



Children's Dental Services

Dental Therapy in Minnesota: A Study of Quality and Efficiency Outcomes

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Since 1919 Children's Dental Services is dedicated to improving the oral health of children from families with low incomes by providing accessible treatment and education to our diverse community.

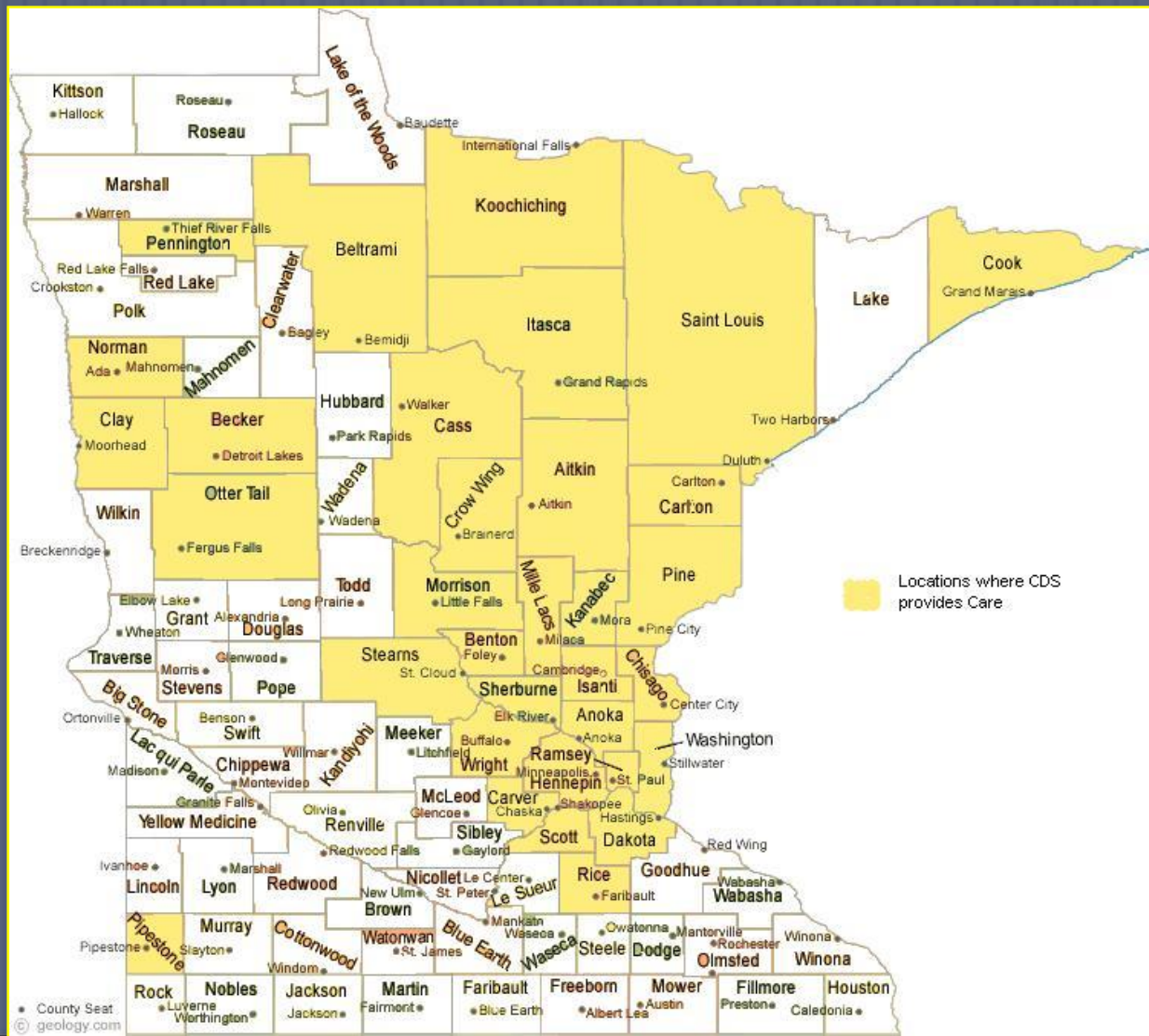


Children's Dental Services

Children's Dental Service History

- ❑ Children's Dental Services was established in 1919 and received non-profit status in 1954
- ❑ Minnesota's primary provider of portable dental care to low-income children
- ❑ First provider in the nation of on-site dental care in Head Start setting
- ❑ Serves entire state

