



14th Annual AAMC Health Workforce Research Conference

**An Assessment of Mobile and Portable
Dentistry Programs to Improve Oral
Health**

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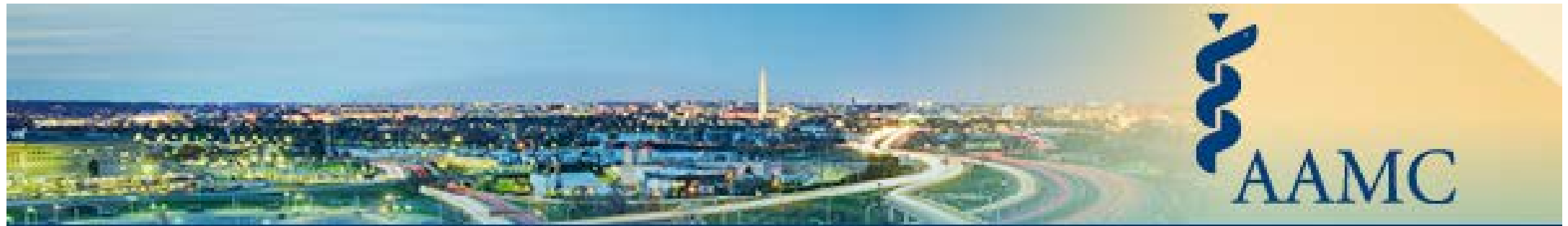
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Background

- Concerns about **poor oral health outcomes** among vulnerable or underserved populations including those in rural areas
- Apparent preference for **dental practice in larger population areas** making services less available to many of these populations
- Recognition of the **need to innovate oral health delivery systems** to bring services to patients
- Dental hygienists were trained as early as 1914 to provide services in schools.
- Initially, most portable oral health service delivery programs were designed to provide **fluoride varnish services** to children in schools

Background

- The **volume and variety** of mobile and portable oral health programs **has increased**
- Progressively more capable **portable imaging technologies** and **treatment modalities** enable service delivery
- While, initially these oral health programs focused on school-aged children and Head Start programs, many now serve
 - adults and the elderly, those in nursing homes or with unstable housing,
 - those with developmental disabilities or other special needs,
 - those with limited transportation options, and
 - those who otherwise lack access to private dental practices.



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Objectives, Methods and Regulatory Environment

Objectives

- Describe the assorted **structural configurations** of portable and mobile oral health service delivery programs, including emerging models
- Define the **various populations** benefitting from these services
- Detail the **regulatory variation** by state
- Examine, **the outcomes** of early and ongoing preventive interventions through portable dentistry in underserved communities
- Understand the **impact of local need**, available resources, and regulatory limitations on program design

Methods

- **Hypothesis** - mobile and portable oral health services are useful in geographic areas and for population groups where the penetration of dental practices or dental participation in Medicaid is low.
- **Qualitative study**
 - examined peer-reviewed literature
 - inventoried state-specific regulations governing service delivery through these modalities – review of law, regulation, and secondary materials
 - In 2017, conducted case studies of 7 mobile and portable dentistry programs
 - to describe value to underserved populations
 - to identify the facilitators of and barriers to the provision of effective oral health services.

A Quick Review of the Regulatory Environment

- Recent **increase in regulation** of mobile and portable dentistry
- Majority of states still do not address to a noticeable extent
- **At least 20 states** have effected **some rules**
 - Somewhat more specific regulation of mobile vans than of portable programs
 - Many states address mobile and portable conjointly in common requirements
 - Unique aspects of each modality are covered in separate, specific sections of law or regulation
 - Often placed as coda to dental or dental hygiene practice acts
 - Some requirements found in laws governing health care facilities or schools
 - Medicaid regulation will specifically address care in these delivery formats making services reimbursable

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Review of Case Studies



Selection of Case Study Participants

- The 7 organizations were chosen to demonstrate:
 - The **variety of settings** in which oral health services are delivered
 - The **mix of patient populations** served by these programs
 - The **differences in local need for oral health services** that affect the design and delivery of mobile and portable oral health services
 - The **variety of funding mechanisms** that support these service delivery methods
- The study used a protocol of questions but the interviews were mainly unstructured.
- The New York State Department of Health's Institutional Review Board reviewed and approved this study prior to its conduct.

