



# ROADS

An initiative of the  
James B. Edwards  
College of Dental Medicine



## **Rural Oral Health Advancements in Delivery Systems: *Exemplification of Public-Private Partnerships for Advancing Oral Health***

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Funding Sources:



## Learning Objectives



- Describe how one state is integrating oral health interprofessional competencies into rural health clinics for two priority patient populations through the MORE Care Initiative (DentaQuest Institute contract).
- Describe how one state is developing innovative definitive care partnerships between rural primary care and dental practices through an Oral Health Workforce grant (HRSA, T12HP28882).
- Describe how ROADS' goals and outcomes align with the Triple Aim for sustainable oral health systems transformation.

*...but first a word from one of our sponsors!*

# An Introduction to MORE Care (Medical, Oral Expanded Health Care)

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## Needs of the Rural Community System

- **Geographic isolation**
  - Lack of adequate transportation
- **Education and Health Literacy**
  - Experience fewer high school and college graduates
- **Rate of poverty is higher in non-metro**
- **Lack of fluoridated community water supply**
  - Rural communities find it cost prohibitive
- **Provider shortages**
  - A large majority of the nation’s Dental Health Professional Shortage Areas are in rural America
    - General dentists less likely to see under 3 y.o.

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geographic isolation—There are fewer dental health professionals in rural areas resulting in

people having to travel farther to obtain oral healthcare

lack of adequate transportation—Public transportation systems are often non-existent, causing rural residents, particularly low-income residents, difficulty in traveling to a dentist

rate of poverty is higher in nonmetro areas—Rural populations living in poverty most often do not have the ability to afford dental healthcare or purchase dental health insurance

provider shortages—A large majority of the nation’s Dental Health Professional Shortage Areas are in rural America. Children in rural areas have little to no access to pediatric dentists.

Similarly, general dentists in these areas are less likely to see children under age 3, which exacerbates the Early Childhood Caries crisis.

difficulty finding providers willing to treat medicaid patients—

Low reimbursement rates cause many dentists to not accept Medicaid or Children’s Health Insurance Program (CHIP) patients

lack of fluoridated community water supply—Rural communities often find fluoridated water systems to be cost prohibitive<sup>1</sup>

education and health literacy – Rural areas experience fewer high school and college graduates, which has a negative impact on health literacy.

Through MORE Care, DQI is partnering with state offices of rural health as well as other national and state

## Rural Health Clinics



## A Gap Exists



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## How can we close the gap?



- ...By using the science of quality improvement (QI)
  - Focuses on the **system**
    - Looks to understand, using a **team** approach, how the care delivery system is working using {local} **data** with a **focus on the patient**
  - It is the testing, implementation, and adoption of **new changes and ideas** that lead to measurable improvements in health outcomes

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Need to differentiate

- Quality – attribute of the ‘work’ being done. How well a crown was placed
- Improvement – do better than currently doing

What we are thinking about is redesigning work flow – what happens for the patient? And the system is your office or parts of your office. Some folks call it ‘front and back’. There are things that happen when a patient checks in and out and there is the care that happens in the back. Your office is in motion. You won’t have time to close, so the theory is you can question and learn within daily work. **Example – flying the plane and fixing it at the same time.**

How well is the current system working?