Map of CDS' Service Area



Problems Preceding Advent of Dental Therapy

- **CDS background:**
- -previously housed in public health department
- -became independent entity struggling for funding
- -swelling patient population
- -difficulty hiring and retaining dentists (DDS)
- -sought alternatives: foreign trained dentists, mid-level providers

Why Advanced Dental Therapists (ADTs) are a solution

- Community-based
- More continuously present than scarce dentists
- Engage patients
- Naturally integrate preventive care and education into patient visit
- Gain expertise on limited scope of restorative procedures
- Free dentists to practice at “top of license” and focus on complex cases

Characteristics of ADTs-roughly equivalent to Vermont model proposed

- All ADT services can be provided under General Supervision.
- General Supervision is defined in Minnesota Rule 3100.0100: “The supervision of tasks or procedures that do[es] not require the presence of the dentist in the office or on the premises at the time the tasks or procedures are being performed, but requires that the tasks be performed with the prior knowledge and consent of dentist”.
- ADTs will therefore directly increase access to care by providing care in rural or low-income area where access is a huge problem.
- While ADTs are not required to undergo chart review by Dentists, CDS ADTs do consult and review cases in a collaborative manner.
 - Teledentistry and frequent communication enables these reviews for Dentists practicing in Minneapolis and St Paul and for ADTs practicing in Greater MN.
- CDS currently employs 1 Dental Therapist and 5 Advanced Dental Therapists

Procedures performed by ADTs

Oral Evaluation and Assessment

- OHI
- X-Rays
- Preliminary charting

Non Surgical Extractions of Primary and Permanent teeth

- Dressing changes
- Administration of nitrous oxide
- Suture removal

Restorations

- Placement of temporary restorations
- Atraumatic restorative therapy
- Administration of local anesthetic
- Application of desensitizing medication or resin
- Tissue conditioning and soft relines
- Tooth re-implantation

Procedures performed by ADTs, cont'd.

Preventive

- Mechanical Polishing
- Application of topical preventive or prophylactic agents, including fluoride varnishes and sealants

Endo

- Pulp vitality testing
- Pulpotomies on primary teeth
- Indirect and direct pulp capping on primary and permanent teeth

Mouthguards

- Fabrication of athletic mouth guards
- Fabrication of soft occlusal guards

Practice Settings for Minnesota ADTs

Subd. 2. Limited practice settings:

An advanced dental therapist licensed under this chapter is limited to primarily practicing in settings that serve low-income, uninsured, and underserved patients or in a dental health professional shortage area.

Collaborative Management Agreements

- Collaborative Management Agreement (CMA): a formal agreement detailing roles and responsibilities for dental therapists and advanced dental therapist and supervising dentists
- Statute requires all advanced dental therapists to engage in a CMA
- No more than five DTs or ADTs can enter into a collaborative agreement with a single DDS
- CMAs must include:
 - Practice settings and populations to be served
 - Any limitations of services provided by the DT or ADT and level of supervision required
 - Age and procedure specific practice protocols
 - Dental record recording and maintaining procedures
 - Plan to manage medical emergencies
 - Quality assurance plan
 - Dispensing and administering medications protocol
 - Provision of care to patients with special medical conditions or complex medical histories protocol
 - Supervision criteria of dental assistants
 - Referral and reallocating clinical resources protocol
 - Collaborating DDS accepts responsibility for unauthorized care provided by DT/ADT
- ADT/DT must submit signed CMAs to the Board of Dentistry prior to providing care

Issues of Quality and Risk

- ADTs and DDS undergo the same licensure exams for procedures they both provide.
- Marsh Insurance provides professional liability coverage for ADTs currently licensed as dental hygienists and members of ADHA. The cost is approximately \$93/year.
- Professional malpractice insurance from various providers range in cost from \$564 to \$1,209 for CDS' dentists (average cost is \$775/year)

Hiring: the first ADTs In Minnesota

Christy Jo Fogarty, a graduate of Metropolitan State University, was the first ADT hired and credentialed in Minnesota.

