Children's Dental Services

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

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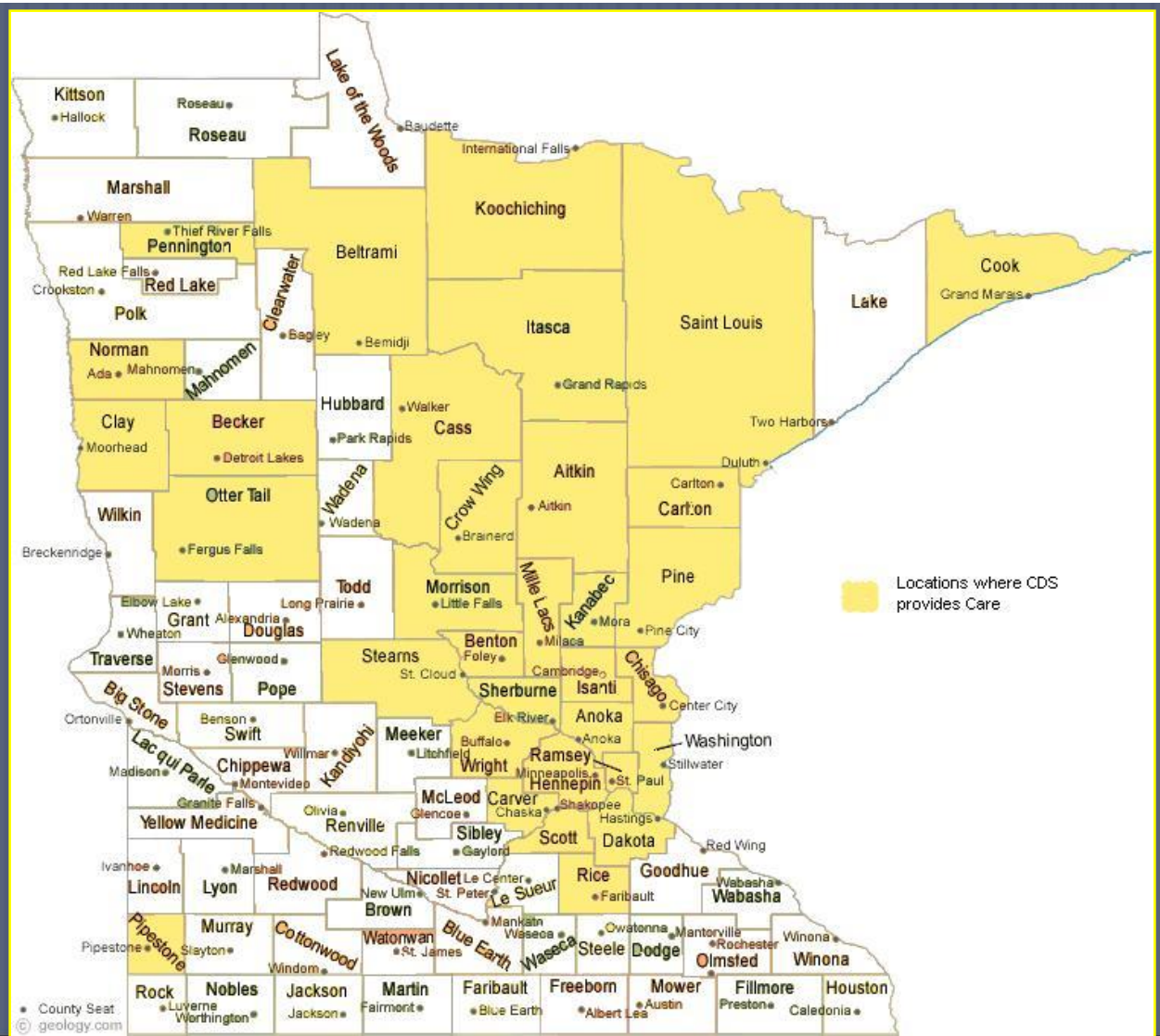
Since 1919 Children's Dental Services is dedicated to improving the oral health of children from families with low incomes by providing accessible treatment and education to our diverse community.

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



2014 Demographics

- In 2014 CDS treated 33,847 patients who were provided 73,518 procedures over the course of 45,980 visits.
- Somali/East African (25%), Latino (24%), African American(19%), Caucasian (17%), Hmong/Southeast Asian (9%), and American Indian (6%).
- 59% female, 41% male
- 80% receive Medical Assistance (MA), 19% are uninsured and enrolled in sliding scale programs (80% of whom receive free care), and less than 1% have private insurance.

Focus on culturally targeted dental care

- Language fluency: CDS' staff speak over 17 different languages and hail from more than 20 countries

- Representing cultures served: Understanding the cultural norms, religious needs and diets of target communities staff create culturally targeted and translated curriculum for care in school-based settings

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

- 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.
  - Teledentisty 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 reline • 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.

