

# Advancing Oral Health Equity

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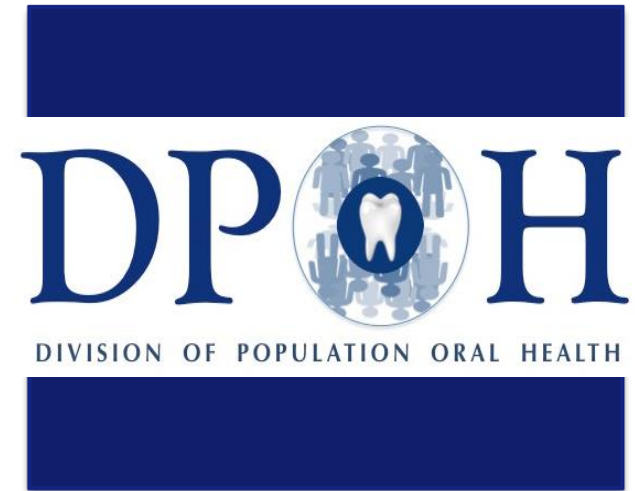
# Our Discussion Ahead...

- **Why oral health matters?** The ‘silent epidemic’ of unmet dental needs
- **What barriers shape poor oral health outcomes?** Challenges for underserved and vulnerable communities
- **What can we do to improve oral health equity?** MUSC and partners collaborating to address inequities in oral health

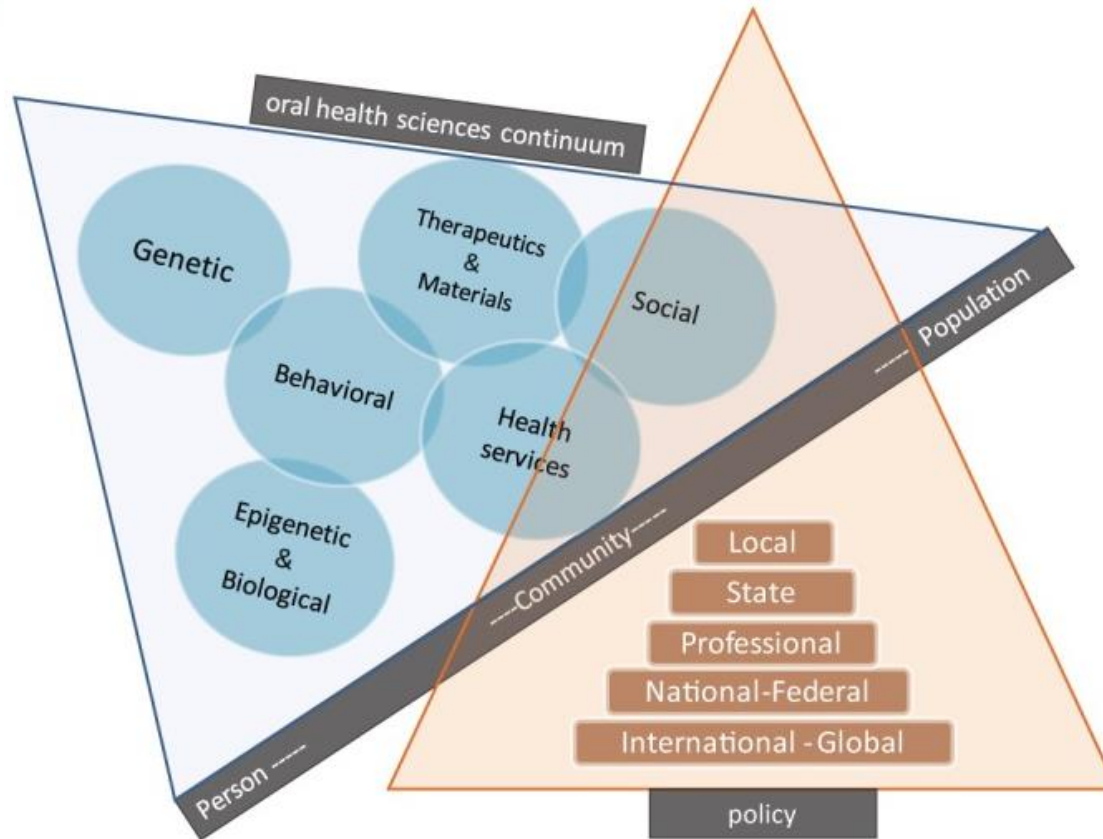


# Who we are..

- Since inception in 2014, the Division of Population Oral Health has been awarded over \$6.8 million for interprofessional training, research, and service from federal, philanthropic, & corporate partners.
- **Location:** Administratively located in the College of Dental Medicine at the Medical University of South Carolina
- **Mission:** The DPOH dedicated to an interprofessional examination of oral health equity with safety net communities such as those in rural America. There is a combined experience of public health, health services, translational and clinical scientists dedicated to improving oral health for underserved populations.



# Where do we fit?



# Why oral health matters?

## ....Oral health disparities hurt everyone!

- 23% of children aged 2–5 years experienced tooth decay; in comparison to non-Hispanic white children aged 2-8, Hispanic and non-Hispanic black children experienced untreated tooth decay two times more in their primary teeth

Dye, B. A., Thornton-Evans, G., Li, X., & Iafolla, T. J. (2015). Dental caries and sealant prevalence in children and adolescents in the United States, 2011-2012.

- Untreated tooth decay can cause unwanted pain and infections that may lead to problems with eating, speaking, playing, learning and even lead to fatal consequences

<https://www.cdc.gov/oralhealth/basics/childrens-oral-health/index.html>

- In comparison to their urban counterparts, US rural children are less likely to have:
  - Teeth in ‘excellent’ condition
  - Any dental visits in the preceding year
  - Dental insurance
  - Preventive dental care in the preceding year

Davis, M. M., Hilton, T. J., Benson, S., Schott, J., Howard, A., McGinnis, P., & Fagnan, L. (2010). Unmet dental needs in rural primary care: a clinic-, community-, and practice-based research network collaborative. *Journal of the American Board of Family Medicine : JABFM*, 23(4), 514–522. doi:10.3122/jabfm.2010.04.090080



# Oral health and economic implications

**The New York Times**

## *How Dental Inequality Hurts Americans*

Lack of dental care through Medicaid not only harms people's health, but has negative economic implications as well.

By Austin Frakt Feb. 19, 2018



**Unmet dental needs are linked to employability.** “One-third of (poor) adults report the appearance of their teeth and mouth affected their ability to interview for a job.”



