

**Policy Brief**  
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## **Iowa Dental Wellness Plan: Evaluation of Baseline Provider Network**

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# Overview

The Iowa Health and Wellness Plan (IHAWP) is an expansion of health care, allowed as part of the Affordable Care Act (ACA), primarily to single adults with incomes below 133% of the federal poverty level and not otherwise eligible for Medicaid. The dental care portion of the IHAWP is being provided through the Dental Wellness Plan (DWP), administered by Delta Dental of Iowa (DDIA). DDIA is responsible for developing a provider network and paying dentists for the care provided.

This report, part of an evaluation of the DWP program being conducted by the University of Iowa Public Policy Center (UI PPC), presents information about the initial dental provider network available to DWP members, with a comparison made to the network of dentists available to adults in the Medicaid State Plan, administered by the Iowa Department of Human Services.

Within this report, DWP providers are defined as “active” if they are accepting new patients, as per provider data from DDIA, while Medicaid providers are defined as active if they have had at least one Medicaid paid claim within a six month period. Slightly different definitions for providers were used because there was not consistent data available at the time of these analyses: 1) We were unable to ascertain, from the Medicaid program, a list of Medicaid providers who were accepting new patients, and, 2) due a lack of DWP claims data at the time of this report, we were unable to determine a list of DWP providers who had submitted at least one claim. Despite the use of slightly different definitions in our comparisons, we believe we are still able to compare the provider networks appropriately.

This baseline assessment of the DWP provider network is one component of the UI PPC’s evaluation of the DWP program. Future reports about the DWP program will present findings from surveys (of members and providers) and examine outcomes of the care provided to DWP members, based on analysis of administrative data.

# Key Findings

## Provider availability

- As of January 2015, 646 dentists were accepting new patients for the Dental Wellness Plan (DWP), 85% of whom were general dentists.
  - By comparison, 1,053 dentists had treated at least one Medicaid patient from January-June 2014 – 89% of whom were general dentists.
- DWP providers were found in 4 states besides Iowa: Illinois, Missouri, Nebraska, and South Dakota. Medicaid providers were found in these states, as well as Wisconsin.
- As of January 2015, 96 dental specialists were accepting new DWP patients.
  - The only endodontists participating in DWP were those affiliated with the University of Iowa.
  - There were 119 dental specialists<sup>1</sup> participating in the Iowa Medicaid program.
- For DWP members, availability of general dentists in private practice ranged from 0 to 70.2 FTEs per county; 19 counties did not have any general dentists in private practice accepting new patients.
  - By comparison, only 3 counties lacked a Medicaid general dentist working in a private practice setting.

## Distance to nearest provider

- On average, DWP members lived 4.0 miles to the nearest general dentist in private practice, with a mean travel time of 6.3 minutes.
  - Among Medicaid members, the nearest general dentist in private practice was 2.8 miles, or 4.7 minutes, away.
- 80% of DWP members lived ≤5 miles to the nearest general dentist compared to 85% of Medicaid members.
  - Only 1.4% of DWP members lived > 25 miles from the nearest general dentist. However, no Medicaid members lived >25 miles from the nearest general dentist.

## Public safety net availability

- The public dental safety net for DWP members included 144 dentists working at 27 sites, including Federally Qualified Health Centers (FQHCs), non-FQHC Community Health Centers, academic institutions, and Indian Health Services clinics.
  - By comparison, the public safety net for Medicaid members included 151 dentists at 34 sites.

## Provider panel overlap

- Overall, 45% of Medicaid dental providers were accepting new DWP patients, including 43% of general dentists.

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<sup>1</sup> Excluding orthodontists, whose services are not covered by DWP.

# Background

## Iowa Health and Wellness Plan

The Iowa Health and Wellness Plan (IHAWP) was implemented on January 1, 2014 and expands coverage for low income Iowans through two new programs: **The Iowa Wellness Plan** and **Iowa Marketplace Choice**. IHAWP provides coverage for adults with incomes from 0 to 133% of the Federal Poverty Level (FPL) who are not otherwise eligible for Medicaid or Medicare. IHAWP replaced the IowaCare program with plans that offer more covered services and broader provider networks, along with expanded coverage to other low income adults in Iowa not previously enrolled in IowaCare.

The **Wellness Plan** covers adults aged 19 to 64 with incomes up to and including 100% of the FPL (\$11,490 for individuals; \$15,510 for a family of two). The Wellness Plan is administered by the Iowa Medicaid Enterprise (IME) and members have the option to enroll in a managed care or a fee-for-service program.

The **Marketplace Choice Plan** covers adults aged 19 to 64 with incomes from 101 to 133% of the FPL (\$11,491-\$15,282 for individuals; \$15,511-\$20,628 for a family of two). Members can choose from certain commercial health plans available on the health insurance marketplace, with Medicaid paying the member's premiums.

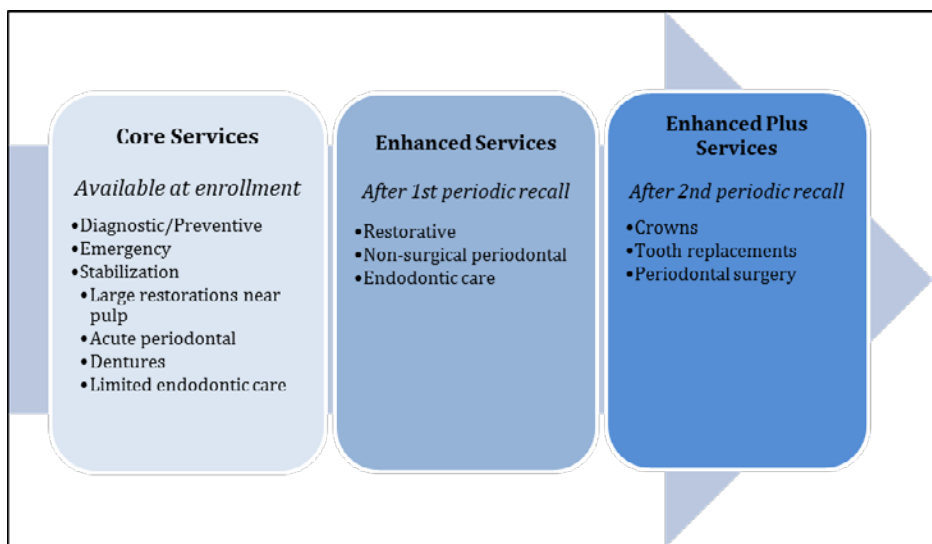
All members of the IHAWP receive dental benefits through the Iowa Dental Wellness Plan.

## Dental Wellness Plan

The Iowa Dental Wellness Plan (DWP) was implemented on May 1, 2014. This plan is operated by Delta Dental of Iowa (DDIA) and includes an earned benefits structure (Figure 1) to encourage healthy behaviors, including routine preventive dental care. DWP is a fee-for-service plan, with IME making capitated payments to DDIA for administration of the plan.

