their patients' willingness to quit, 22% assist them in developing a quit plan, or referring them to cessation resources, and 18% arrange to follow-up and assess tobacco use at the patient's next visit. At follow-up there were several notable improvements: 77% (+10%) now regularly ask their patients about tobacco use, 74% (+13%) advise them to start a cessation program, and 31% (+9%) assist in developing a quit plan. There were no notable changes in sugar-sweetened beverage counseling behaviors. Therefore, a disparity persisted in how providers are addressing their patients' tobacco use versus sugar-sweetened beverage intake. This is reflected in how confident providers reported to be in advising their patients on tobacco cessation (47% strongly agree or agree); as opposed to sugar-sweetened beverage reduction (90% strongly agree or agree). Limited time was again cited as the primary barrier to advising patients on tobacco cessation and sugar-sweetened beverage use.

Continuing Education Event

Following the event, providers were asked to complete an evaluation and we received 27 responses. Nearly all (99%) of the responding providers reported that the event met each of its learning objectives, and 94% agreed that the event was beneficial and relevant to them. Unfortunately, only 19% reported using the patient resource guide created by the Minneapolis Heart Institute Foundation. Lastly, providers identified three barriers to implementing what they learned: time, patient interest and support from D.D.S.'s.

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Link: www.heartsbeatback.org/communities/heart-of-brown-county/oral-health

National Rural Health Association