



Use of Dental Services by Children Enrolled in Wisconsin Medicaid Program

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Background

- An increasing number of states are moving towards administering their Medicaid programs through Managed care agreements with HMOs
- Managed care reduces the cost of providing health benefits and improves the quality of care as well as access to care
- Studies on medical managed care have confirmed improvements in access and utilization relative to fee-for-service plans

Background

- Few studies have directly compared the use of dental services between a enrollees of managed care and fee for service plans under Medicaid, especially for children
- In four counties in southeastern Wisconsin, dental services are delivered under managed care arrangements between the Department of Health and Family Services (DHFS) and health maintenance organizations (HMOs)
- In the remaining 68 counties, dental services are provided on a fee-for-service basis, under which the State directly reimburses dentists for each authorized service.



MINNESOTA

IOWA

MICHIGAN

MI

Lake Superior

Lake Michigan

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Douglas

Bayfield

Ashland

Iron

Vilas

Burnett

Washburn

Sawyer

Price

Oneida

Florence

Forest

Polk

Barron

Rusk

Taylor

Lincoln

Langlade

Marinette

St Croix

Dunn

Chippewa

Marathon

Menominee

Oconto

Pierce

Pepin

Eau Claire

Clark

Shawano

Door

Buffalo

Trempealeau

Jackson

Wood

Portage

Waupaca

Outagamie

Brown

Kewaunee

MINNESOTA

Waushara

Winnebago

Calumet

Manitowoc

La Crosse

Monroe

Juneau

Adams

Marquette

Green Lake

Fond du Lac

Sheboygan

Vernon

Richland

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Crawford

Grant

Iowa

Dane

Jefferson

Waukesha

Racine

Kenosha

IOWA

Lafayette

Green

Rock

Walworth

MICHIGAN

MI

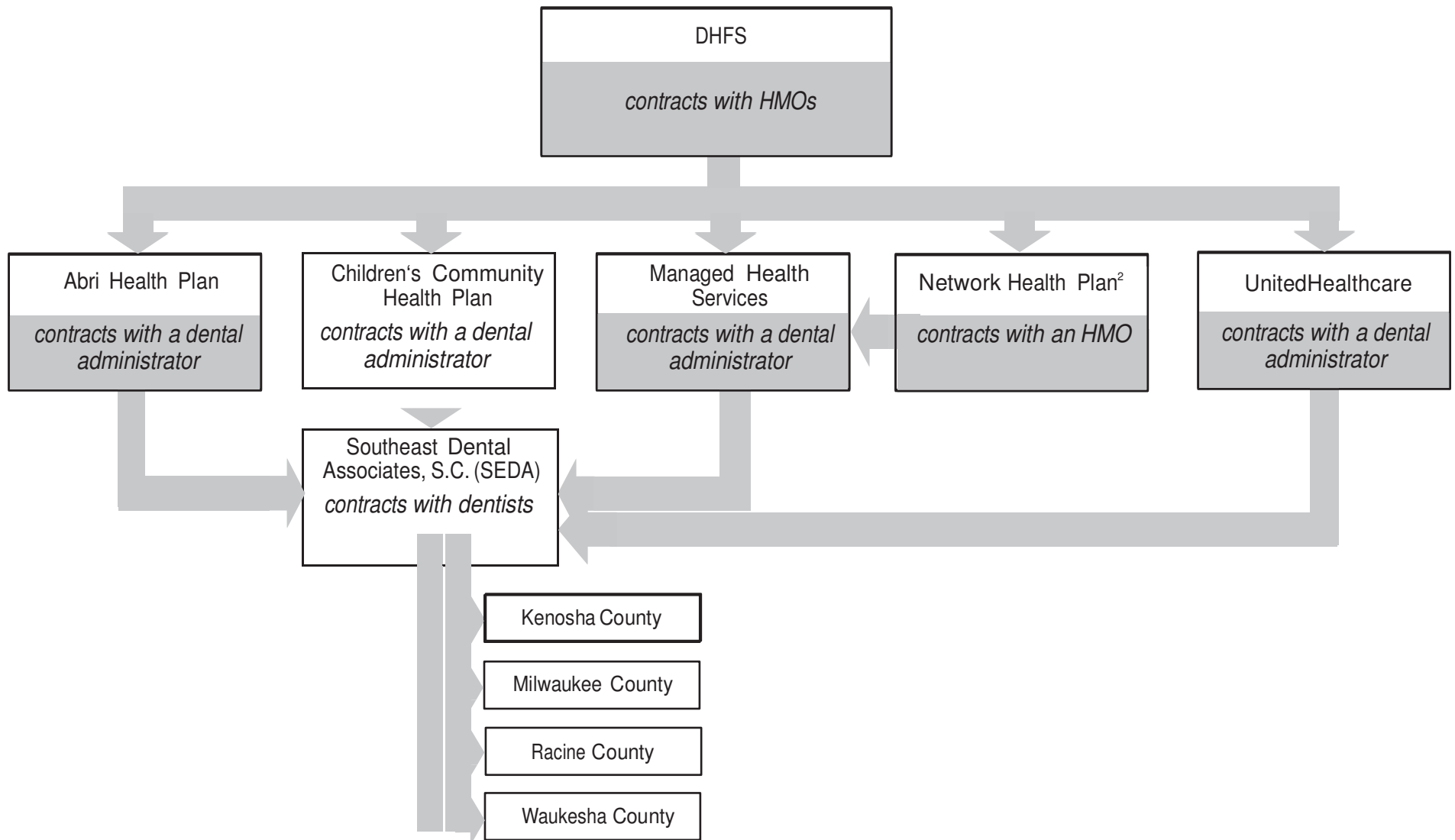
Lake Superior

Lake Michigan

Administration of Services

- The HMOs receive monthly capitation payments for every enrollee, regardless of the services provided.
- These HMOs subcontract services through Southeast Dental Associates, S.C. (SEDA), a dental administrator
- The contracts between DHFS and the HMOs and those between the HMOs and the SEDA contain provisions intended to ensure timely access to care.