All DWP members are eligible for **Core** benefits upon enrollment, which include emergency and stabilization services. If they return for a periodic dental recall exam within 6 to 12 months of the initial exam, members become eligible for **Enhanced** benefits. **Enhanced Plus** benefits are available after receiving a second recall exam within 6 to 12 months of the first recall.

**Figure 1. Earned benefits in the Iowa Dental Wellness Plan**



# Research Methods

The DWP is expected to offer members a larger provider network than the adult Medicaid dental provider network by offering higher reimbursement rates and reduced administrative burdens as compared with the traditional Medicaid program. This report evaluates the baseline provider network for DWP members. The Medicaid provider network for a comparable adult population will be used for comparisons.

This report assessed two main components of network adequacy:

- Dentist supply measures
- Distance measures

These two components reflect spatial accessibility, or potential physical accessibility, to dental care.<sup>2</sup>

This report addresses **Hypothesis 5.1** of the Public Policy Center's evaluation of the Iowa Dental Wellness Plan:

"DWP Members will have better access to an adequate provider network than those in the Medicaid State Plan as reflected by travel distance and time, access to safety net providers, and provider acceptance of new patients."

Two measures are associated with this hypothesis:

**Measure 28:** Travel distance and travel time to regular dentist

**Measure 29:** Provider network inclusion of safety net dental providers, particularly FQHCs

Future evaluation activities will incorporate claims data, which is not available at the present time, to assess provider adequacy with respect to dental utilization. Additional components of the DWP evaluation include consumer surveys, which will assess members' perspectives about access to dental care, and provider surveys, which will include questions about the extent to which dentists accept DWP patients into their practices.

## Study populations

### *Dental Wellness Plan Members*

DWP provides dental coverage for all low income members enrolled in IHAWP – Iowa's Medicaid expansion program. This population includes adults aged 19 to 64 with income between 0 and 133% Federal Poverty Level (FPL) who are not otherwise eligible for Medicaid or Medicare. Dental benefits in DWP are provided by a network of Delta Dental of Iowa dentists recruited specifically for this program. DWP dental benefit structures are the same for all IHAWP members, irrespective of their type of plan.

The study population for this evaluation included all individuals enrolled in DWP as of February 1, 2015.

### *Comparison Group: Medicaid State Plan Members*

The Family Medicaid Assistance Program (FMAP) is a provision under the Medicaid State Plan that provides medical coverage for the parents or caretaker relatives of children enrolled in Medicaid. The income eligibility for FMAP includes: 37% FPL for non-working parents/caretakers, and 75% FPL for working parents/caretakers. Dental care for FMAP enrollees is provided through a fee-for-service state run program. The benefits and payments structures for the provision of dental care are the same for all Medicaid State Plan members.

The comparison population for this evaluation included all adults (aged 19-64 years) enrolled in Medicaid through FMAP as of February 1, 2015.

<sup>2</sup> Guagliardo MF (2004). Spatial accessibility of primary care: concepts, methods and challenges. International Journal of Health Geographics. 3(3):1-13.



## Provider inclusion criteria

### *DWP Providers*

A list of DWP participating providers, as of January 2015, was obtained from Delta Dental of Iowa (DDIA). Participating providers include all dentists who have a current contract with DDIA. Participating providers are further distinguished based on whether or not they currently accept new DWP patients into their practices. All participating providers who currently accept new DWP patients were considered to be active providers and included in this evaluation.

At the time of this evaluation, DWP claims data were not available.

### *Medicaid Providers*

Dentists were identified as Medicaid providers if they had submitted at least one claim to Iowa Medicaid Enterprise on behalf of a Medicaid-enrolled adult (FMAP population only), aged 19 to 64 years, from January through June 2014 – the most recent claims data available.

## Dentist supply calculations

Individual dentists were identified by National Provider Identifier (NPI) in the DWP and Medicaid datasets. Practice locations were identified based on unique street address and city. Dentist supply measures at the state and program levels represent counts of unique dentists.

County level supply measures for dental specialists represent counts of unique provider/practice location pairings, or points of access.

### *General dentist-to-population ratios*

County supply measures of general dentists are expressed as FTE dentist-to-population ratios and calculated as the number of general dentists in private practice per 1,000 DWP or Medicaid members for each county. These measures were adjusted to account for dentists with multiple practice locations, which are frequently located in multiple counties. Due to the lack of information about how individual dentists split time between multiple practices, we assumed that dentists worked equivalently at each practice location. For example, a dentist with two practice locations was assumed to work 50%, or 0.5 FTE, at each site.

Due to low numbers of FMAP Medicaid members per county, dentist-to-population ratios for the Medicaid population also included the Supplemental Security Income (SSI) adult population. These additional members served to adjust dentist ratios to more appropriately reflect the adult Medicaid population served by these dentists.

## Geocoding

Provider and member addresses were geocoded to the street address level. Address data were cleaned prior to geocoding. Incomplete addresses and Post Office Box addresses were omitted from the distance calculations. Previous research has found significant discrepancies between actual street addresses and post office box location. One study found that approximately 25% of people lived more than 4 miles away from their post office box location, with some individuals living more than 100 miles away.<sup>3</sup> Providers with addresses out of Iowa were considered for this evaluation; however, members with out of state addresses were omitted.

Geocoding was carried out in multiple steps. Locations were initially geocoded using an address locator created in Esri ArcMap 10.3 using the “North American Detailed Streets” dataset maintained by Esri. Addresses incorrectly located or not located after this process were located using a combination of Google Maps geocoding API and Open Street Map geocoding API. The Google Maps API is fast and accurate, but has 24 hour period query limits. When limits were reached, the Open Street Map API was employed to geocode the remaining locations.

## Distance calculations

Travel distance to the nearest participating general dentist in private practice was calculated for DWP and Medicaid members. A network dataset was created using the “North American Detailed

<sup>3</sup> Hurley SE, et al. 2003. Post office box addresses: A challenge for geographic information system-based studies. *Epidemiology* 14(4):386-391.

Streets” dataset. Non road pathways (e.g., bicycle trails) were removed from the dataset. Travel time for each section of roadway was calculated using the posted speed limit and section length. A small subset of roads had no data for speed limit; these were edited to have a 15 mph speed limit in order to avoid inflated travel times when creating an origin-destination (OD) cost matrix for nearest provider determination.

The OD cost matrix was used to determine the closest provider to each member, which calculated travel time (in minutes) and distance (miles) for each member to the closest provider along the fastest travel route on the network using Manhattan distance (e.g., distance based on a grid). This method optimized travel time in order to reflect actual route choice, but may not always result in the shortest travel distance.

## Public safety net providers

For this evaluation, public safety net sites include Federally Qualified Health Centers (FQHCs), non-FQHC Community Health Centers, academic institutions, Indian Health Service clinics, and other non-profit clinics.

## Provider panel overlap

The list of DWP active providers was compared to the list of Medicaid providers by NPI in order to assess panel overlap between the two programs. Overlap was examined by specialty for dentists working in all practice settings at the state level.