# Deamonte Driver

- Deamonte never complained and no one was looking
- Mid-January 2007, had severe headaches
  - Pediatrician found tooth decay upon an oral exam
- Diagnosed first as a sinus infection and then a brain infection
- Underwent 2 brain surgeries, experienced seizures, had 1 tooth extracted, and spent 6 weeks in a hospital
- Emergency treatment cost = \$250,000
  - Medicaid cost of simple extraction - <\$100
  - Medicaid cost of preventive services - <\$60 - \$80/year



- For Want of a Dentist, 2007  
Voices of Maryland, Deamonte Driver  
<https://youtu.be/BHYBHKma3x8>
- Advancing Oral Health in America Report Brief,  
Institute of Medicine, 2011



# Why oral health matters for humanistic reasons?



- Middle-aged woman in Pee Dee Region
- Presented with fasciitis and sepsis due to untreated abscess
- Admitted to inpatient bed in September 2016
- Death due to sepsis





# Why oral health matters?

## ...What are costly diagnoses to your states' Medicaid programs?

- [Those who come early...Preemies](#)

Huck O, Tenenbaum H, Davideau JL. Relationship between periodontal diseases and preterm birth: recent epidemiological and biological data. Journal of Pregnancy, 2011, Article ID 164654.

- [Those who live long...Dementia/Alzheimer's](#)

Manczak M, Reddy, PH. Abnormal interaction of oligomeric amyloid-beta with phosphorylated tau: Implications to synaptic dysfunction and neuronal damage. Journal of Alzheimer's Disease 36(2), 2013, DOI:10.3233/JAD-130275.

- [Those who with chronic disease...Diabetes & Cardiovascular Disease](#)

Leite RS, Marlow NM, Fernandes JK. Oral health and type 2 diabetes. American Journal of Medical Science. 2013 Apr;245(4):271-3



# Unmet Oral Health Burden for Hospitals

An iceberg floating in the ocean. The tip of the iceberg is above the water line, and the much larger base is submerged. The text is placed on the iceberg to illustrate the concept of unmet needs.

**ER Visits for Unmet Needs**

**600+ saliva depleting Rx**

**Memory disorders**

**Substance Abuse**

**Uncontrolled A1c**

**Preterm labor**

**HIV**



# Unmet Oral Health Burden for Hospitals

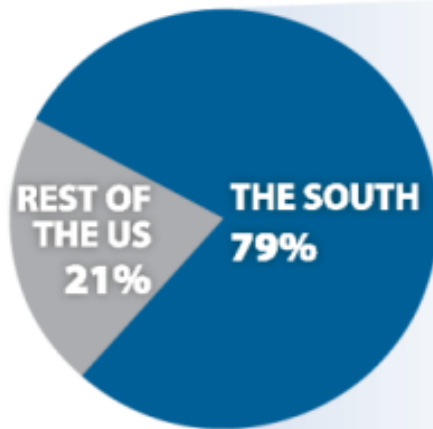
- Rural hospitals face unique challenges due to their size and case mix.
  - During the 1980s, many were forced to close due to financial losses.
  - From January 2005 to July 2016, 118 rural hospitals closed permanently and 7 closed but later reopened.
  - The number of closures has increased each year since 2010; in the first half of 2016, the closure rate surpassed two closures per month (North Carolina Rural Health Research Program, 2016).



