

Co-located Dental Hygienist Project:

Baseline Early Childhood Caries Prevalence Rates and Parent Oral Health Knowledge, Attitudes, Beliefs and Behaviors



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Background: Early Childhood Caries

- Most common chronic disease of children
- 18% of Colorado's Head Start children have caries experience
- Large disparity exists
 - 80% of disease occurs in 25% of children
- AAP and AAPD recommend first oral health visit by 12 months of age
- Innovative models of care delivery necessary

Colorado Head Start Basic Screening Survey, 2004
The Impact of Oral Disease on the Health of Coloradans, CDPHE, 2005



Background: Co-location

- General Considerations
 - Placing multiple services in same physical space
 - Premise that proximity will enhance access to necessary services
 - Continuum of care
 - co-location > collaboration > integration



Background: Co-location

- Dental + Medical
 - Place dental services where children frequently receive preventive medical care
- Registered dental hygienists can practice independently in Colorado



Goal

- Overarching goal of project is to test **feasibility** of **co-locating** registered dental hygienists into medical practices.



Objectives

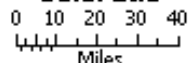
- *Objective 1:* Using co-located dental hygienists in medical practices, measure baseline early childhood caries prevalence in young children, 0-36 months of age
- *Objective 2:* Describe the baseline oral health knowledge, attitudes, beliefs and behaviors of primary parents/caregivers of young children