## Data analysis

Univariate and bivariate statistics were calculated using IBM SPSS Statistics 22. Maps were produced using Esri ArcMap 10.3.

# Member Enrollment and Demographic Characteristics

As of February 2015, there were 111,934 members in DWP – 75% of whom were enrolled through the Wellness Plan and 25% through Marketplace Choice (Table 1). In comparison, there were 41,941 adults enrolled in the Medicaid comparison population.

**Table 1. Members by program, February 2015**

Program	Members
<b>DWP</b>	<b>111,934</b>
Wellness Plan	83,669
Marketplace Choice	28,265
<b>Medicaid (FMAP)</b>	<b>41,941</b>

Comparing demographic characteristics of the two populations (Table 2) indicates that the DWP population was more likely to be male, older, Asian, or of unknown race/ethnicity, and less likely to be Black compared to the Medicaid population. Mean age of the DWP population was 38.4 years (SD 13.3) compared to 32.9 years (SD 8.7) for the Medicaid population.



**Table 2. Age, Sex, and Race/Ethnicity for DWP and Medicaid members, February 2015**

<b>Demographics</b>	<b>DWP</b>	<b>Medicaid</b>
	<b>Number (%)</b>	<b>Number (%)</b>
<b>Female</b>	60,779 (54.3)	32,677 (77.9)
<b>Race/Ethnicity</b>		
White	73,165 (65.4)	27,158 (64.8)
Black	8,225 (7.3)	4,354 (10.4)
American Indian	1,322 (1.2)	597 (1.4)
Asian	2,393 (2.1)	688 (1.6)
Hispanic	3,838 (3.4)	1,480 (3.5)
Pacific Islander	801 (0.7)	240 (0.6)
Multiple-Hispanic	1,070 (1.0)	580 (1.4)
Multiple-other	845 (0.8)	393 (0.9)
Unknown	20,275 (18.1)	6,451 (15.4)
<b>Age</b>		
19-44 years	71,794 (64.1)	37,427 (89.2)
45-64 years	40,140 (35.9)	4,514 (10.8)
<b>Total</b>	111,934 (100.0)	41,941 (100.0)

## Dentist Supply

### Overall dentist supply by specialty

As of January 2015, 718 dentists had contracted as DWP providers. Among these, 646 (90%) were DWP currently accepting new patients (“active providers”). Among DWP active providers, 85% were general dentists (Table 3). This includes dentists working in all practice settings (i.e. private practice and public safety net). By comparison, 1,053 dentists provided services to adult Medicaid enrollees from January through June 2014.<sup>4</sup>

**Table 3. Overall Provider Availability (All Specialties, All Practice Settings)**

<b>Specialty</b>	<b>DWP</b>	<b>Medicaid</b>
	<b>Number (%)</b>	<b>Number (%)</b>
<b>General Dentists</b>	549 (85.0)	934 (88.9)
<b>Endodontists</b>	6 (0.9)	5 (0.5)
<b>Oral Surgeons</b>	49 (7.6)	68 (6.5)
<b>Pediatric Dentists</b>	10 (1.5)	21 (2.0)
<b>Periodontists</b>	11 (1.7)	9 (0.9)
<b>Prosthodontists</b>	21 (3.3)	16 (1.5)
<b>Total</b>	646 (100.0)	1,053 (100.0)

General dentists in four states besides Iowa were also enrolled as active DWP providers: Illinois, Missouri, Nebraska, and South Dakota. Medicaid general dentists were found in these four states, as well as Wisconsin.

As of January 2015, there were 97 dental specialists participating in DWP (Table 3), located at 156 points of access.<sup>5</sup> Slightly over half of all DWP specialists (n=49) were affiliated with the University of Iowa College of Dentistry and Hospital Dentistry (UI). Medicaid does not identify prosthodontists within their provider dataset. However, 16 prosthodontists in DWP were matched to the Medicaid dataset; all worked at the University of Iowa College of Dentistry. Among 119 Medicaid specialists, 47 had affiliations with the University of Iowa.<sup>6</sup> Similarly, pediatric dentists may be categorized by Medicaid as general dentists; therefore, Medicaid pediatric dentists may be underestimated by this evaluation.

<sup>4</sup> Excluding orthodontists.

<sup>5</sup> Dentists often work in multiple locations. Each unique dentist/practice location combination is considered to be a point of access.

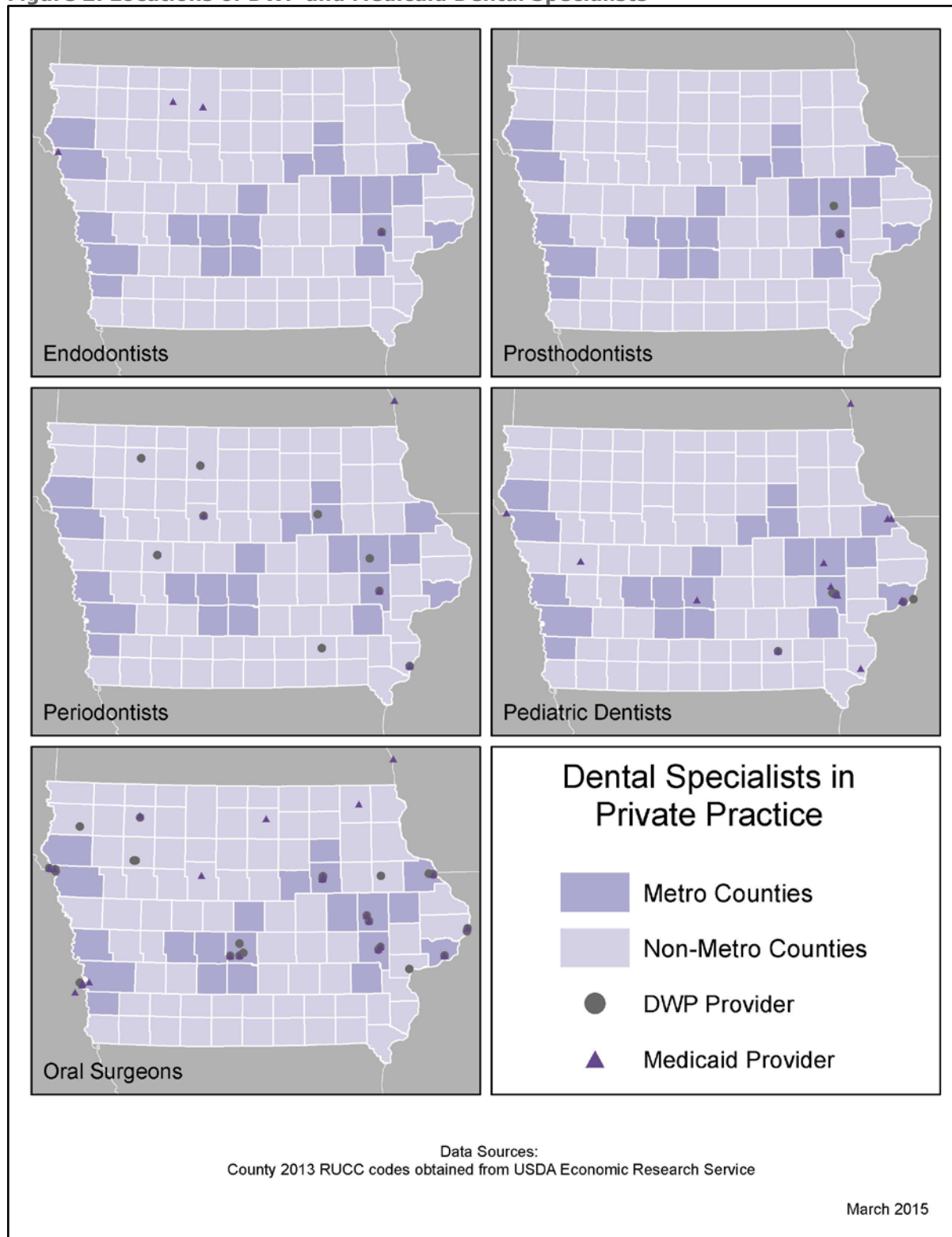
<sup>6</sup> UI affiliation is not mutually exclusive with private practice; several dentists work in both clinical settings.