Employed at CDS since December 2011.

Became Minnesota's first licensed ADT in January 2013.



CDS hired Elizabeth Branca, its third ADT from the Metropolitan State University Program, in June 2013.

CDS' most recent ADT hire is Jodi Becker who graduated from Metropolitan State University Program in June 2014



Effective Dental Teams

According to the PEW Center on the States a team approach to dentistry has been found to be the most effective and provide the most access to dental care:

“In solo private dental practices—where most dentists work—adding new types of providers and dental hygienists produced gains in productivity and increased earnings by a range of 17 to 54 percent. Dentists who operate a practice by themselves can increase their pre-tax profits by six or seven percent by accepting more Medicaid-enrolled children and hiring either a dental therapist or a hygienist-therapist”.

Structure of New Dental Team

Traditional team: DDS, RDH and LDA.

Today: DDS, ADT, Collaborative Practice RDH, RDH, LDA, Unlicensed DA.

Integrating ADT:

- **Scheduling own column of patients**
- **Similar to dental school: start, prep and final checks**
- **Program producing highly skilled and qualified clinicians**

Quote of one CDS dentist about working with CDS ADT:

“She completes fillings better than I do.”

Initial Questions about ADTs:

Dentists' biggest source of information about the field=local dental association

- Many questions arose about:
 - -quality
 - -ability to handle uncooperative patients
 - -impact on patient care

Observations of ADTs

- strong clinical skills

- significant relevant experience:

 - U-MN dental students generally do 1 SSC, ADTs do an average of 12 SSCs;

 - U-MN dental students receive no motivational interview training, ADTs receive training on an average of 10 motivational interviews

- good behavior management

- mature, experienced professionals

- motivated

Impact on the Dental Team

- ❑ Requires increased communication which has developed into cohesive team experience
- ❑ The ADTs' questions and desire to learn has spurred additional learning among DDS
- ❑ Opportunity to reflect on clinical decisions through teaching/supervising
- ❑ Frees DDS to focus on specialized restorative care (DDS appreciate opportunity to hone higher skill level & relief from routine care)
- ❑ Overall increase in quality of care
- ❑ Overall reduction in cost of care