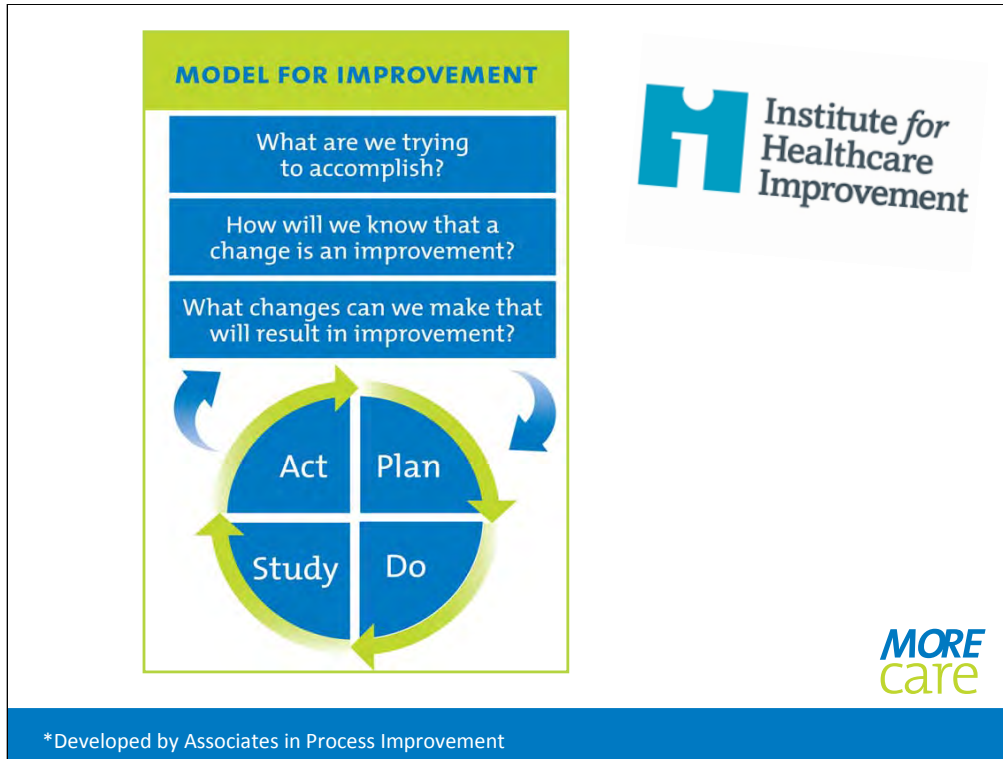
What happens if we try a change?

Need to document performance

The GOAL is improvement. Not making a change for change sake.

Want something to get better





The framework we use is called the Model for Improvement. The Model for Improvement guides you in learning from experience and determining a plan of action based on information you've gathered. Developed by Associates in Process Improvement, the Model for Improvement has been used in many healthcare organizations to guide them along their journeys to improve the health of their patients.

Composed of three key questions and the Plan-Do-Study-Act cycle – we will look at the components in the next section of the webinar.

To “use” quality improvement, we apply the Model for Improvement. A tool designed to accelerate learning. Think about the scientific method – this is built on that premise – you have a question you want to answer and a prediction about what will happen. The MFI has 2 parts – 3 fundamental questions we are trying to answer and the PDSA cycle – a method for testing changes in real work settings. The questions define the endpoint (what are we trying to improve)

MFI is not linear but iterative. Allows you to step back and ask “what are we doing/what is happening?”. Trial and error learning approach to improvement that emphasizes prediction and feedback loops all for learning.

This is a tool, a framework, it is not the rule. It is flexible and comprehensive.

## **MORE Care: Goals**

- **Test strategies for integrating oral health primary and secondary prevention of dental disease into primary care practices**
- **Test an optimal patient-centered referral system between medical and dental care teams**
- **Test Health Information Technology and Telehealth models for improved quality of care and capacity enhancement**

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## Model Spread

### *MORE Care Dissemination Plan*

**INNOVATION:** Phase I and II include the pilot period, with a small group of states, to develop new models of care delivery.