 - to maintain an “adequate” number of dental providers;
 - a dental care provider to be located within 35 miles of each enrollee
 - have access to routine dental care within 90 days of requesting an appointment, and within 24 hours in emergencies.

Managed Care Dental Services



Legislative Audit Bureau's Report

- In response to dentists' complaints about reimbursement rates, Joint Legislative Audit Committee requested a review of services provided under HMOs
- The 2008 Audit Bureau's report found that
 - HMOs cost the state more money
 - \$211 vs. \$270/enrollee/year
 - Provide less access to dental care than the MA fee-for-service mode
 - Higher percentage of enrollees under FFS plans received dental services than those served by the HMOs

Utilization Rates

Fiscal Year	SEDA Network Enrollees	Doral Network Enrollees	Fee-for-Service Recipients
2002-03	27.6%	27.7%	34.3%
2003-04	28.8	25.1	33.6
2004-05	26.6	27.4	33.0
2005-06	21.2	25.2	33.1
2006-07	25.6	29.3	33.8

1 Includes only individuals participating in Family Medical Assistance or BadgerCare for at least 259 days

2 Represents individuals served in the 68 counties outside of Kenosha, Milwaukee, Racine, and Waukesha counties..

Methods

- This study is a secondary analysis of Medicaid HMO and FFS claims and enrollment data
- We wanted to examine if differences exist in the types of procedures that are provided to enrollees of these plans
- The datasets had information on
 - Age and Zip-code of residence of the enrollee
 - Date of treatment and procedure code
- Information on children aged 0-18 years enrolled in WI Medicaid from 2002- 2008 was included in the analysis

Methods

- We grouped dental caries related treatment procedure codes into five treatment categories:
 - Preventive Procedures
 - Oral prophylaxis (D1120),
 - Fluoride Varnish (D1206) and
 - Fluoride gel applications (D1203), and
 - Dental sealant placement (D1351)

Methods

- We grouped dental caries related treatment procedure codes into five treatment categories:
 - Preventive
 - Restorative procedures
 - Simple (D2000 to D2430)
 - Complex restorative (D2510 to D2999)



Methods

- We grouped dental caries related treatment procedure codes into five treatment categories:
 - Preventive
 - Restorative
 - Endodontic: All procedures