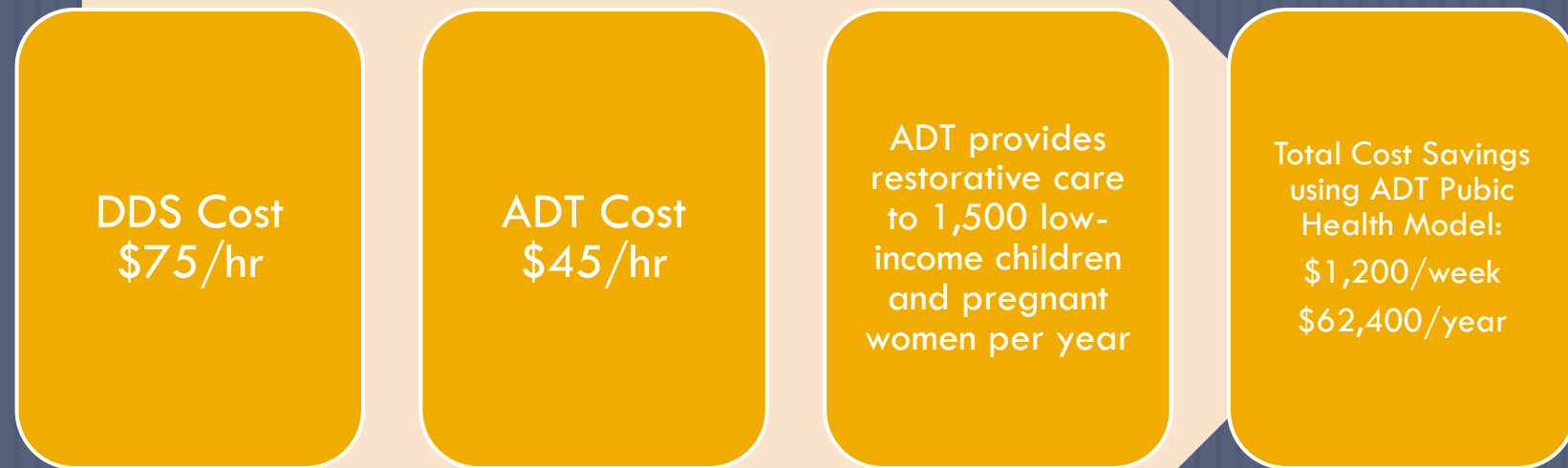
CDS' data on Dental Therapy Care

- Since December of 2011, CDS' ADTs combined have provided care to over 7,000 patients.
- There have been 3 requests to see a dentist instead of a dental therapist.
- There have been no complaints of poor quality by ADTs; during the same period there were 3 complaints of poor quality against a dentist and 1 complaint against a hygienist.
- Overall appointment wait time has decreased by 2 weeks; overall patient time with provider has increased by 10 minutes.
- 97% of survey respondents state that they are satisfied or very satisfied with the quality of care received by an ADT, compared with 92% satisfaction with dentists and 97% satisfaction with hygienists.
- An ADT bills and is paid the same for procedures as a dentist by both public and private insurance.

Summary of Dental team production results with integration of dental therapist (average salaries: dentist = \$75/hr, dental therapist = \$39/hr, advanced dental therapist = \$45/hr)

- 2011: Average production of team is \$280.72/hr
- 2012: Average production of team is \$298.09/hr (\$292.13 adjusting for fee increase); Average production of ADT is \$340.35/hr
- 2013: Average production of team is \$336.87 per hour (\$326.76 adjusting for fee increase); Average production of ADT is \$365.04/hr
- 2014: Average production of ADT remains \$365/hr
- ADTs are vital to the financial viability of CDS; private practice dentist Dr. John Powers and others seeing similar productivity and financial impact

Results: Financial Impact



Cost-Benefit Analysis based on 1 ADT providing services covered under the ADT statute for 40 hours/week in a public health dental clinic.