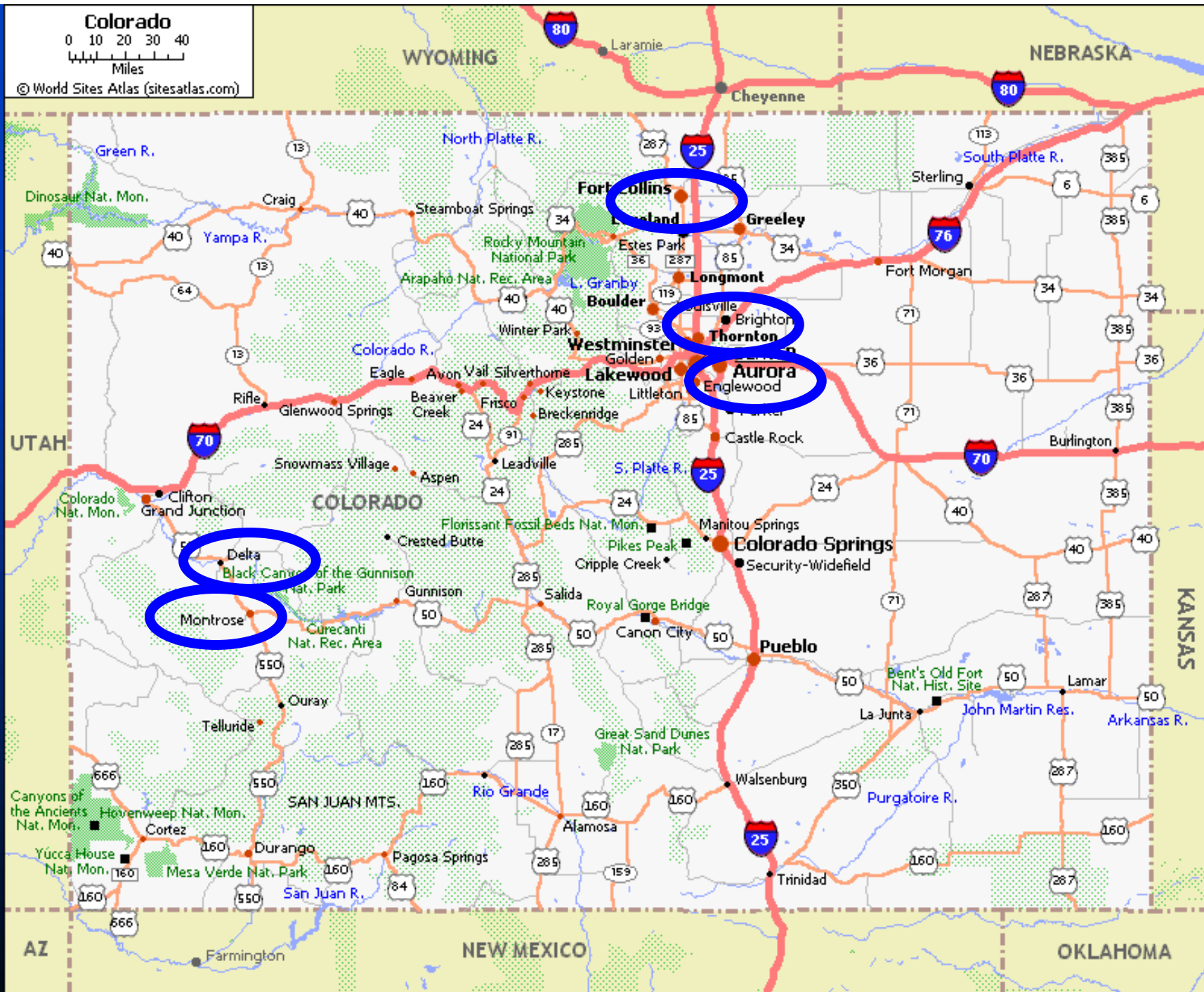
Methods: Study Setting

- Five medical offices purposefully selected
- All offices serve predominantly low income children
- Registered Dental Hygienists (RDH) hired from 10/08 through 4/09
- Dual function exam rooms built
- RDH care specifically directed to children 0-36 months of age

Colorado



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Methods

- Recruitment Efforts
 - Letters mailed to parents at practices
 - Open recruitment by hygienists in offices
 - Direct referral of patients by medical staff
- Services
 - Oral examination, rubber tip prophylaxis, assessment of caries, fluoride varnish application and oral health instruction
 - All children referred to dentist
- Business Model
 - RDH practice independently
 - Do own scheduling and billing



Measurement of Cavities

- Decayed, missing, filled surfaces (d_1d_2mfs)
 - RDHs calibrated to caries measurement
 - NIDCR and DRURY criteria (white spot lesions)
 - Visualized on dried teeth, overhead light source, no probing or x-rays



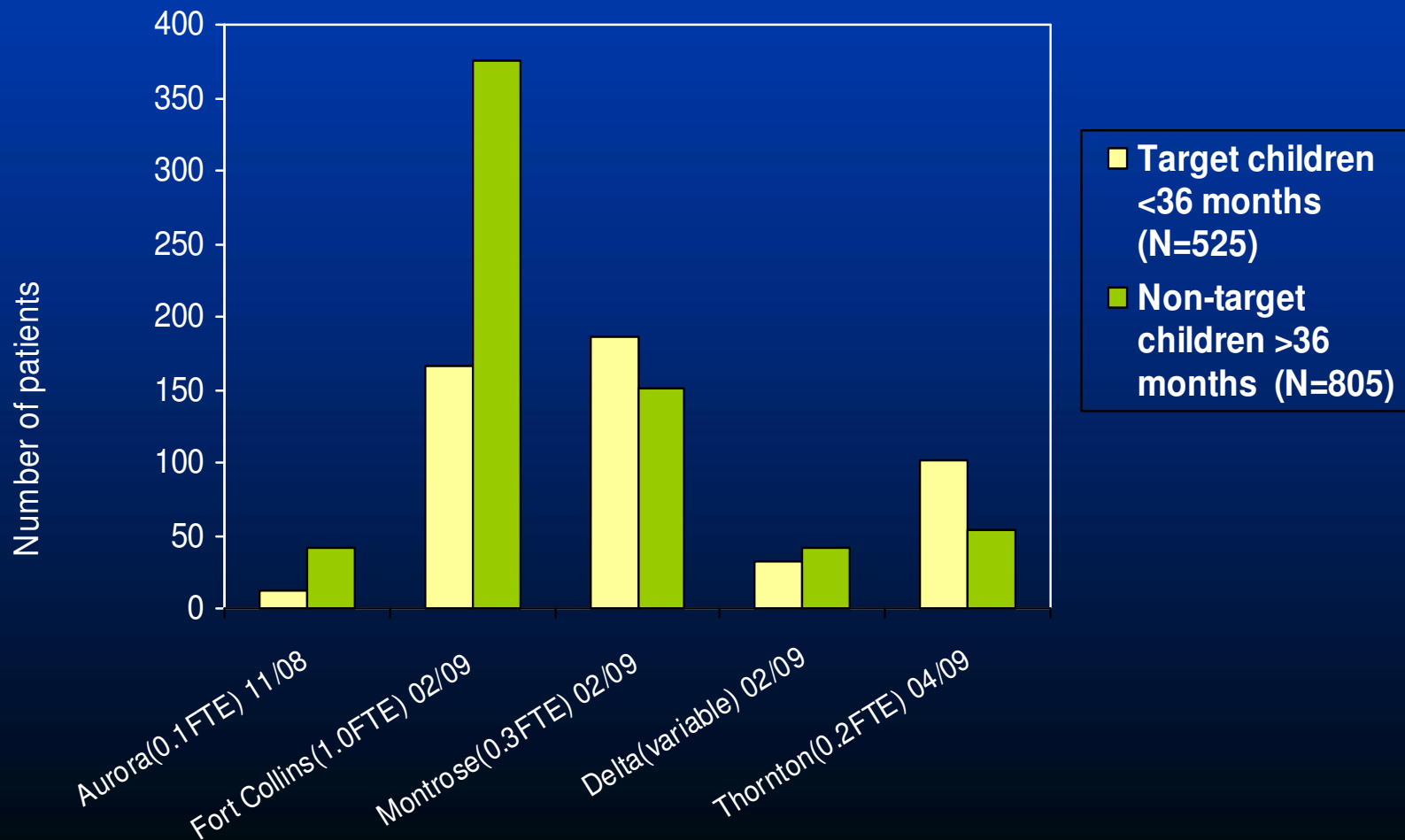
Measurement of Parent/Caregiver Variables