No endodontists working in private practice settings were enrolled as DWP providers; the 6 DWP endodontists were all affiliated with UI. The only dental specialists working in safety net settings other than UI – for either DWP or Medicaid – included several oral surgeons working at the University of Nebraska Medical Center in Omaha, Nebraska.

With 549 general dentists participating in DWP, as of February 2015, this corresponds to approximately 204 DWP members per general dentist. In comparison, there were approximately 40 adult Medicaid enrollees per general dentist participating in the Medicaid program.

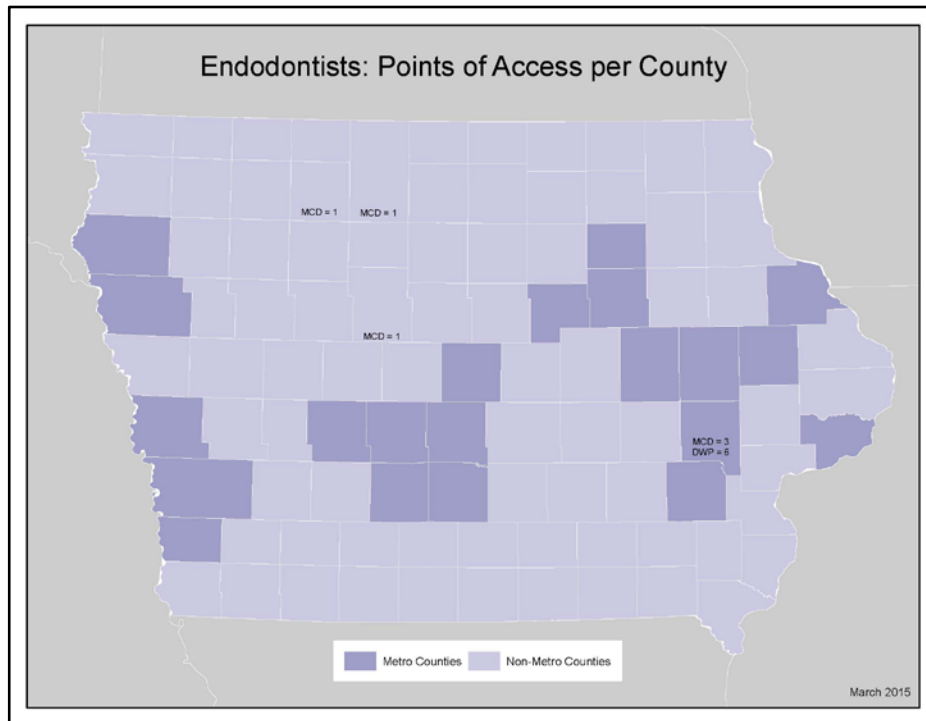
Practice locations for DWP and Medicaid dental specialists are displayed in Figure 2.

**Figure 2. Locations of DWP and Medicaid Dental Specialists**



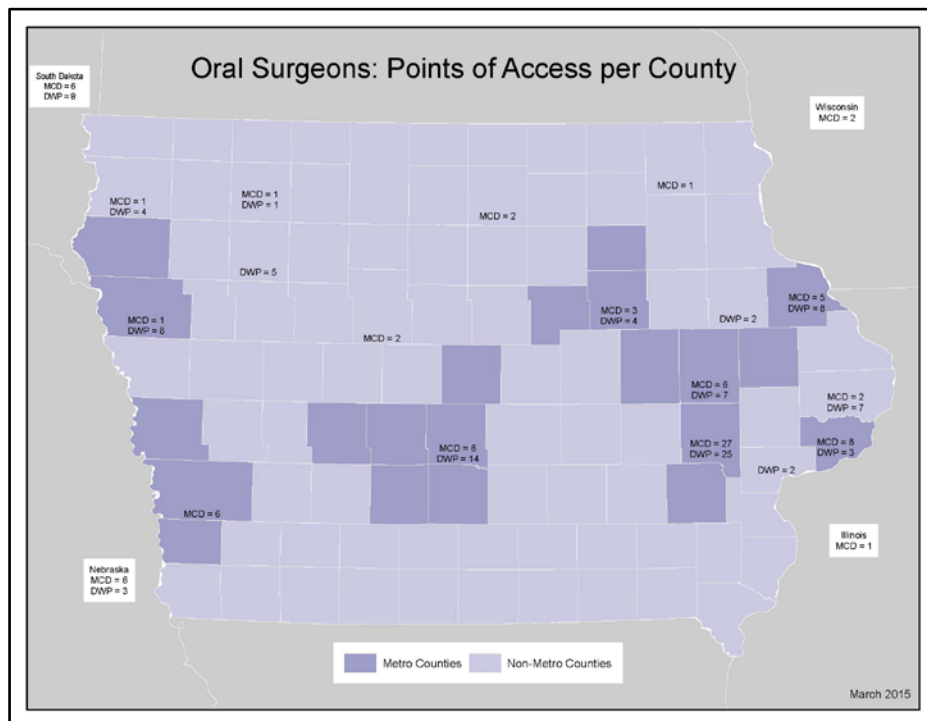
Endodontists active in DWP were only located in Johnson County and affiliated with the University of Iowa (Figure 3). Medicaid endodontists were located in Johnson County and 3 other counties in Iowa.