Health Professional Shortage Areas

Low Income Dental HPSA Designations



Dental Therapy Employment Sites by County

19 different counties

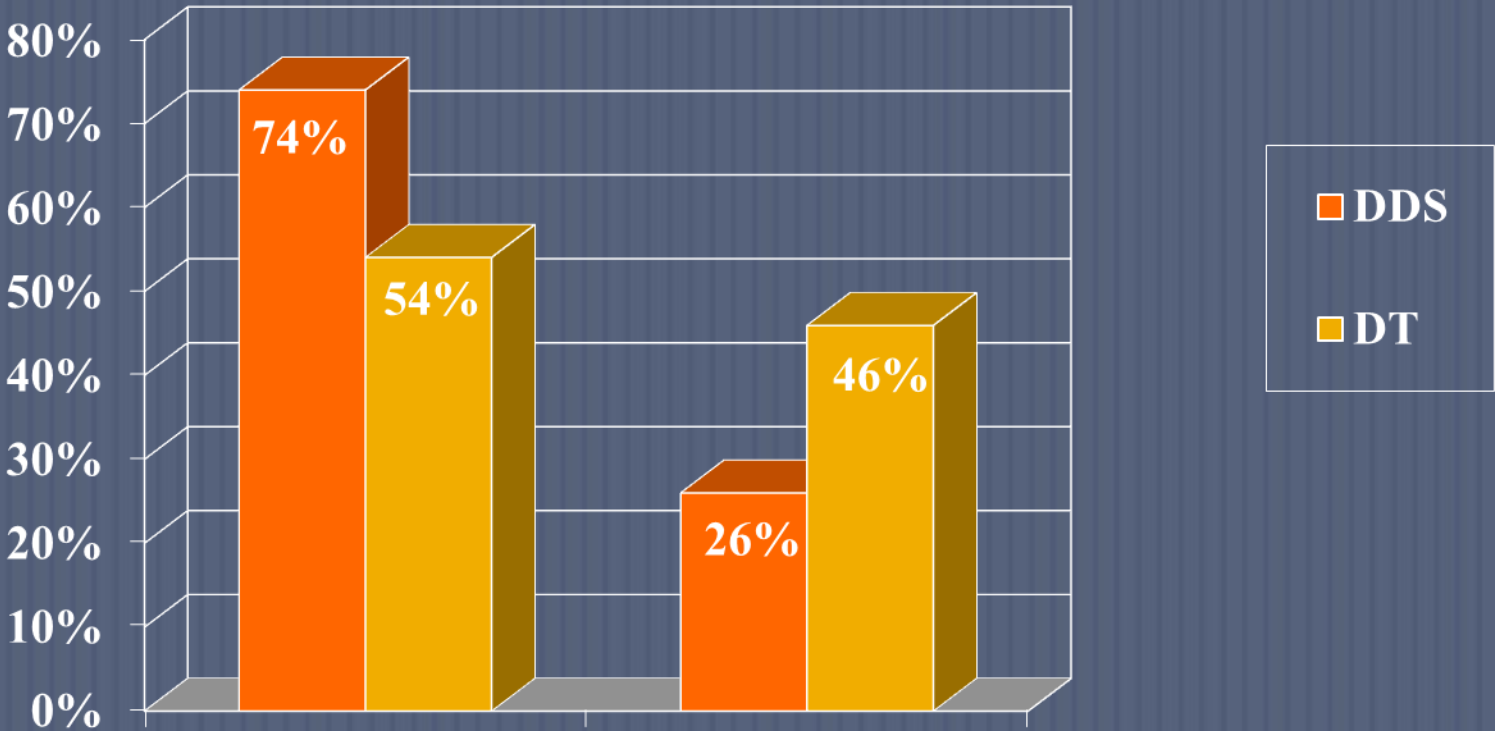
(July 2014)

Data Source:
Minnesota Department of Health
Office of Rural Health and Primary Care
State DD HPSA May 2014



Dental Therapists Across Minnesota

Current Practice Locations* (All DT Grads)