**TESTING:** Phase III will involve a larger number of states to test the new innovative models of care

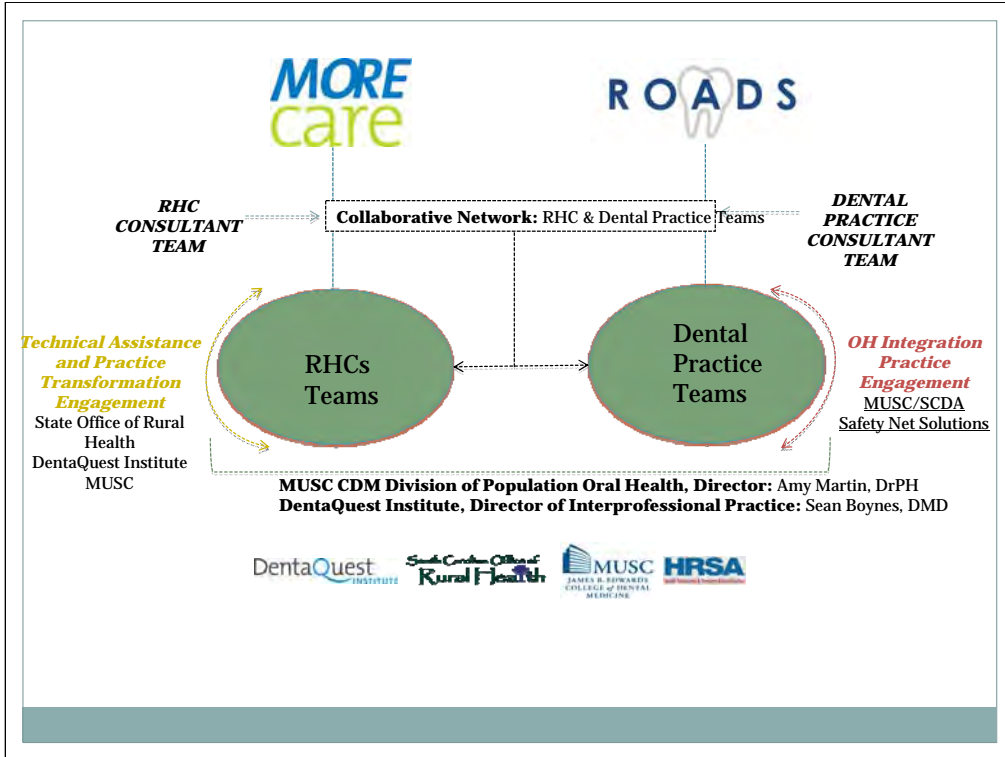
**SPREAD:** Phase IV and V will establish adoption of the models in areas where testing has demonstrated improvement of care delivery.

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## MUSC-USC Collaborations for Rural Oral Health Improvement Community Investments by Congressional District

***Strengthening the Rural Dental Safety Net*** (2012 to present)

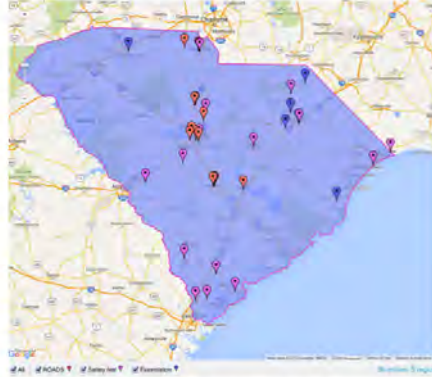
Improved rural access to dental care for through improved efficiencies and capacity growth. Technical assistance was provided to FQHC Dental Programs by DentaQuest Institute's Safety Net Solutions. SC Primary Care Association was an essential partner on the project.

***Rural Community Water Fluoridation Advocacy & Improvements*** (2012 – 2015)

Improved or continued access to optimally fluoridated water in seven rural communities at risk for losing their community water fluoridation equipment due to failing equipment. We provided advocacy training to local pediatricians, dentists, water system operators, & early childhood development program (e.g. Head Start or First Steps). SC Dental Association & SC Department of Environmental Control are core partners.

***ROADS – Rural Oral Health Advancements through Delivery Systems*** (2015 to present)

Improving access to and quality of care through innovative integration models of primary care and oral health providers. We are working with Rural Health Clinics and Community Dentists in three markets: Rock Hill/York, Fairfield/Blythewood, and Orangeburg/Santee. SC Dental Association & SC Office of Rural Health are core partners on the project.



Service Area	Congressional Districts	Safety Net Impact*	Water Fluoridation Impact*	ROADS Impact*
Beaufort Jasper Hampton	1, 6	\$45,000 and 7,500 residents		
Horry Georgetown	7	\$45,000 and 5,640 residents (Horry only)	\$16,330 and 45,000 residents (Georgetown only)	
Sumter	6	\$45,000 and 5,000 residents		
Richland Lexington Fairfield	2, 5	\$45,000 and 2,630 residents		\$280,000 and 200 to 2,000 residents (Fairfield only)
Orangeburg	2, 6	\$45,000 and 1,900 residents		\$280,000 and 200 to 2,000 residents
Florence Darlington Marlboro	7		\$115,294 and 141,587 residents	
Spartanburg	4		\$37,650 and 180,000 residents	
York	5			\$290,000 and 200 to 2,000 residents

\*Funds directly spent in the community at medical and dental practices and water systems.