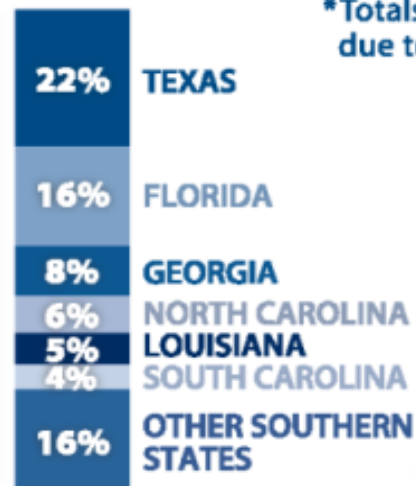
# The Access Gap

## Nearly 4 Million Poor Uninsured Adults in the South in States Not Expanding Medicaid Fall Into the Coverage Gap

**TOTAL: 4.8 MILLION  
UNINSURED ADULTS  
IN THE COVERAGE GAP**



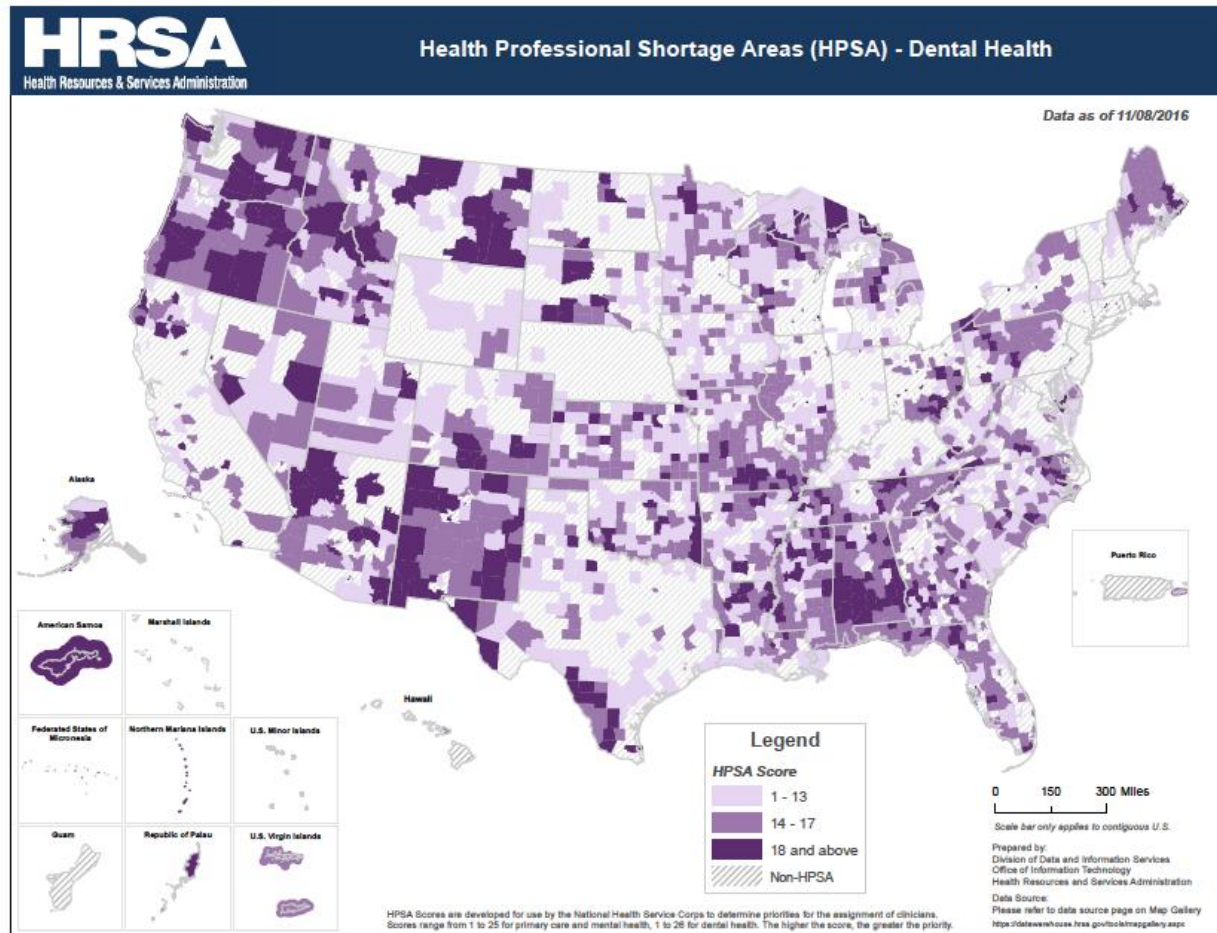
**SOUTHERN TOTAL: 3.8 MILLION  
UNINSURED ADULTS IN THE  
COVERAGE GAP\***



\*Totals do not sum due to rounding



# Unequal distribution of oral health resources



# Dental Safety Net Capacity Considerations

## Estimates of Need

## Pop. Numbers

National estimate of underserved

82 million

Number that see a dentist annual (27.8%)

22.8 million

## Current Estimates of Capacity

## Pop. Numbers

Existing capacity at CHCs, hospitals, public schools & dental schools

7 to 8 million

## Estimates of Capacity Expansion Options

## Pop. Numbers

Expand CHCs & their efficiencies

2.5 million

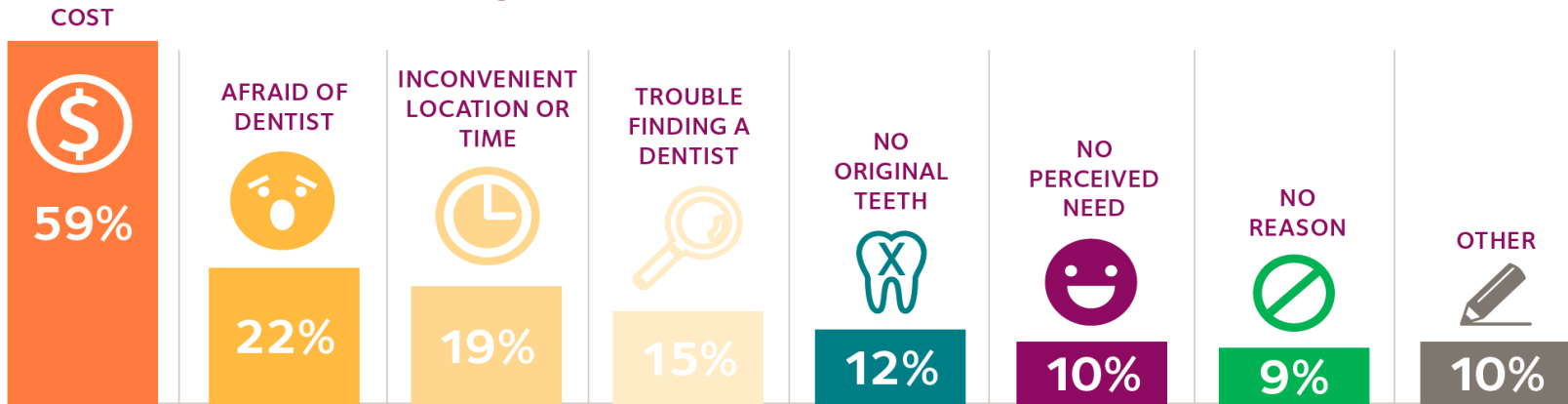
Require dental school grads to receive 1 year of residency training, and senior dental students and residents to work 60 days in community clinics and practices.

***Bulk of additional capacity needs to come through private practice settings but how do we pay for this?***

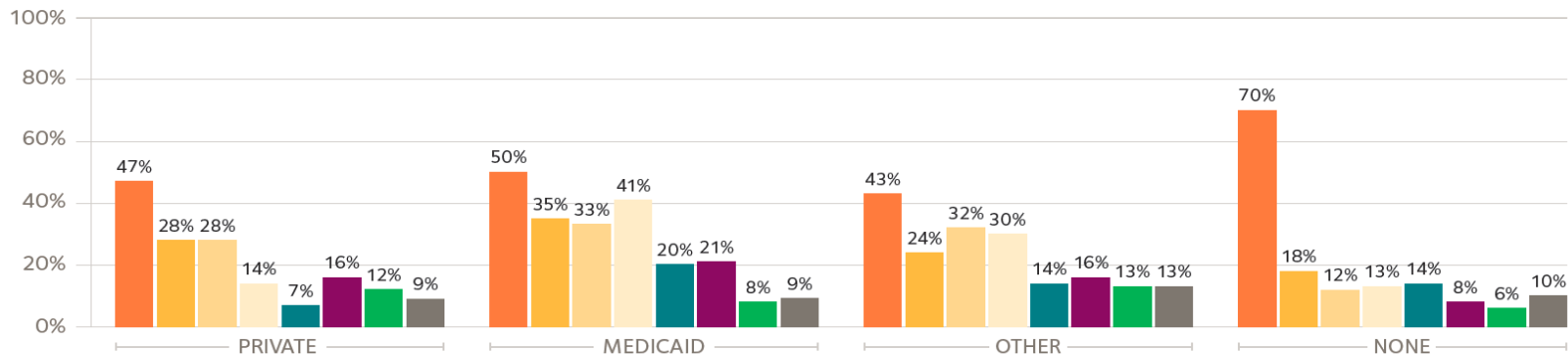


# Why are we not going to the dentist?

Reasons for Not Visiting the Dentist More Frequently,  
Among Those Without a Visit in the Last 12 Months