- Parent/Caregiver knowledge, attitudes, beliefs, behaviors
 - Hand written paper-based survey
 - Health Belief Model
 - Validated questions (e.g. BRFSS)
 - Piloted
 - Administrated at first visit

Results

Patients seen to date (Total = 1330)

Nov. 2008 to March 2010





Baseline Characteristics of Study Population

Target Participant Characteristics

N=525

Age (mean) Range	18 months (6-36)
Insurance Medicaid CHP+	67% 11%
Household Income ≤ \$29,999	55%
Caries d ₁ s only d ₂ mfs	9.6% 3.7%



Baseline Characteristics of Target Population

Target Participant Characteristics

N=525

‘Has your child ever been received care by a dental provider?’	9% (yes)
‘Do you have a dental provider you plan on taking your child to?’	27% (yes)
‘Have you (parent) seen a dental provider in the past 2 years?’	51% (yes)



Parent Attitudes about Co-location

How much do you agree or disagree with the following statements?

Strongly Agree

Somewhat Agree

Convenient to get dental care in same office as child's medical provider

84%

15%

More likely to take my child to a dental provider located in doctor's office than one in the community

63%

29%

Getting dental care at the same time as getting medical care makes sense

78%

17%



Perceived Barriers to Taking Children to Dental Provider

How much are the following a problem for you to take your child to a dental provider?

A Big Problem

Somewhat a Problem

Cost

14%

25%

Finding a dentist that takes child's insurance

13%

23%

Finding a dentist close to my house

10%

14%

Child afraid of the dentist

9%

19%

Too busy to take child to dentist

5%

14%



Parent Knowledge Regarding Provision of Dental Care

Has medical provider told you when to take child to see dental provider Yes- 40%

Has dental provider told you to take child to see dental provider Yes - 26%

By what age...	By age 1	By age 1 and before age 3
..did <u>medical provider</u> tell you to take child to dental provider (n=210)	65%	32%
...did <u>dental provider</u> tell you to take child to dental provider (n=137)	62%	31%
...do <u>you think</u> you should take child to dental provider (n=525)	51%	42%



Other Important Attitudes and Behaviors

- 47% brush child's teeth once a day
- 22% use toothpaste when brushing child's teeth
- 47% agree child won't let them brush teeth
- 44% agree that most children eventually get cavities



Other Important Attitudes and Behaviors

- 47% of children currently use a bottle
- 23% reported putting child to bed with a bottle (milk, formula, juice) daily
- However, 87% described taking child to dental provider as “very important” to preventing cavities



Challenges and Limitations

- Challenges to Co-location
 - Medical practices lack space for new providers
 - Getting medical providers to refer patients slow
 - Incorporating dental hygienists into scheduling of clinics difficult
- Limitations
 - RDH assessing for caries
 - Generalizability
 - Selection Bias



Conclusions

- Co-located dental hygienists seeing both targeted and non-targeted children
- Young children are receiving preventive oral health services
- Few targeted children previously seen by dental provider and already are developing white spot lesions and cavities
- Reported barriers are less common/haven't been encountered yet



Conclusions

- Most parents think child should see dental provider by age 3
- Most parents report that dental visits prevent cavities
- Co-locating dental hygienists into medical practices is feasible — more detailed investigation needed



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Conclusions

- Co-located dental hygienists seeing both targeted and non-targeted children
- Few targeted children previously seen by dental provider and already are developing white spot lesions and cavities
- Parents support receiving dental care in the medical office
- Reported barriers are less common
- Parents think child should see dental provider by age 3
- Parents report that dental visits prevent cavities
- Co-locating dental hygienists into medical practices is feasible — more detailed investigation needed