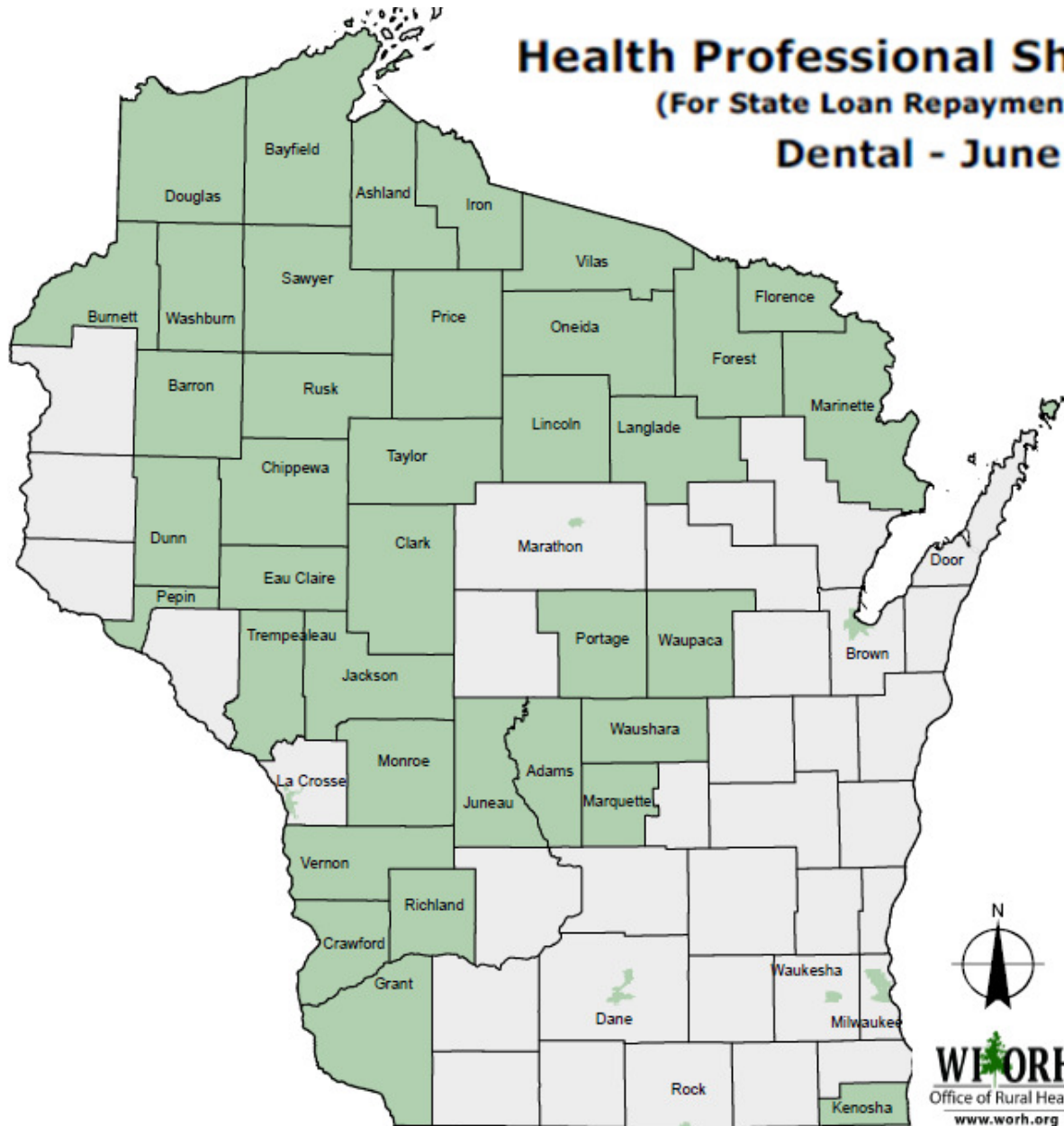
Methods

- We grouped dental caries related treatment procedure codes into five treatment categories:
 - Preventive
 - Restorative
 - Endodontic
 - Surgical
 - Extraction of deciduous teeth (D7111)
 - Extraction of erupted teeth (D7140)
 - Extraction of teeth requiring flap elevation (D7210)

Methods

- Children were categorized into 4 groups based on insurance type and residence in designated dental Health Professional Shortage Areas (HPSAs) into
 - HPSA-HMO,
 - non-HPSA-HMO,
 - HPSA-FFS, and
 - non-HPSA-FFS groups.