## Source of Dental Benefits



**HPI** Health Policy Institute

ADA American Dental Association\*

Where have all the dental visits gone, 2015  
<https://youtu.be/bIKsLleVsH8>

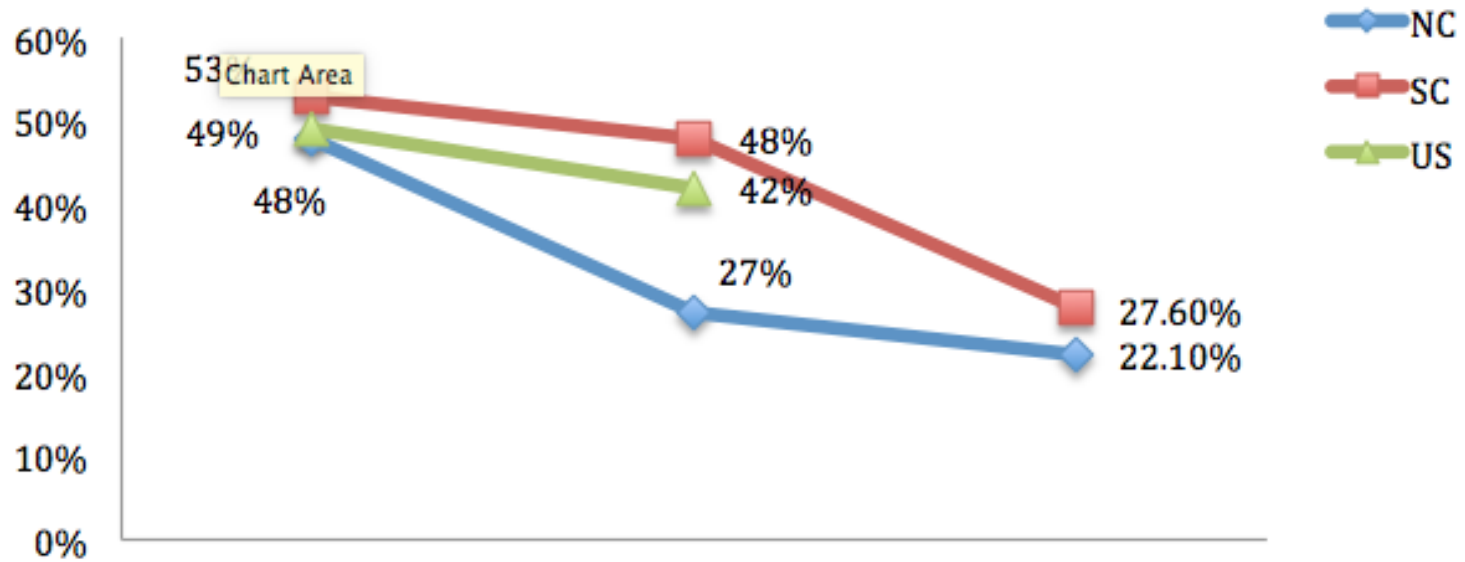
**MUSC**  
Medical University  
of South Carolina

Changing What's Possible | MUSC.edu



# Medicaid Reimbursement & DMD Participation

**Comparison of Medicaid Reimbursement Indicators, 2014**  
**Source: ADA HPI**



Medicaid Fee-for-Service Reimbursement as a Percentage of Private Insurance for Child Dental Care

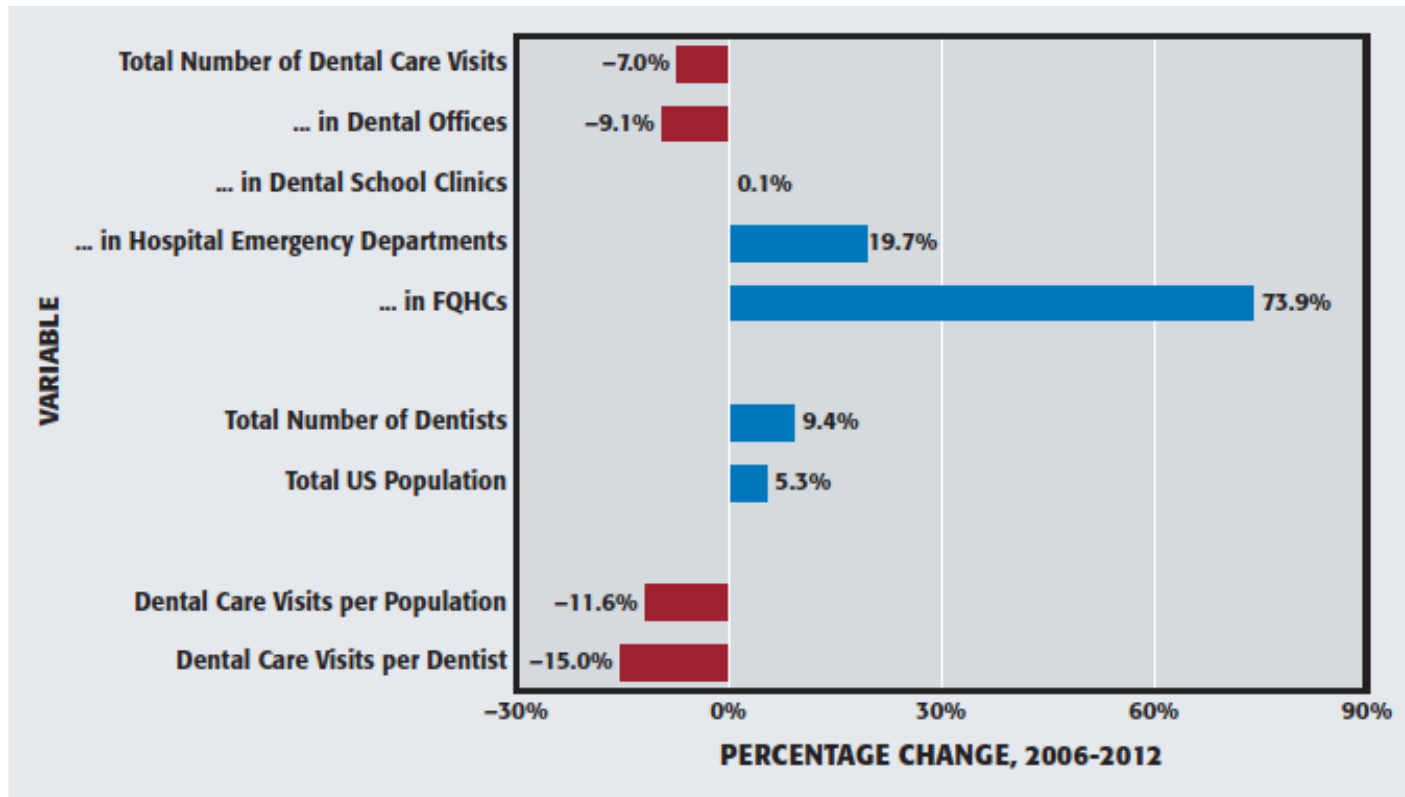
Percentage of Dentists Participating in Medicaid for Child Dental Services

Percent Decrease in Reimbursement Rates 2003-2013





# Where have all the dental visits gone?



**Figure.** Changes in dental care visits, number of dentists, and US population from 2006 to 2012. FQHC: Federally Qualified Health Center. Sources: Agency for Healthcare Research and Quality,<sup>1,2</sup> Health Resources and Services Administration,<sup>3</sup> American Dental Association Health Policy Institute,<sup>4,5</sup> and the US Census Bureau.<sup>6</sup>



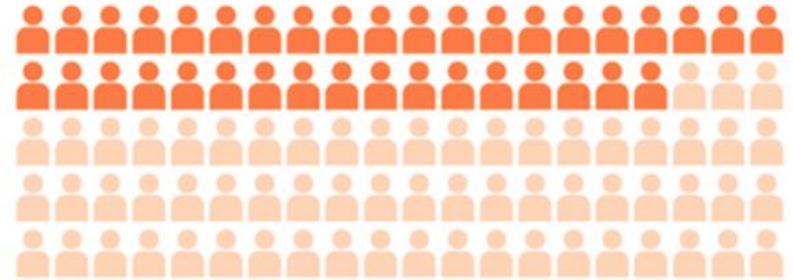
# Values vs. Utilization

What People Say...