**Figure 3. Endodontists: DWP and Medicaid Points of Access per County and State**



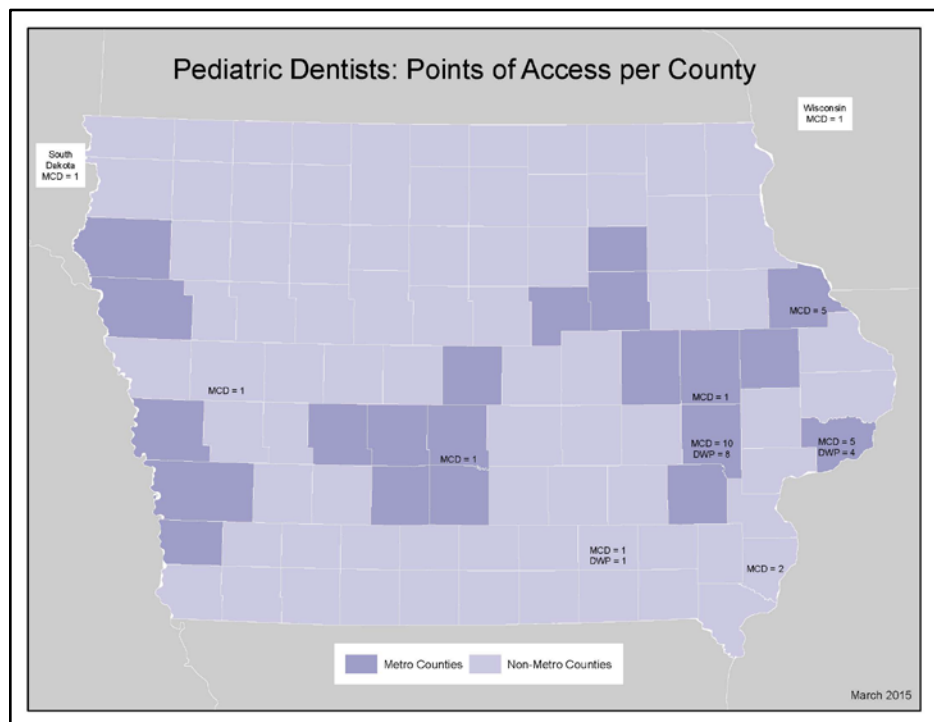
Oral surgeons active in DWP were found in 13 counties in Iowa and 2 other states (NE and SD) (Figure 4). Among Medicaid providers, oral surgeons were found in 14 counties in Iowa and 4 other states (NE, SD, WI, and IL).

**Figure 4. Oral Surgeons: DWP and Medicaid Points of Access per County and State**



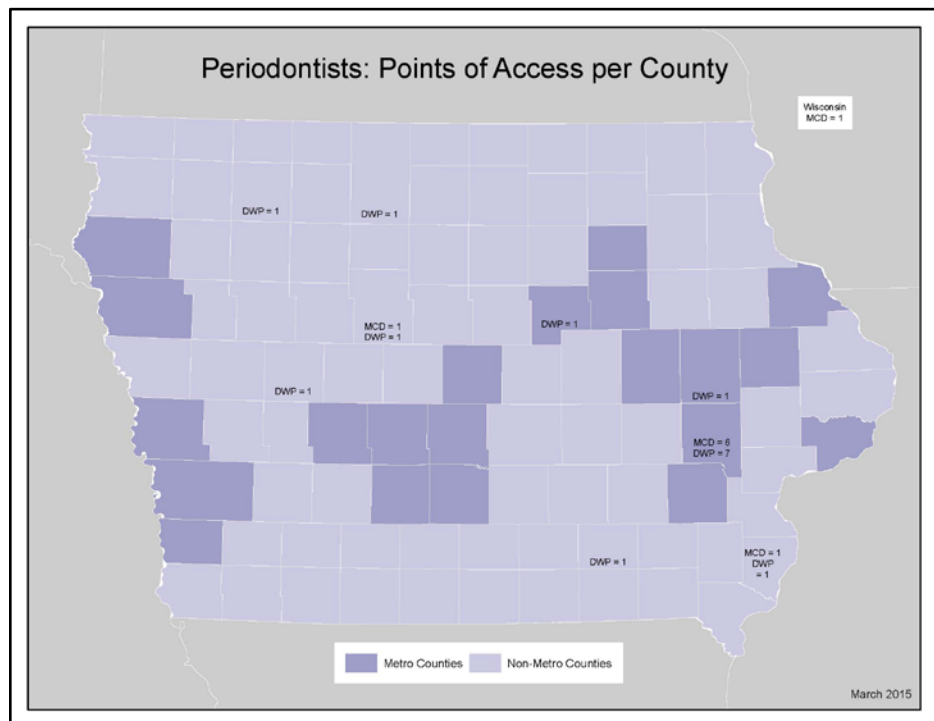
Pediatric dentists active in DWP were found in 3 counties in Iowa (Figure 5); Medicaid specialists were located in 8 counties, along with South Dakota and Wisconsin.

**Figure 5. Pediatric Dentists: DWP and Medicaid Points of Access per County and State**



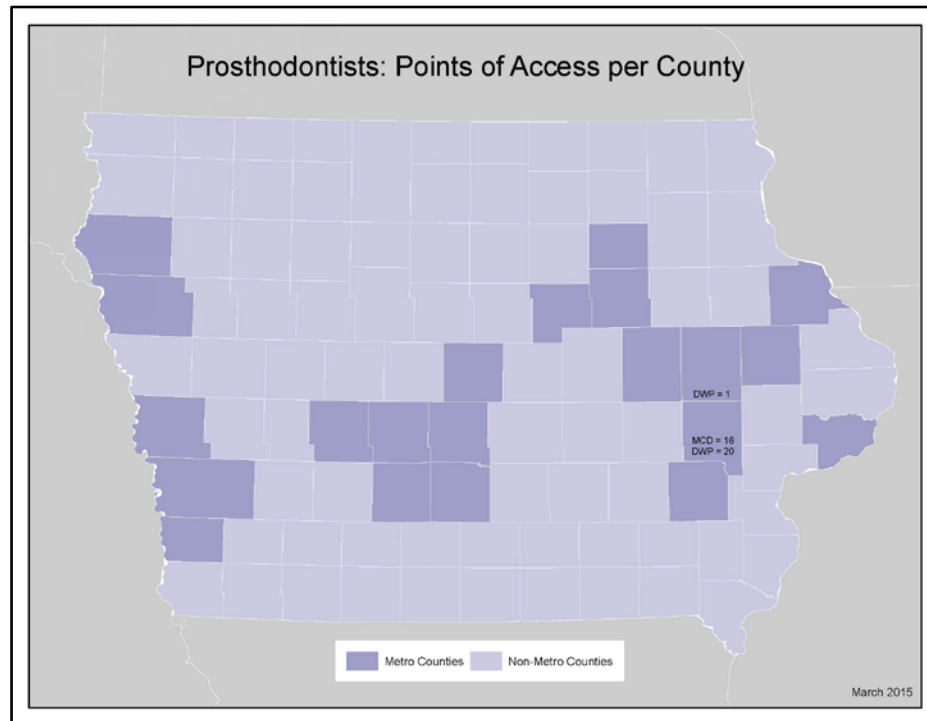
DWP periodontists were found in 9 counties (Figure 6). Periodontists active in Iowa Medicaid were found in 3 counties, along with Wisconsin.