Organizations that Participated in the Study

- **Access Dental Care**, Asheboro, North Carolina (Not-for-profit organization)
- **Eastman Institute for Oral Health**, Rochester, New York (Academic health/dental center)
- **Future Smiles**, Las Vegas, Nevada (DH practice)
- **Health Promotion Specialists**, Lexington, South Carolina (DH practice)
- **Jordan Valley Community Health Center**, Springfield, Missouri (FQHC)
- **Northeast Mobile Dental Services**, Derry, New Hampshire (For-profit organization)
- **St. David's Foundation**, Austin, Texas (Private non-profit foundation)



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Common Themes Developed From Case Study Interviews



Common Themes Developed From Case Study Interviews

- Mobile dental vans and portable oral health programs are equipped to supply an **array of dental services**.
 - Dental chairs mounted on moveable platforms with positioning capabilities similar to those in dental offices.
 - Wheelchair lifts and ramps, Panorex or other imaging equipment
 - Patient records maintained on laptops and iPads with wireless hotspots
- Mobile and portable dentistry programs provide both **preventative and restorative oral health services**.
- Mobile and portable service delivery results in the building of **strong oral health care teams**.

Mobile and portable dentistry programs have grown organically to meet the needs of their service population and area.

- **St. David's Foundation, Austin, Texas**
- 1998-99 – 1 van 15,000 oral health screenings, 2,449 sealants
- 2006-07 – 3 vans 37,383 oral health screenings, 7,409 sealants
- 2016-17 – 9 vans, 68 schools, 28,631 children screened, 11,331 children received preventive and/or treatment services.
- Collaborates with 40 community partner pediatric/ specialty dentists
- All services are free
- Five of the vans equipped with wheel chair lifts
- 72% of service population are Latino, most from low income families
- Frequent re-evaluation of need to evaluate whether populations are still those in greatest need



A wide-angle photograph of a cityscape at dusk or dawn, with lights from buildings and streets visible against a dark sky. The city extends to the horizon under a gradient sky.

Mobile and portable dentistry programs represent a response by local providers and organizations to unmet need for oral health services in communities of interest.

Organizations target diverse populations:

- Low income children and families
- Those experiencing housing insecurity
- Culturally and linguistically diverse populations
- Medically fragile patients, people with developmental disabilities
- Elderly populations

Northeast Mobile Dental, Derry, NH

- Dentist and dental hygienist rotate
- Serve residents of 75 skilled nursing facilities in 3 states
- Train certified nurse aides to help patients with daily oral hygiene
- Capitated payments



Many Programs Constitute a Dental Home or are Part of a Larger Dental Home

- Programs **do not operate in isolation** from the larger oral health system
 - integral part of a larger dental home.
 - comprehensive dental home
 - work in concert with community dental providers to identify and establish a dental home for their patients.
- Some addressed an **immediate or temporary need**
- Others acted as an **enduring solution** for intractable barriers to access

Eastman Institute for Oral Health SMILEmobile Program, Rochester, NY

- Full service dental provider/ dental home
 - 150 associated dentists
 - Fixed specialty dental clinic
 - adjacent to sponsoring academic medical center
- 5 mobile dental units
 - 1 equipped with Panorex, wheelchair lift and an air glide chair
- School based dental clinics
- 17 schools in city district, treats 2,000 children in 7,000 visits annually



Mobile and portable dentistry programs are an effective means of integrating oral health into primary care settings