Health Professional Shortage Areas (For State Loan Repayment Eligibility) Dental - June 2012



Methods: Statistical Analysis

- Descriptive and bivariate analysis were performed
- Multivariable analysis using Poisson generalized estimating equation modeling on the number of procedures per year was performed
- The final regression model included
 - Treatment Procedure
 - Type of insurance plan (HMO vs. FFS)
 - Age at treatment
 - Date of treatment

Study Population (based on person yrs of enrollment)

	Medicaid			
	FFS (Rest of Wisconsin)		HMOs (SE Wisconsin)	
Age group	HPSA	Non HPSA	HPSA	Non HPSA
0-3	7,002	7,785	2,185	5,365
4-6	40,842	46,995	16,592	37,665
7-9	38,196	46,247	16,145	37,328
10-14	54,129	62,349	22,459	50,773
15-18	34,455	36,609	13,460	29,883
Total	174,624	199,985	70,841	161,014

Avg. No. of Procedures/1000 yrs of Enrollment

	Medicaid			
	FFS (Rest of Wisconsin)		HMOs (SE Wisconsin)	
Procedure	HPSA	Non HPSA	HPSA	Non HPSA
Preventive	916	1,012	99	224
Simple Restorative	914	1,154	105	265
Complex Restorative	157	256	18	47
Endodontic	64	117	13	27
Extraction	150	188	26	57

Utilization Rates for Dental Procedures

	Medicaid			
	FFS (Rest of Wisconsin)		HMOs (SE Wisconsin)	
Procedure	HPSA	Non HPSA	HPSA	Non HPSA
Preventive	0.34	0.42	0.03	0.08
Simple Restorative	0.31	0.39	0.04	0.10
Complex Restorative	0.06	0.09	0.01	0.02
Endodontic	0.04	0.07	0.01	0.02
Extraction	0.08	0.10	0.02	0.03

Rate Ratios (CI) from Multivariable analysis

	Medicaid			
	FFS (Rest of Wisconsin)		HMOs (SE Wisconsin)	
Procedure	HPSA	Non HPSA	HPSA	Non HPSA
Preventive	6.5* (5.0,8.4)	7.6* (5.9,9.9)	1.00	2.5* (1.9,3.3)
Simple Restorative	6.0* (4.2,8.5)	8.4* (5.9,11.9)	1.00	2.8* (2.0,4.1)
Complex Restorative	3.5* (2.0,6.2)	7.1* (4.1,12.3)	1.00	3.3* (1.8,5.8)
Endodontic	3.5* (2.2,5.5)	6.8* (4.4,10.7)	1.00	2.4* (1.5,3.8)
Extraction	4.5* (2.7,7.5)	6.2* (3.8,10.3)	1.00	3.0* (1.8,5.1)

Conclusions

- Significantly lower proportion of children enrolled in Medicaid HMO plans used dental services as compared to those in FFS plans
- Medicaid enrollees living in non-HPSA regions had significantly higher utilization rates than those living in HPSA designated areas
- Children in the HPSA-HMO groups had the fewest procedures of all types examined in the study



Implications and Future Directions

- Fewer dental visits and treatment procedures indicate barriers in access and untreated disease
- Policies and strategies to increase utilization and improve oral health among these vulnerable populations are required
- Future studies collecting primary data through are needed to ascertain the actual reasons for low utilization of dental services

Limitations

- Procedure codes preclude the possibility of knowing the normative need
- Potential confounders such as family SES, race and proximity to providers were not accounted for in analysis
- Underreporting of procedures by providers billing based on encounters could have lead to Type 1 error
- Relationship of Extractions with orthodontic treatment or impacted 3rd molars not examined



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THANK YOU !