**Figure 6. Periodontists: DWP and Medicaid Points of Access per County and State**



Prosthodontists active in DWP were found in 2 counties. While Medicaid does not identify prosthodontists as a specialty, 16 of these DWP specialists were also found to be listed in the Medicaid provider dataset.

**Figure 7. Prosthodontists: DWP and Medicaid Points of Access per County and State**



### County level supply of general dentists in private practice

DWP general dentist FTEs per county ranged from 0 (in 19 of 99 counties) to 70.2 (Table 4). By comparison, Medicaid FTEs per county ranged from 0 (in 3 counties) to 110.5. A complete listing of county general dentist supply (including FTEs and dentist-to-population ratios) is included in in Appendix A (Table A1).

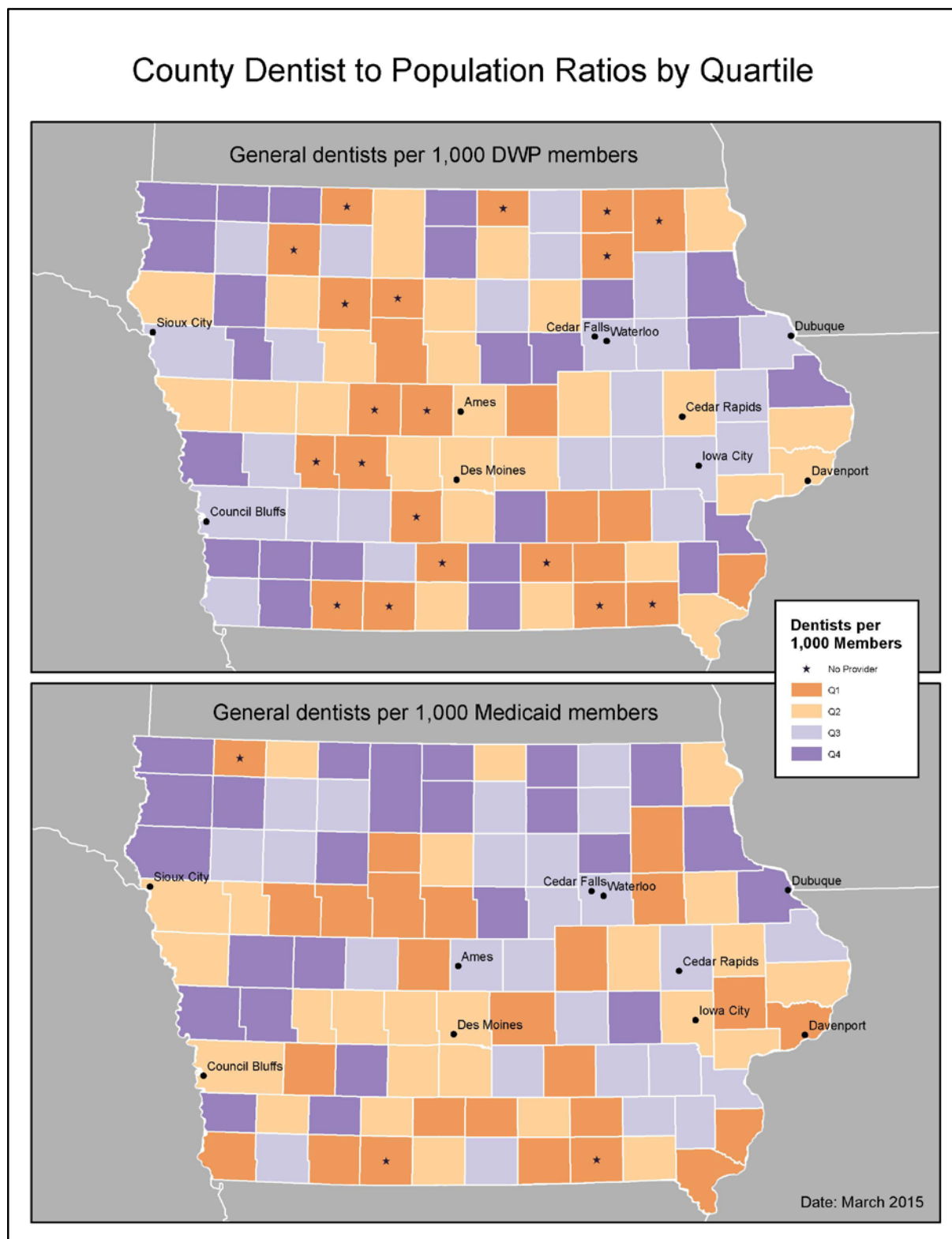
Mean county dentist-to-population ratio in DWP was 4.8 general dentists per 1,000 enrollees, compared to 12.6 general dentists per 1,000 Medicaid FMAP and SSI enrollees.

**Table 4. County Dentist-to-Population Ratios for General Dentists in Private Practice**

	General dentists (FTEs)		General dentist FTEs per 1,000 members <sup>1</sup>	
	DWP	Medicaid	DWP	Medicaid
<b>Mean</b>	4.4	8.2	4.8	12.6
<b>Median</b>	2.0	3.5	4.0	10.6
<b>Std. Dev.</b>	9.0	15.6	4.7	7.9
<b>Range</b>	0 – 70.2	0 – 110.5	0 – 22.7	0 – 42.5
<b>Percentiles</b>				
<b>25</b>	1.0	2.0	1.3	7.5
<b>50</b>	2.0	3.5	4.0	10.6
<b>75</b>	4.0	6.5	6.8	16.8

County level dentist-to-population ratios are displayed by quartile in Figure 8. Counties in quartile 1 have the lowest dentist supply relative to the enrolled population, while counties in quartile 4 have the highest relative supply of general dentists. Cut-points for quartiles are displayed in Table 4 (e.g., 25th, 50th, and 75th percentile values).