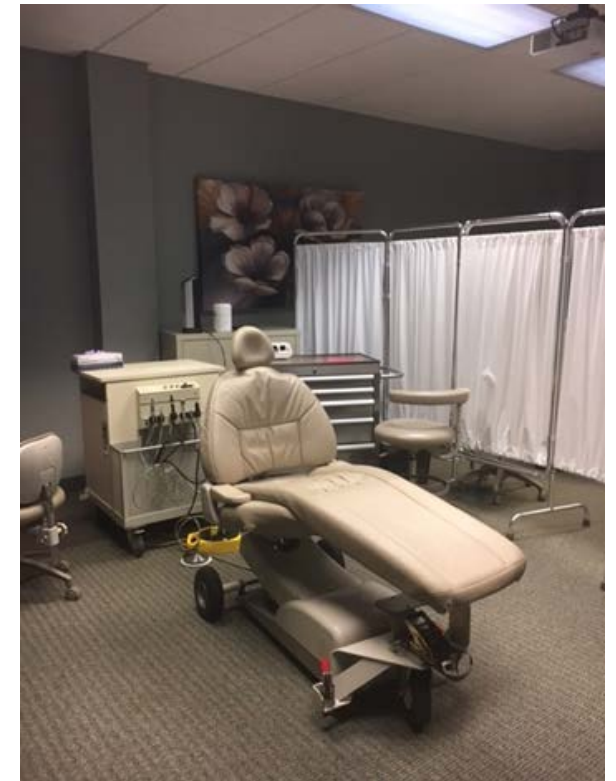
Access Dental Care, Asheboro, NC

- **Moveable** equipment designed for special-needs patients
 - 16 foot panel trucks
 - equipped to hold and transport moveable equipment
 - 2 fully equipped operatories
- Serving patients in 23 counties and 86 facilities
- Offers a range of dental treatment services
 - group homes, day habilitation programs
 - Programs of All-inclusive Care for the Elderly (PACE),
 - infectious disease clinic
- Special needs dentists offer more extensive treatment in community hospitals



Providers Work to Integrate Dental and Medical Services

“Being in a medical environment allows providers to develop a system of wraparound care inclusive of a variety of services, including dental. In this program, there is a lot of integration and interaction between multiple entities, all of whom strive to make care as seamless as possible for the patients” – a case study participant.



Mobile and portable dentistry programs reconcile service availability with the uneven distribution of dental providers in certain geographic areas or for particular populations

Advocates for a Healthy Community, Jordan Valley Health Center, Springfield, MO

- Full service FQHC - adult, pediatric, specialty, and urgent care oral health clinics
- Mobile services since 2010
- 7 county catchment area including 26 school districts in southwestern MO
- 2 children's home
- Health services, immunizations, asthma clinic, optometry, dental
- Dental vans – four days a week 10 hours a day – after school hours to address urgent or emergent need in the community





Jordan Valley, cont.

- Schools provide a liaison to the program and provide help with scheduling and permissions
- A local electric company donated electrical hookups.
- School nurses transport children from neighboring schools to the school where the van is located.
- Need is so great that the van can only visit the school once a year but remains in place until student dental needs are met.
- Students referred to brick and mortar clinics of the FQHC.

Many Programs Struggle to Find Sustainable Funding Sources

Future Smiles, Las Vegas, NV

- Mainly in low income schools in 5th largest school district in US
- 4,800 seen annually, 9,000 children of record
- 1,775 identified in 2016-17 as needing intensive case management usually related to treatment needs
- Dental hygienists provide services in 5 fixed school based dental clinics and in a portable format in other schools
- Funded mainly by grants from local foundations established by gaming operators

Health Promotion Specialists, Lexington, SC

- 17 dental hygienists
- 46 school districts
- 23,000 children receive preventive services each year
- Participates with the state sealant program
- Practice is mainly supported by revenue from services provided to Medicaid insured children

Many Programs Struggle to Find Sustainable Funding Sources

Mobile and portable dentistry programs are supported by various funding sources.

- Foundation grants
- Proceeds from reimbursement for services
- Other philanthropy
- Capitation
- Post eligibility treatment of income

“Providing oral health services to people who are medically fragile or compromised is the easiest part of what we do. Finding ways to be financially sustainable is the most problematic part of delivering services in a mobile format” - a case study participant



Conclusions

- While the historical model of delivering dental services in private dental practices continues to work well for many, service availability or utility of that model is either variable or inadequate to meet the needs of some populations.
- Mobile and portable dentistry programs appear to mediate structural and financial barriers to access to oral health services experienced by some populations.
- While some stakeholders express concern that mobile programs have the potential to act in isolation from the established delivery system, it was apparent that these programs are integrated into systems of care within the communities they serve.
- Mobile and portable service delivery programs can act as effective vehicles to health service integration and to building a comprehensive health home.

Thank You

Questions?

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