**77%** of adults say they plan to visit the dentist within the next year.

What People Do...



**37%** of adults actually visited the dentist within the last year.

Is there cognitive dissonance among Americans when it comes to dental care values & utilization?



# What's in our backyard?

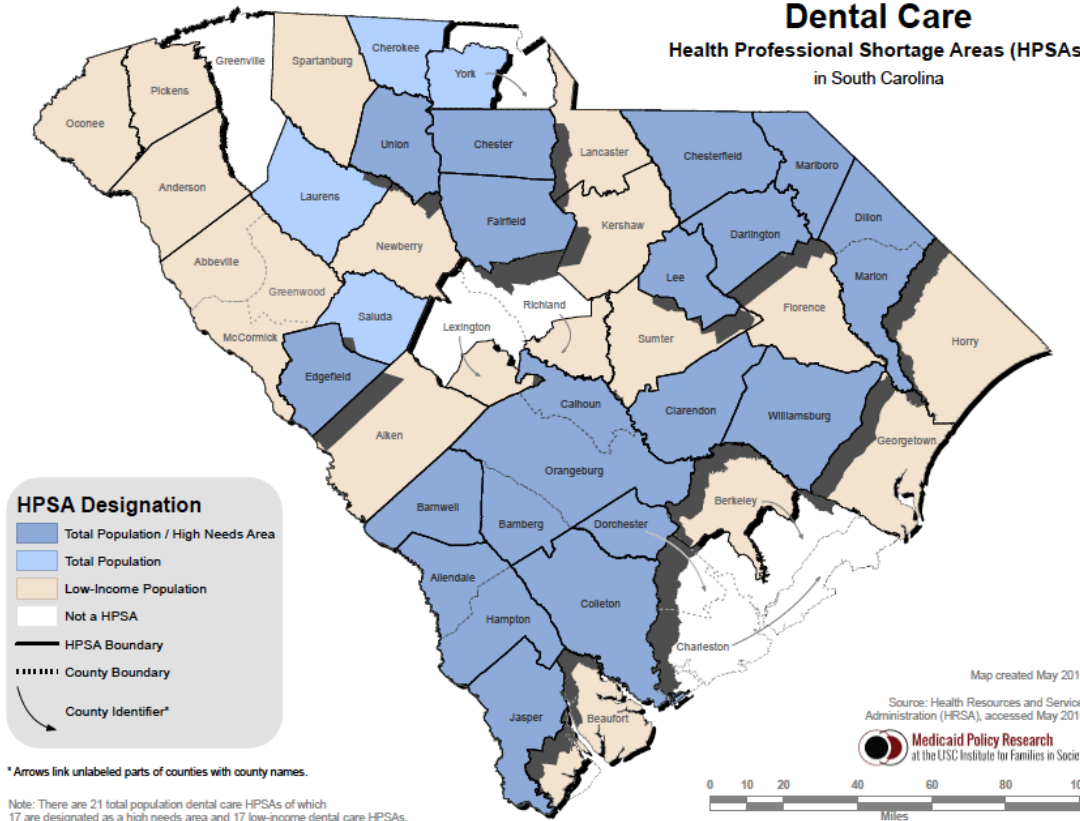
## HPSA Implications:

- Geographic vs. Low Income
- Fluctuations in HPSA scoring

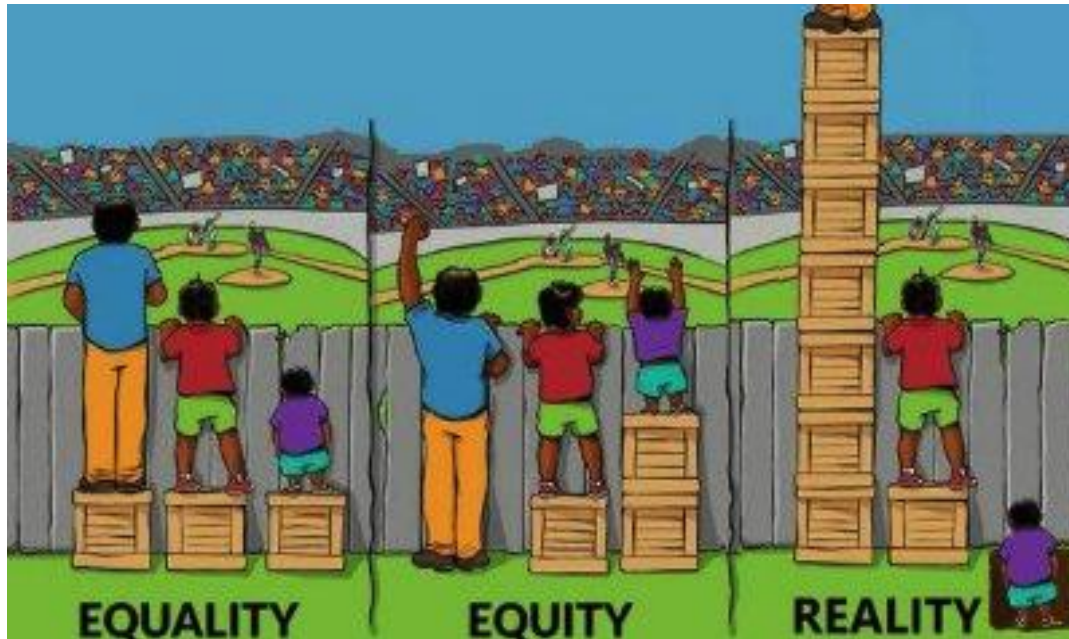
## Contributing Causes:

- Supply
  - MUSC only dental school
  - 55.4% five-year retention rate
- Medicaid participation
  - 48% of SC dentists participate in Medicaid (42% US)
- Medicaid reimbursement
  - Medicaid FFS reimbursement is 53% of private insurance (US 49%)
  - 27.6% decrease in Medicaid reimbursement rates (2003-2013)