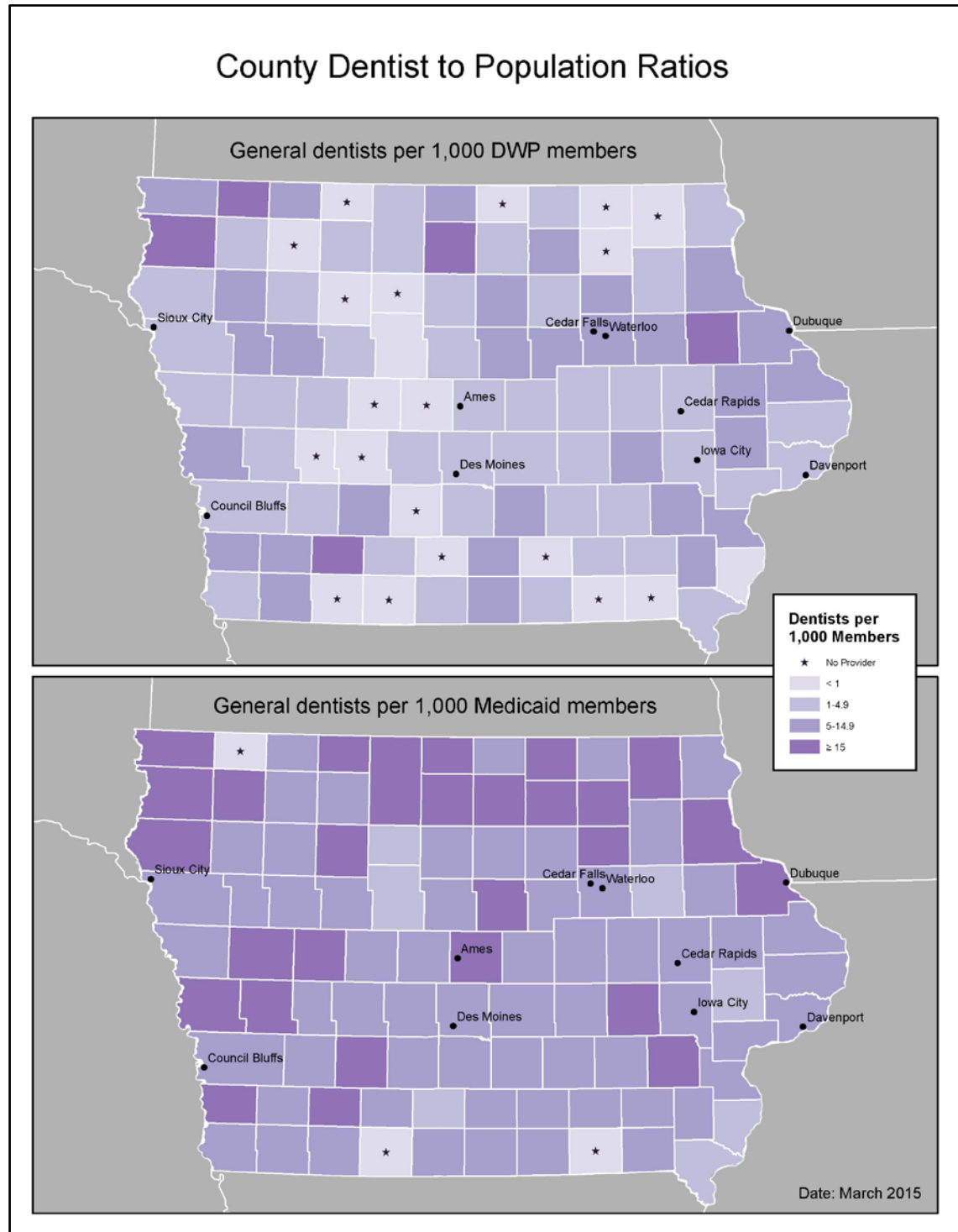
**Figure 8. Private practice general dentist-to-population ratios by quartile**



Actual county level dentist-to-population ratios are displayed in Figure 9. Whereas Figure 8 shows relative trends in general dentist supply for the DWP population versus the Medicaid population, this map compares absolute values of dentist FTEs. Sixty-four counties have less than 5 general dentists per 1,000 DWP members. By comparison, only 10 counties have less than 5 general dentists per 1,000 Medicaid members.



**Figure 9. Private practice general dentist-to-population ratios**



## Distance to Nearest Participating Provider

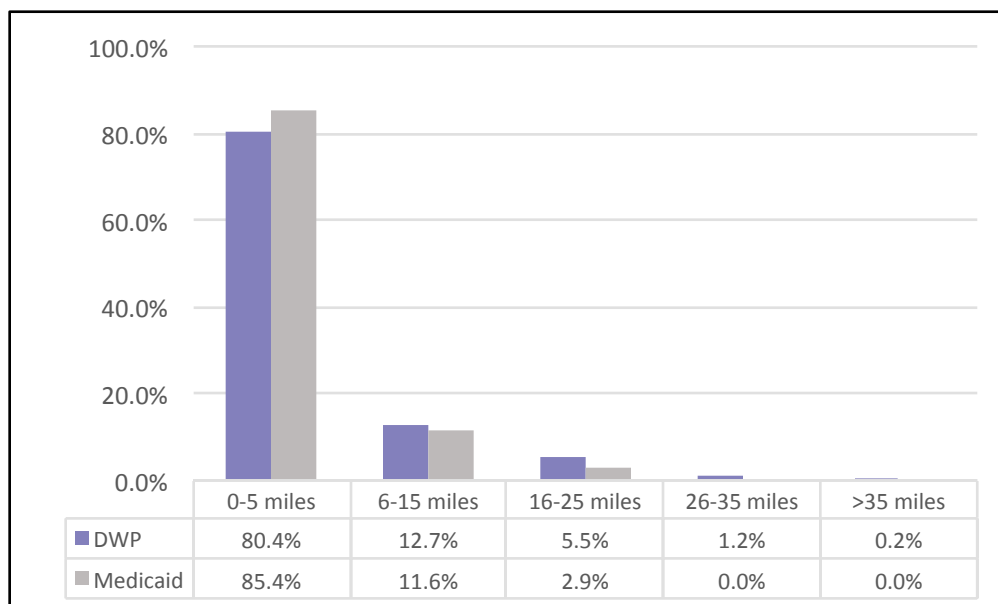
Mean distance to the nearest general dentist for DWP members was 4.0 miles and ranged from 0 to almost 50 miles (Table 5). By comparison, mean distance among Medicaid members was 2.8 miles with a maximum of 30.7 miles. Travel time showed a similar pattern: mean travel time to the nearest dentist was slightly longer for DWP members compared to Medicaid members (6.3 minutes vs. 4.7 minutes, respectively).

**Table 5. Distance to the nearest general dentist for DWP and Medicaid members**

	DWP		Medicaid	
	Travel Distance (miles)	Travel Time (minutes)	Travel Distance (miles)	Travel Time (minutes)
Mean	4.0	6.3	2.8	4.7
Median	1.3	2.5	1.1	2.0
Std. Dev.	6.2	9.0	4.4	6.7
Range	0 – 49.7	0 – 76.1	0 – 30.7	0 – 49.4

Additionally, 80.4% of DWP members lived ≤5 miles to the nearest general dentist (Figure 10), compared to 85.4% of Medicaid members. While no Medicaid members lived more than 25 miles to the nearest dentist, 1.4% of DWP members live beyond this threshold, which represents the HRSA cut-point for excess travel distance to dental services.<sup>7</sup>