* Est as of October 2014



Health Policy Division, Office of
Rural Health and Primary Care
PO Box 64882
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651-201-3838
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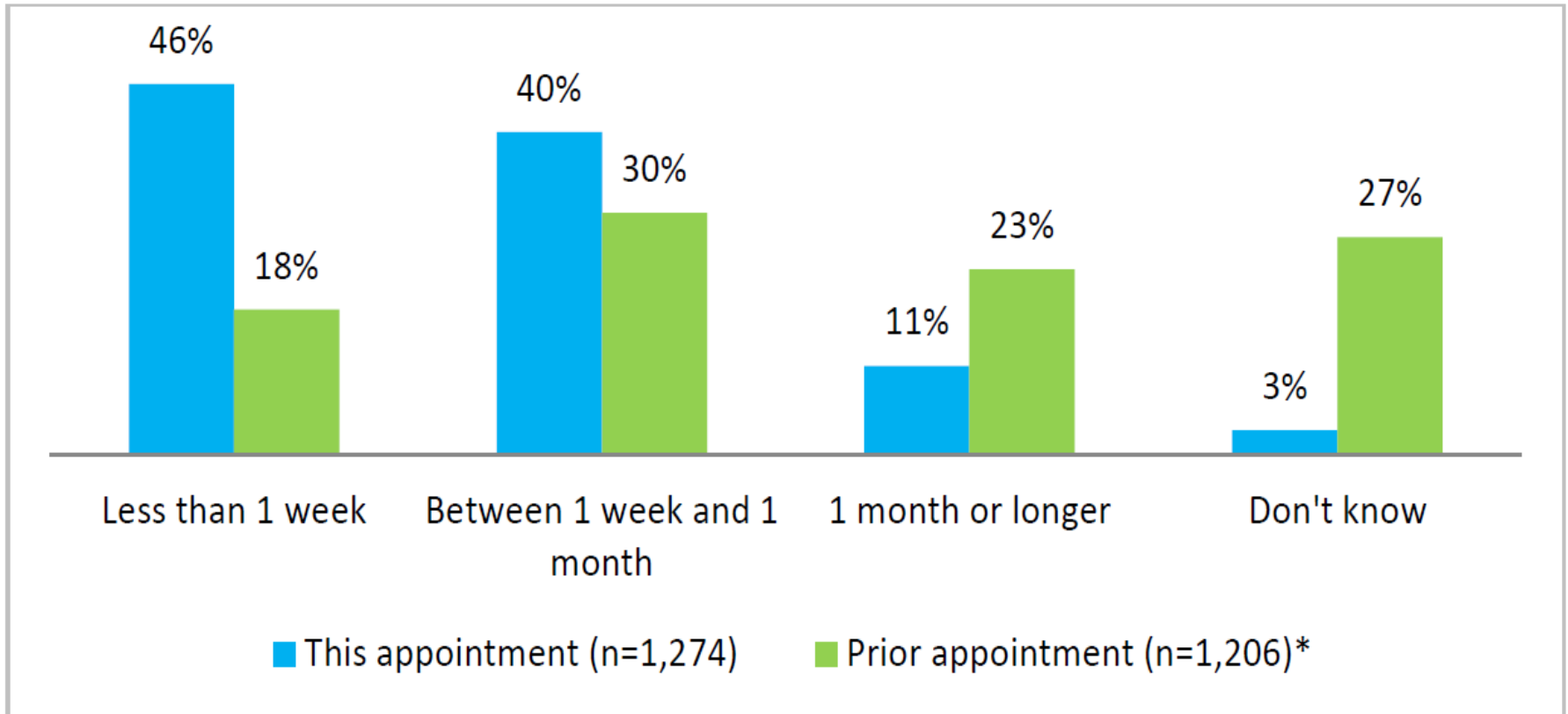
Early Impacts of Dental Therapists in Minnesota