**Dental Care**  
Health Professional Shortage Areas (HPSAs)  
in South Carolina



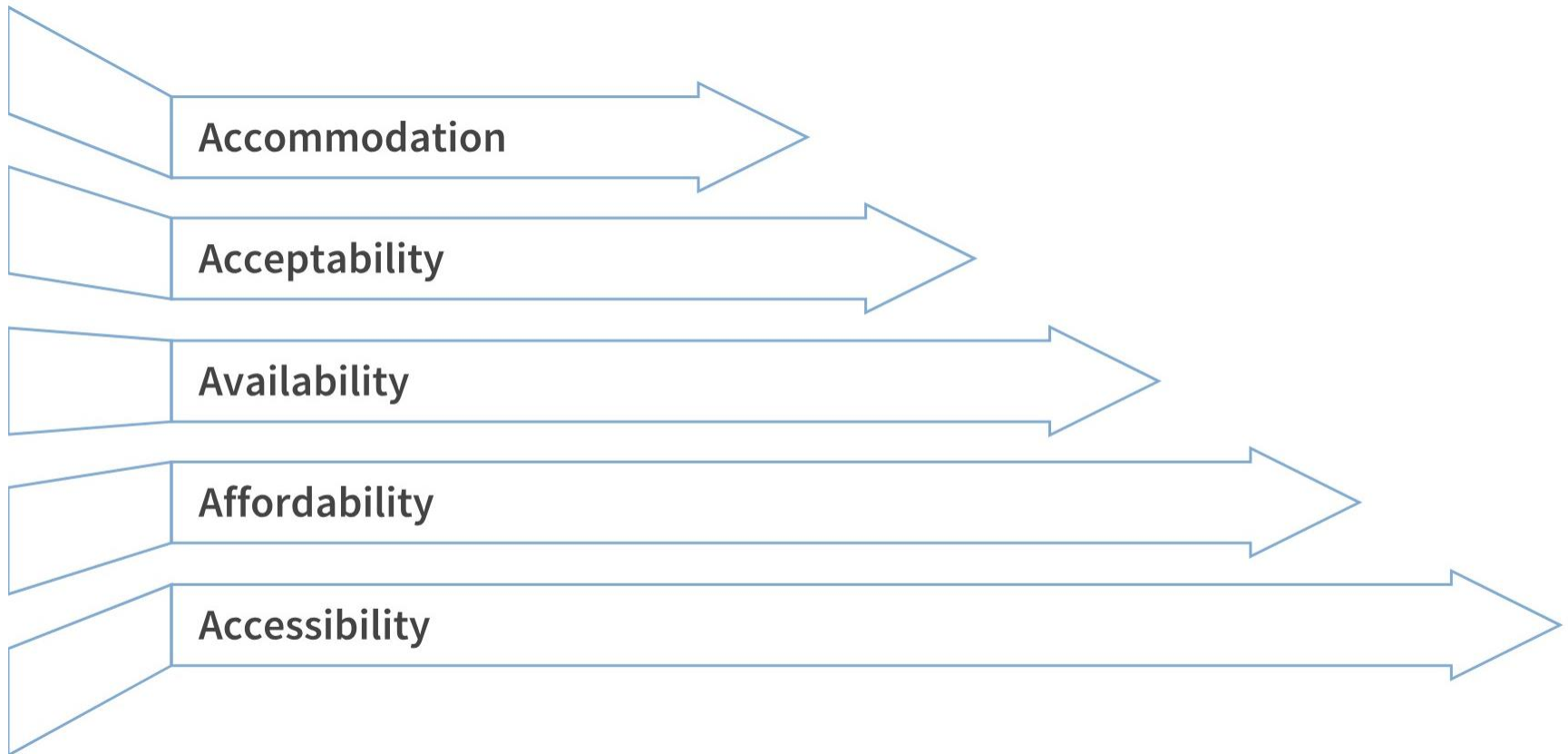
# Our backyard is Not the same for everyone



- Optimal fluoridated community water supplies
- Transportation systems
- Dental insurance coverage



# Dimensions of Healthcare Access and Utilization Impacts Rural Health Outcomes



# Strengthening the Dental Safety Net

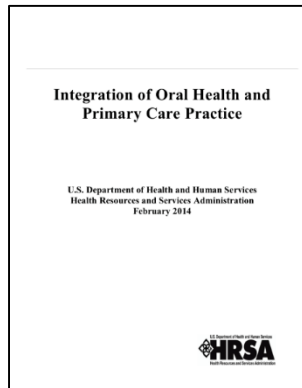
- Dental Education & Training
- Practice Transformation
- Health Systems Enhancement:
  - Interprofessional & Integrated Care Models
  - Policy development

DENTAL CLINICS



# Overview of Integration Models Policy & Practice

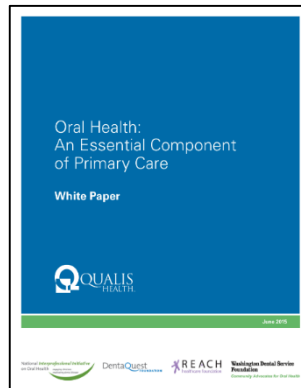
2014



**POLICY IMPERATIVE:**

- Risk Assessment
- Evaluation
- Education
- Preventive Clinical Services
- Collaborative Referral Management

2015



**PRACTICE RELEVANCE:**

- Clinical and quality case for oral health interprofessional practice

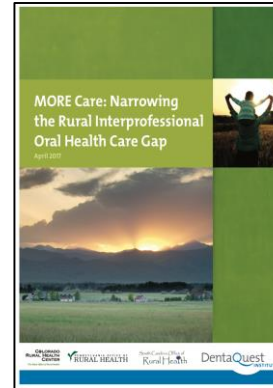
2016



**IMPLEMENTATION GUIDE (THEORETICAL):**

- General guidelines for integrating oral health into primary care

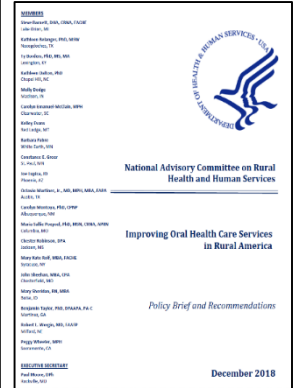
2017



**RURAL PRACTICE LESSONS LEARNED:**

- SC, PA, & CO
- Elements that work and don't work for rural SC populations

2018

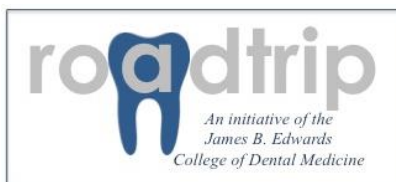


**POLICY RECOMMENDATIONS**

- Recommendations to the USDHHS Secretary on how to improve oral health for rural communities

# Translating Practice to Pipeline

- Graduate-level certificate in safety net dental practice
- Integration of oral health competencies campus-wide in health professions programs
  - Family Medicine & Pediatric Residents
  - Nurse Practitioner Program
  - Physician Assistant Program
  - Pharmacy
  - Public Health Sciences



## Integration of Oral Health and Primary Care Practice

U.S. Department of Health and Human Services  
Health Resources and Services Administration  
February 2014

Thou shall...