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

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 50 SSCs;

U-MN in 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 6,000 patients.
- There have been 3 requests to see a dentist instead of a dental therapist.
- There have been no complaints or claims of poor quality.
- Over 90% of survey respondents state that they are satisfied or very satisfied with the quality of care received by an ADT.
- An ADT bills and is paid the same for procedures as a dentist by both public and private insurance.

Results: Production 2011

NOTE: based on billing in community clinic setting with lower than average fees

Production Summary August 2011

Provider Code	Total Production Charges	Total Hours Worked	Total Production
DR11 Endo Provider	10,040	24	$418.33
DR01	55,165	136.8	$403.25
DR20	4,178	11.5	$363.30
DR12	47,261	148.85	$317.51
DR24	36,518	120.16	$303.91
DR36	45,898	161.53	$284.15
DR38	37,646	144.96	$259.70
DR42	26,105	116.7	$223.69
DR04	878	4.65	$188.85
DR41	7,301	40.09	$182.12
DR43	8,739	51.45	$169.85
DR44	3,616	24.2	$149.42
DR30	7,678	51.83	$148.14

Results: Production 2012

Production Summary August 2012 (*CDS began tracking ADT productivity in March. ADT productivity has consistently risen since that time.)*

Provider Code	Total Production Charges	Total Hours Worked	Total Production
DR11 Endo Provider	6,420	16	401.25
DR01	66,696	130.39	511.51
DR04	2,132	4.35	490.08
DR20	4,974	12	414.50
ADT01	66,508	171	388.94
DR12	43,978	150.66	291.90
DR36	43,562	162.35	268.32
DR43	22,946	85.95	266.97
DR44	43,219	174.65	247.46
DR38	27,094	111	244.09
DR42	20,757	85.94	241.53
DR24	23,861	110.2	216.52
ADT02	9,390	52	180.58
DR41	3,017	23.55	133.79

Results: Production 2013

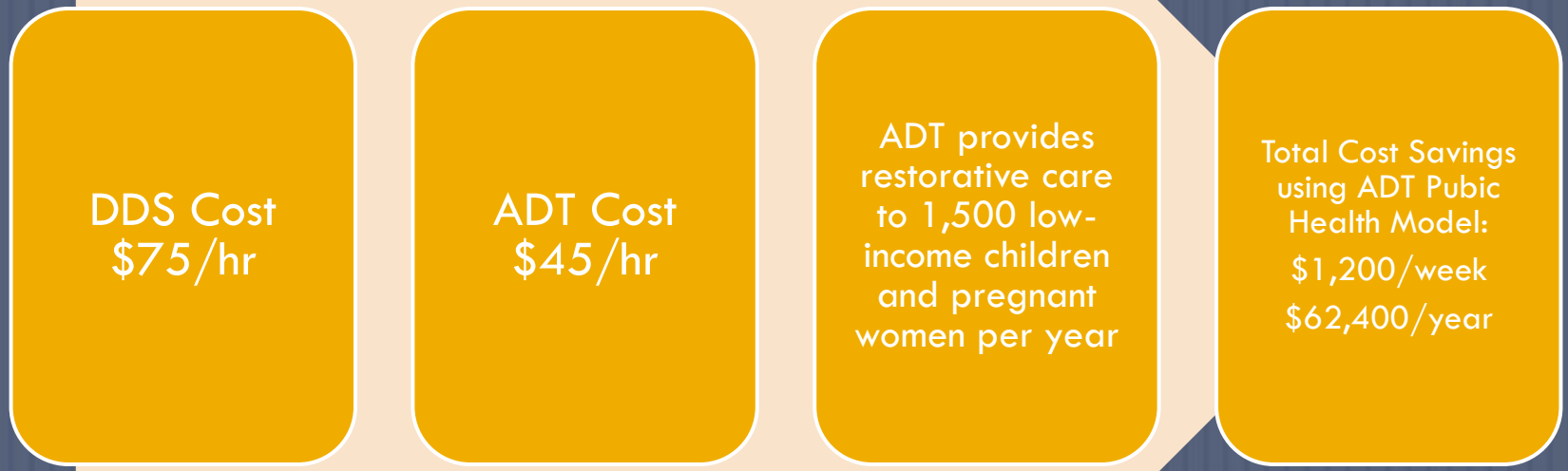
Production Summary August 2013

Provider Code	Total Production Charges	Total Hours Worked	Total Production
DR11 Endo Provider	8,516	16	$532.25
DR20	19,343	43.15	$448.27
DR44	53,555	138.05	$387.58
ADT01	46,755	123.5	$378.58
DR24	53,507	144.91	$361.45
DR36	42,304	140.05	$302.06
DR01	41,008	144.96	$299.66
DT01	4,277	16.3	$262.39
DR43	3,382	4.65	$207.48
DR12	57,856	171.87	$203.46
DR53	10,676	62.74	$170.16
DR04	487	3.05	$159.67

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
- ADTs are vital to the financial viability of CDS; other clinics, such as private practice dentist Dr. John Powers, are 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.

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.

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THANK YOU

Questions?

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