**Minnesota Department of Health
Minnesota Board of Dentistry
*Report to the Minnesota Legislature 2014***

February 2014

Early Impact: Wait Time

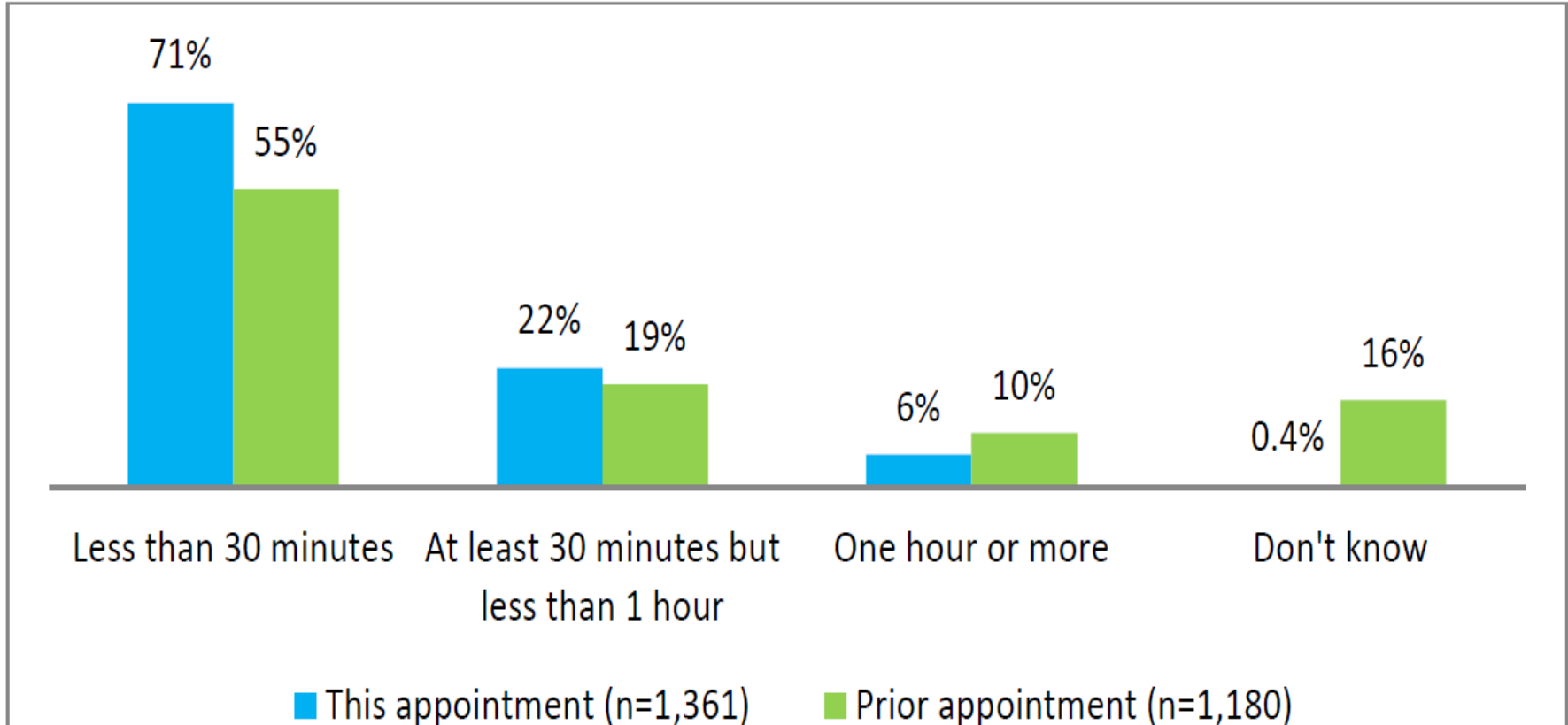
Wait times for appointment, with DT vs. pre-DT



*For 32 patients, this was their first dental appointment, so "prior appointment" question did not apply.