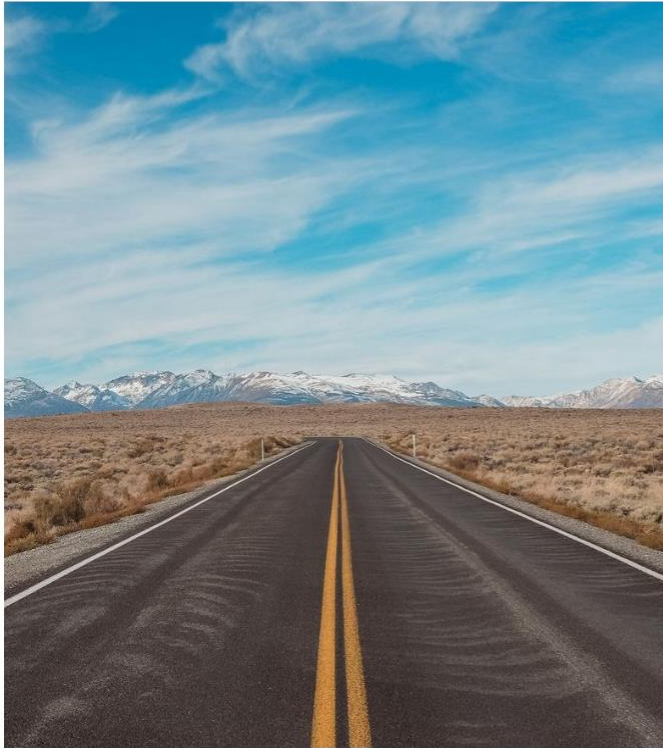
1. Risk assessment
2. Patient education
3. Preventive clinical care
4. Referral management





# Dental Education and Training

## The road we have taken: Overview and Purpose



- **Rural Oral Health Advancement and Delivery through Interprofessionalism (ROADTRIP)**

The purpose of ROADTRIP is to transform interprofessional education at the Medical University of South Carolina so that more dental and primary care graduates have prerequisite clinical and interprofessional competencies, business acumen, and willingness for rural safety net oral health practice. ROADTRIP is funded by the HRSA Predoctoral Training in General, Pediatric, and Public Health Dentistry and Dental Hygiene Cooperative Agreement (D85HP28493).

- **Safety Net Dental Certificate**

We developed an 18-credit hour, online, certificate degree program in Safety Net Dental Practice (SNDP) at the James B. Edwards College of Dental Medicine, including an experiential learning opportunity with various community partners.



# Dental Education and Training

## Overview of program courses



- **Advanced Dental Public Health**  
DPOH 801 CE
- **Safety Net Dental Practice Management**  
DPOH 802 CE
- **Safety Net Dental Practice Leadership**  
DPOH 803 CE
- **Impacts of Poverty and Healthcare Consumerism**  
DPOH 804 CE
- **\*\*Research and/or Experiential Learning**  
Student exposure to field experience within the safetynet for community-based partnerships, oral health policy development, qualitative and/or quantitative research analytics, etc. based on their desired topic of interest.



# Dental Education and Training



*a professional development course designed to elevate your clinical leadership and practice in reducing the risks poverty plays in your patient healthcare outcomes*

## who took our courses?



- Since 2016, 69 students have taken at least 1 Safetynet Dental Certificate Course
  - Dental: 59
  - Pharmacy: 6
  - Health Profession: 1
  - Medicine: 3

## certificate graduates



- 3 Certificate Graduates – Dentist
  - National Health Service Corp Recipients (n=2)
  - Commissioned Officer, Navy

## oral health interprofessional campus activities



- Interprofessional Special Needs Dental Clinic Rotation
- College of Pharmacy, Curriculum Enhancement for Diabetes and Oral Health
- College of Nursing, Elevating Oral Health Champions in Primary Care

## mentored research

- Safety net dental research club
- Stipends for competitive research at national conferences
- Peer-reviewed journal publications



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# The DUKE Endowment Partnership

1. School-based oral health models:  
*New Special Program*
2. Research Consortium
3. Integrated Care Models:  
*POWER Pee Dee*



# End of Life Care = End of Obvious Care?



- Senior adult loses 18lbs in 6 weeks
- Family Medicine Resident & supervising faculty cannot determine origin
- Expensive imaging (MRI) reveals no new information
- Residency Director suggests examining the mouth
- Poorly fitted dentures caused extensive irritations, inflammation, and infection.
- Patient stopped wearing dentures and had been subsiding on a diet of baby food.



# ER Frequent Flyer: Another Opportunity Realized



- 5 ER trips in two weeks for fever of unknown origin
- Family Medicine Resident inspects the mouth
- Prior training on oral health risk assessment
- Appropriate care and referral



# Power Pee Dee Goals & Objectives

Prioritizing Oral Health Workforce & Education in the Rural Pee Dee

## Dentists

- Improve recruitment and retention of private practice, safety net and NHSC dentists in the Pee Dee Region
- Enroll community dentists in the *MUSC Safety Net Dental Certificate Program*
- Develop a Dental Referral Network for children and CSHCNs that facilitates the School Nurses in completing dental referrals for their students

## School Nurses

- Improve oral health of children through integration of oral health interprofessional services in existing school-based telehealth programs through School Nurses.
- SC DHEC and MUSC Telehealth will conduct an Oral Health Training for School Nurses that includes the Basic Screening Tool and the use of telehealth equipment for ensuring access to care for children with urgent dental needs.

## ROHSC & SANDs

- Improve the availability and efficiencies of interprofessional pediatric oral health services through an innovative PH Regional Oral Health Systems Coordinator (ROHSC)
- Increase the number of children with special health care needs who have access to continuous, high quality oral health care services through MUSC CDM SANDs program.