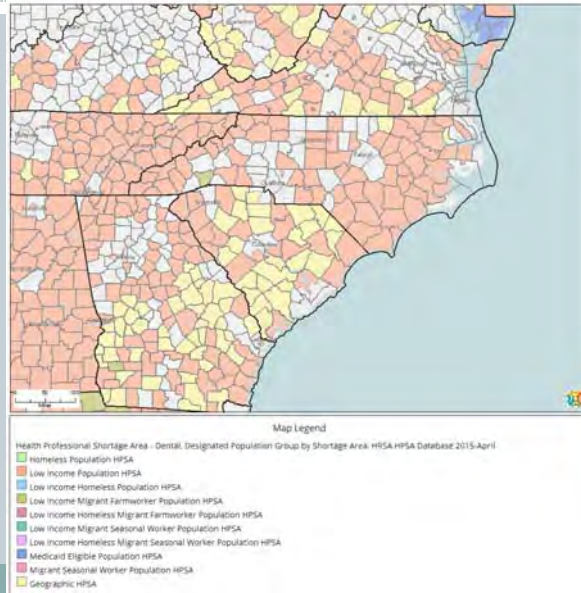
# Our Backyard

## HPSA Implications

- Geographic vs. Low Income
- Fluctuations in HPSA scoring

## Contextual Supply Factors

- Supply
  - *MUSC only dental school*
  - *55.4% five-year retention rate*
  - *59.1% of all practicing dentists are our graduates (2011)*
- 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)*



## Purpose & Goals of ROADS

- To reduce rural oral health disparities experienced by high-risk adults with diabetes and children through medical-dental integration that emphasizes improvements in preventive care and system performance.
- Our purpose will be achieved through four goals:

Goal 1. Optimize practice of **primary prevention** through oral health interprofessionalism in rural primary care settings

Goal 2. Optimize practice of **secondary prevention** through oral health interprofessionalism in rural primary care settings

Goal 3. Improve access to **tertiary or definitive care** in resource-thin communities through innovative partnerships and business models; and

Goal 4. Enhance primary care & dental **practice management** competencies that optimizes efficiencies and creates sustainable capacity.



**Care Delivery Diagram**

(Goals 1 & 4) Primary Care Provider (PCP) conducts oral health risk assessments:  
• Kids (caries only) every 6 months or EPSDT periodicity, whichever is most frequent  
• Adults with a1c levels  $\geq 9$  (caries, perio, cancer) based on risk, at least annually

*If presence of risk but no disease*

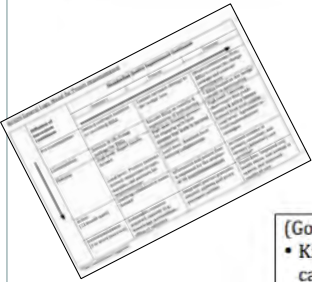
(Goals 1 & 4)  
• Kids: provide anticipatory guidance & risk-based fluoride varnish  
• Adults: anticipatory guidance only

*If presence of disease (caries or perio)*

(Goal 1)  
• Kids: provide anticipatory guidance & fluoride varnish  
• Adults: anticipatory guidance only

(Goals 2 & 4)  
• Adults: PCP provides systemic intervention (e.g., antibiotic, anti-inflammatory management; prescriptive rinse & paste)

(Goals 3 & 4)  
• Kids: PCP refers to DMD for regular, ongoing care -or- tertiary/definitive care  
• Adults: PCP refers to DMD for regular, ongoing care-or-tertiary/definitive care; refers to periodontist as needed



# EPSDT – Opportunities for Improvement



Number of SC Medicaid Children 18 and Under  
Served by a ROADS Practice During  
September 1, 2014-August 31, 2015