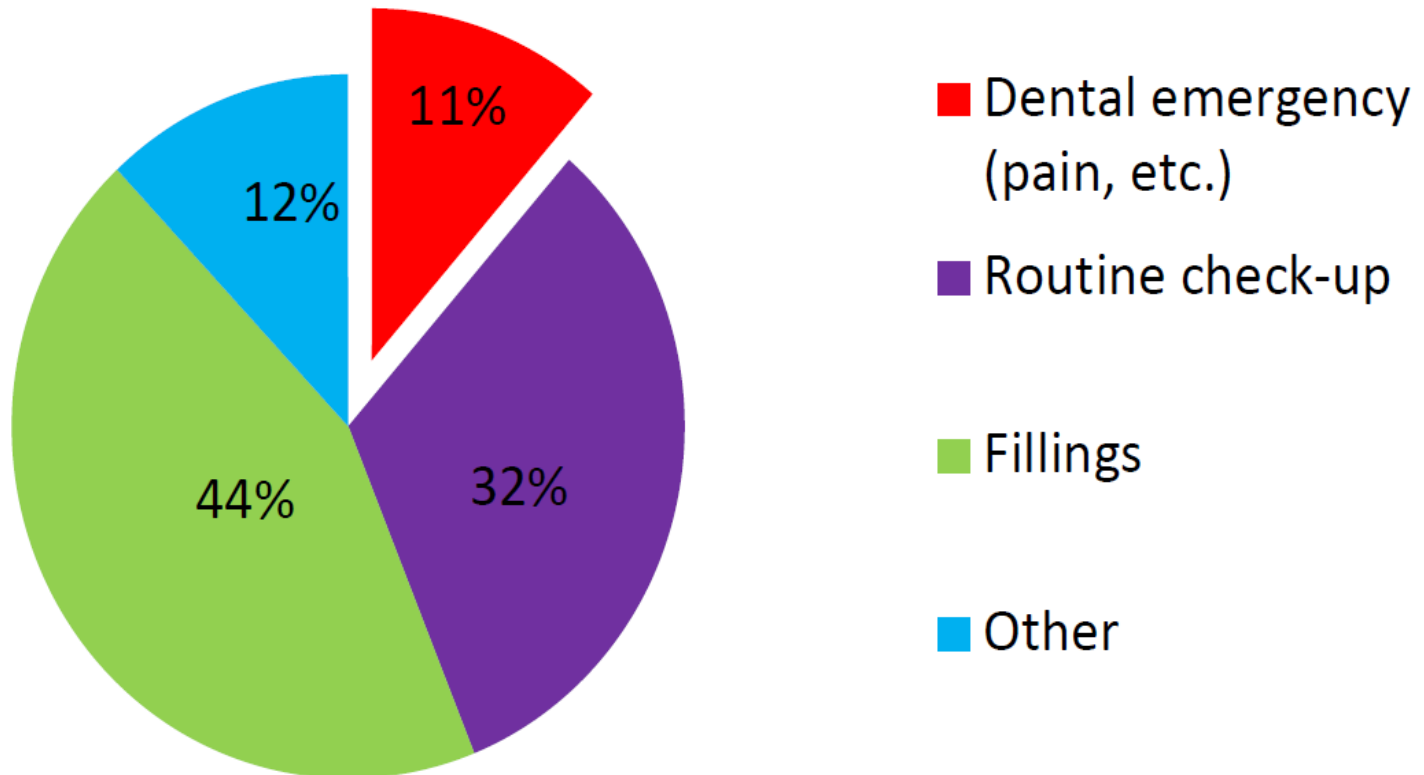
Early Impact: Travel Time

Travel times for appointment, with dental therapist vs. pre-dental therapist



Early Impact: Emergency Reduction

Reason for dental visit (n=1,373)



Lessons Learned/Suggestions

- Graduated ADTs are in high demand for employment
 - ▣ Ability to do preventive care in portable settings is useful.
 - ▣ Ability to practice under general supervision allows flexibility and frees clinic space for additional providers.
 - ▣ Supervising dentists find that quality of care is excellent with ADTs.
 - ▣ Entire dental team is more efficient with integration of ADTs.
 - ▣ There have been no patient complaints related to any dental therapy work.
 - ▣ Flexible and transferable model of care delivery that is increasing access across Minnesota in a variety of urban and rural, public and private care settings.

RESOURCES

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- **Dental Therapy Employer Guide:**

<http://www.mchoralhealth.org/mn/dental-therapy/references.html>

- **Minnesota Board of Dentistry:**

<http://www.dentalboard.state.mn.us/Default.aspx?tabid=1165>

- **University of Minnesota School of Dentistry:**

<http://dentistry.umn.edu/programs-admissions/dental-therapy/index.htm>

- **Metropolitan State University :**

http://www.metrostate.edu/msweb/explore/catalog/grad/index.cfm?lvl=G§ion=1&page_name=master_science_advanced_dental_therapy.htm

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<https://www.revisor.mn.gov/statutes/?id=150a.105>

<http://www.dentalboard.state.mn.us/Portals/3/>

[http://www.dentalboard.state.mn.us/Portals/3/](http://www.dentalboard.state.mn.us/Portals/3/Licensing/Dental%20Therapist/ADT-CMA%2012-4)

[10approved.pdf](http://www.dentalboard.state.mn.us/Portals/3/Licensing/Dental%20Therapist/ADT-CMA%2012-410approved.pdf)

<https://www.revisor.mn.gov/statutes/?id=150a.105>

THANK YOU

Questions?

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