A HRSA funded (T12HP28882) initiative to strengthen the dental safety-net in the most underserved region of South Carolina



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# Power Pee Dee Goals & Objectives

Prioritizing Oral Health Workforce & Education in the Rural Pee Dee



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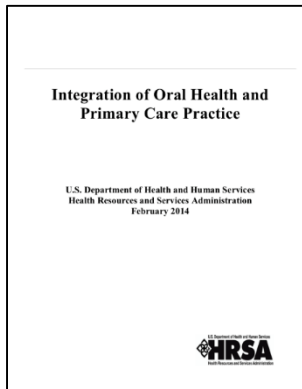


# Practice Transformation and Policy

- **DPOH research has led to improvements in state policies & programs such as changes in Medicaid reimbursement for fluoride varnish.**
  - Our work was recently recognized by the National Advisory Committee on Rural Health & Human Services, the National Rural Health Association, and the DentaQuest Institute.
- **The DPOH has codified a contract with SC Medicaid to serve as their oral health policy analytical partner.**
  - We have been given offices within the agency's Columbia headquarters where a research portfolio is being conducted to explore new reimbursement opportunities for integrated care and value-based care delivery in population-based settings such as public schools.



# HRSA Oral Health Interprofessional Domains for Primary Care Providers



- Risk Assessment
- Oral Health Evaluation
- Preventive Intervention
- Communication & Education

## Care Integration

- Interprofessional Collaborative Practice
  - Shared patient management goals
  - PCP – DMD communication on history, dx, tx, plans
  - Collaborative referral management



# New Patient-Centered Medical Home (PCMH) Standards

- KM 01: PROBLEM LISTS: Documents an up-to-date problem list for each patient with **current & active diagnoses**.
- KM 05 ORAL HEALTH ASSESSMENT & SERVICES: **Assesses oral health needs & provides necessary services** during the care visit based on evidence-based guidelines or coordinates with oral health partners.
- KM 23: ORAL HEALTH EDUCATION: **Provides oral health education** resources to patients.



# Other OH-Related PCMH Standards

KM12 PROACTIVE OUTREACH: Proactively and routinely identifies patient populations & **reminds them, or families/caregivers about needed services.**

KM20 CLINICAL DECISION SUPPORT: Implements clinical decision support following **evidence-based guidelines**

KM21 COMMUNITY RESOURCES NEEDS: The practice identifies/considers and establishes **connections to community resources** to collaborate and direct patients to needed support.

KM26 COMMUNITY RESOURCE LIST: Routinely maintains a current **community resource list** based on the needs identified in KM21.

AC09 EQUITY OF ACCESS: Uses information about the population served by the practice to **assess equity of access** that considers health disparities.

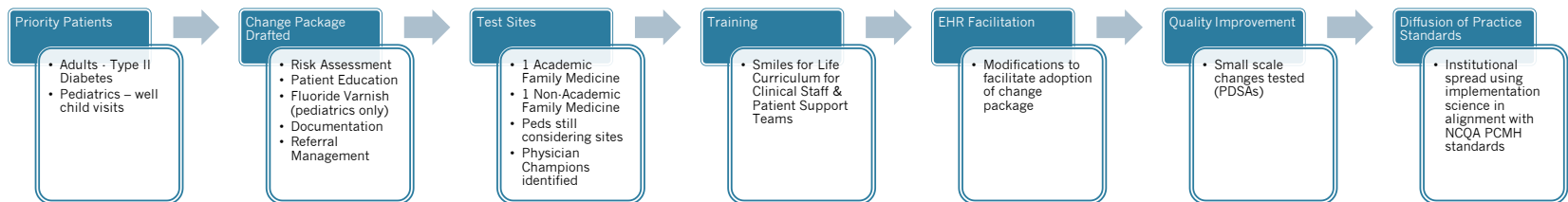
CM 09 CARE PLAN INTEGRATION: **Care plan is integrated and accessible** across settings of care.

CC 04 REFERRAL MANAGEMENT: The practice systematically **manages referrals.**



# Facilitating Primary Care & Oral Health Integration Excellence at MUSC

- The PCMH Workgroup has been convening regularly, partnering with both Departments of Family Medicine and Pediatrics.
- The goal is to ensure MUSC achieves new oral health standards as delineated in NCQA PCMH Standards (2017).
- We are using previously validated change packages with which MUSC CDM has had success, modifying it for the unique organizational culture in our primary care practices.
- Action Plan is delineated:



## *Anticipated Work Plan with Unintended Consequences...*

In addition to improving clinical outcomes and financial efficiencies, a cadre of research opportunities are revealing themselves.



# MUSC Dental Clinics

- **General Dentistry Clinics** are available for routine care through Student Clinic, Resident Clinic, or Faculty Practice
- **Specialty Care Clinics** provide care in Endodontics, Pediatrics, Periodontics, Orthodontics, and Oral Surgery
- **Emergency Dental Walk-In Clinic** serves both new and established patients from 8:45am or 12:45pm
- **Pamela Kaminsky Clinic Adolescents & Adults with Special Health Care Needs Clinic** provides a full range dental services to persons with physical, medical, developmental, or cognitive conditions that limit their ability to access routine care.
- Student/resident rotations at free clinics in the area.

**Dental Clinic Hours**  
Monday through Friday  
8:30 a.m. to 5:00 p.m.  
[29 Bee Street](#)  
[Charleston, SC 29425](#)

**Call for an Appointment:**  
[843-792-2101](tel:843-792-2101)

[Patient Resources](#)



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**SEARCH**

Name

Specialty

Services

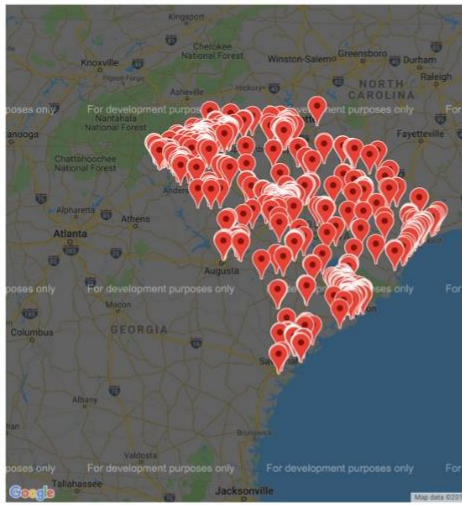
Specialty

Options

Medical?

Search Reset

**LIST VIEW**



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Do you or someone you know have  
 Special Health Care Needs?  
 Are you HAVING DIFFICULTY with  
 FINDING A DENTIST to provide dental care?

[sandsc.org](http://sandsc.org)

An aerial photograph of the MUSC Health campus in Charleston, South Carolina, taken during the "golden hour" of sunset. The sky is a mix of soft pinks, oranges, and blues. The campus features several large, multi-story brick and stone buildings. In the foreground, there are lush green trees and a paved plaza area. A semi-transparent white box with a thin blue border is centered over the image, containing the text "Thank you!!" in a bold, blue, sans-serif font. The MUSC Health logo is visible on one of the buildings.

Thank you!!