	A	B	C	B/A	C/A	D	E	D/B	E/C
Site	Kids Served at RHC for any reason	# Kids With RHC EPSDT	# Kids With EPSDT Served by Anybody	% of Kids Seen at RHC w/EPSDT visit at RHC	% of Kids w/EPSDT visits anywhere	# EPSDT Visits at RHC	# EPSDT Visits (Any source, not limited to RHC)	EPSDT Visit rate at RHC	EPSDT Visit rate at all sources of care
Blythewood	*	0	*	*	*	0	*	*	*
Fairfield	161	29	140	18.0%	87.0%	41	788	1.41	5.63
Santee	52	6	43	11.5%	82.7%	6	339	1.00	7.88
Singleton	52	18	41	34.6%	78.8%	18	370	1.00	9.02
Tri-County	1540	695	1443	45.1%	93.7%	851	15446	1.22	10.70

\*cell-size less than 5.

Reflects all providers

Notes: EPSDT visits were identified by CPT codes 99381-99385, 99391-99395, or a primary ICD-9 diagnosis code of V20.2<sup>1</sup>

# Diabetes = Volume



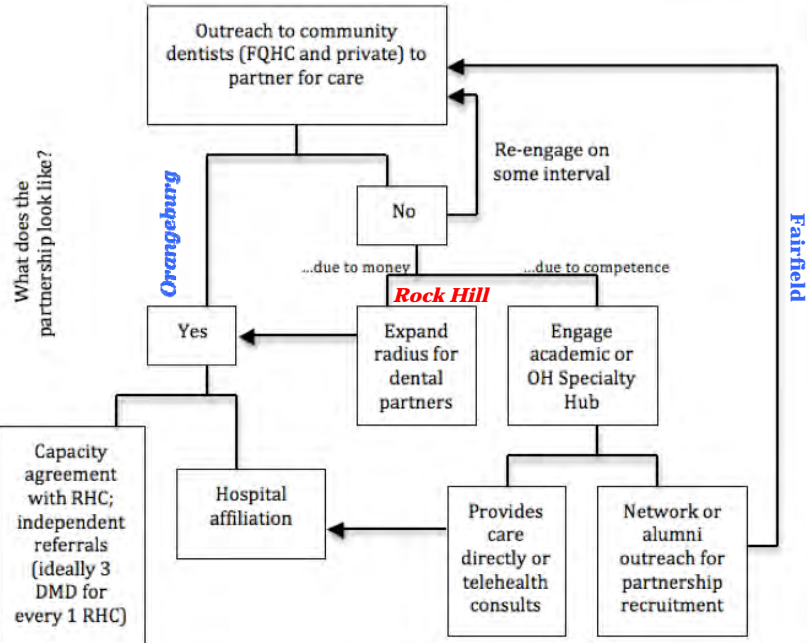
Number of SC Medicaid Adults 19 and Over Served by a ROADS Practice During September 1, 2014-August 31, 2015					
Site	Adults Served	# With a Diabetes Dx	% With a Diabetes Dx	# Visits to RHC with Dx	Visits Per Person
Blythewood	12	*	*	*	4.0
Fairfield	1115	322	28.9%	975	3.0
Santee	615	81	13.2%	162	2.0
Singleton	432	145	33.6%	372	2.6
*=cell-size less than 5.					
<b>Notes:</b> Diabetes identified by a primary or secondary ICD-9 diagnosis beginning with '250'.					

## An Overview of Our Dental Partners



- **Fairfield/Blythewood**
  - Young dentist 'flips' private practice to begin seeing Medicaid
  - Diabetes clinic at RHC
  - FQHC partner for kid health
- **Orangeburg/Santee**
  - General dental practice partners
  - Focus on kids
  - Ethical issues tied to adult benefits
- **Rock Hill/York**
  - Had (a great) one – lost one
  - Challenging market, large Latino population
  - Re-focusing on general dentistry partnerships

## Dental Partner Outreach Strategy



## Process for Dental Partner Engagement

### STEP 1

DPOH cold calls practices based on secondary data 'clues'

### STEP 2

Site visit by team; overview of project with practice

### STEP 3

Sign contract with SCDA Foundation

### STEP 4

'Organic' meet & greet between DMD & RHC

### STEP 8

RHC/DMD debriefings on independent QI activities

Explore shared QI opportunities among RHC/DMD

### STEP 7

Pre-learning on quality improvement

Practices develop & conduct independent PDSAs

### STEP 6

Stipend issued by SCDA Foundation

### STEP 5

Facilitated Safety Net Solutions module completion & environmental analysis



## Measures of Success (Process)



### Process Evaluation

#### *Primary Care Success*

- The degree to which innovation was adopted;
- Enablers and obstacles to implementation;
- How modifications, if any, strengthened or jeopardized implementation;
- Optimal process flow;
- Oral health interprofessionalism champions
- Receptivity of patients to integrating oral health into comprehensive pediatric care and diabetes management.

#### *Dental Partner Success*

- How capacity agreements were achieved through FQHC dental partners, private dental practices, and hospitals
- Factors that facilitated or inhibited codification of capacity agreements for sustainable systems of dental care

# Select Formative Findings from Process Evaluation of RHC System Component

## 1. Practice Selection (Pre-contemplation).

- RHC has an organizational culture that embraces transformation or integrated care models beyond being a PCMH designated care provider.

## 2. Treatment Completion Pathways (Contemplation).

- RHC sees oral health as an asset to their patients' overall wellness. A clear vision for how dental care completion is assured, including but not limited to ability to pay for services.

## 3. Internal & External Expert Faculty (Planning).

- RHC embraces quality improvement, evidence by a history of team-based applications of quality improvement science.
- RHCs value accessing local peer clinicians and practices for mentorship, rather than national. Also, they would prefer faculty come to their practices rather than traveling to them.

## 4. Health Information Management (Planning).

- RHCs have demonstrated proficiency in using electronic health records (EHRs) for delivering integrated care models and exchanging health information.

MAHJ General Logic Model for Process Implementation

Diffusion of Innovation Continuum	Evidence-Based Quality Improvement Continuum		
	Initiation	Planning	Implementation
Pre-Contemplation	Develop outreach materials for community-based organizations (CBOs).	Conduct outreach strategy in low-coverage areas.	Initial assessment from CBOs to review the change package and consider participation.
Contemplation	Develop of QR change package for MAHJ.	Educate CBOs on benefits & expectations of participating.	1 CBOs included in the change process for participating.
Planning	High level: Develop locally tailored strategies that build on existing systems.	Local level: Practice partners conduct assessments of priority, resources and partners for implementation.	High level: Learning objectives that include practice & policy issues derived from field visits, local issues. Agreement of local implementation strategies.
Action (12 month mark)	Learning collaborative teams formed.	Adherence and patient flow is improved for the adoption of QR implementation.	Increased number of primary care visits and tertiary (dental) care activities.
Reinforcement (2 to more years mark)	Sustainable resource network, expanded drug knowledge, partnerships, efficiency established.	Integrated practice protocols adopted, assessment and policy processes updated.	Triple Aim: improved oral health access and savings to systems and improved quality of care.

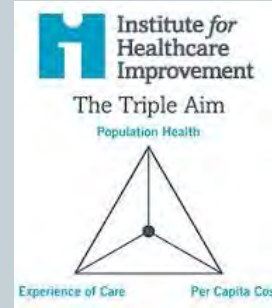
\*See Core Delivery Diagram



## Proposed Project Outcomes & the Triple Aim

*By December 31, 2018,*

- the rate of caries will decrease among children aged 0 to 6 years in our targeted geographic area (Population Health)
- The percent of adults with diabetes with uncontrolled periodontal infection will decrease (Population Health & Quality)
- The total Medicaid cost for dental services among children in the targeted geographic area will decrease (Cost Savings to System)
- The total Medicaid cost (medical and dental combined) for adults with diabetes will decrease (Cost Savings to System; Quality)
- Hospitals will see cost savings due to decreased emergency room visits for dental reasons.



## Conclusion



- **Integration = Calibration**
  - Patient expectations
  - Shared patient outcomes
  - Clinical language
  - Quality improvement
- **Incentives for system performance**
  - Rewards
  - Penalties
- **Integrators**
  - Practice-level champions
  - QI facilitators

Thank you!