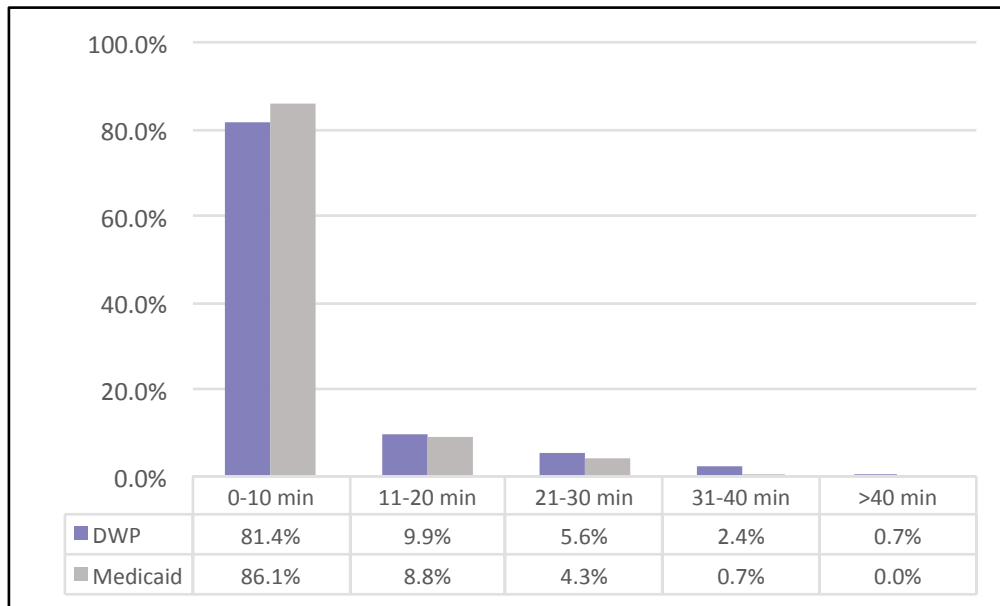
**Figure 10. Distribution of DWP and Medicaid members by travel distance to the nearest general dentist**



Examining travel times to the nearest provider showed similar a similar distribution: 81.4% of DWP members lived within 10 minutes of a general dentist, compared to 86.1% of Medicaid members (Figure 11).

<sup>7</sup> Health Resources and Services Administration. "Dental HPSA Designation Criteria". Available at: <http://bhpr.hrsa.gov/shortage/hpsas/designationcriteria/dentalhpsacriteria.html>. Accessed: 03/17/2015.

**Figure 11. Distribution of DWP and Medicaid members by travel time to the nearest general dentist**



## Participating Public Dental Safety Net Providers

Public safety net providers serving DWP members as of January 2015 included Federally Qualified Health Centers (FQHCs), other Community Health Centers (CHCs) and non-profit clinics, academic institutions, and Indian Health Services clinics.

As of January 2015, 144 dentists at 27 locations actively participated in DWP as public safety net providers (Table 6). In comparison, 151 dentists participated in Iowa Medicaid as public safety net providers. It is difficult to ascertain how many locations actively provided services to Medicaid members from January through June 2014 since Iowa Medicaid Enterprises assigns a single identifier to an FQHC and all of its satellite dental clinics. If we assume that all satellite dental clinics of each FQHC that participates in Medicaid also accept Medicaid patients, then 34 locations provided dental services to Iowa Medicaid patients during the six-month study period.

**Table 6. Number of Public Safety Dental Net Providers**

	DWP	Medicaid
Safety Net Dentists	144	151
Clinic Locations	27	34

Dentists affiliated with the University of Iowa College Of Dentistry and Dental Clinics comprised a majority of both DWP and Medicaid public safety net dentists:

- 91 DWP providers were affiliated with the University of Iowa
- 97 Medicaid providers were affiliated with the University of Iowa

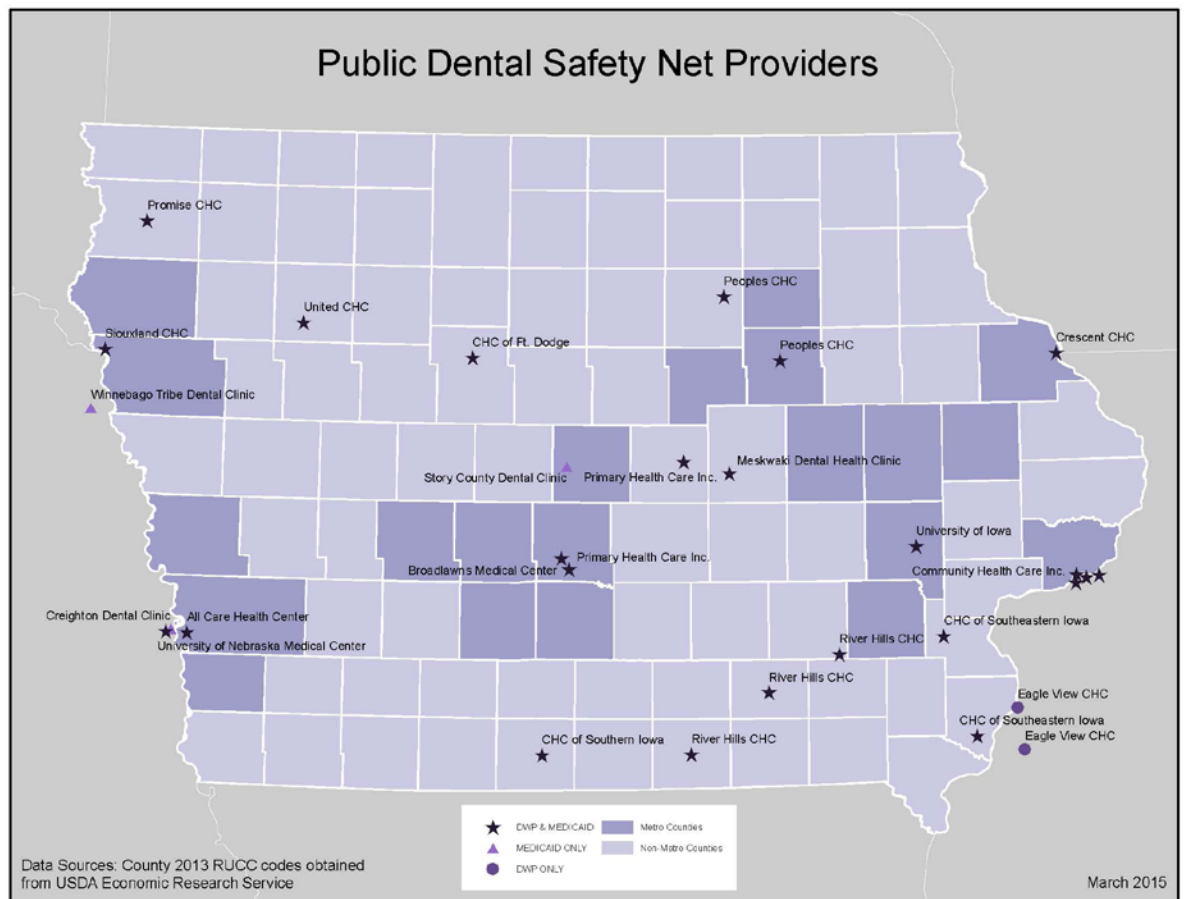
A complete listing of public dental safety net sites and their participation in DWP and Medicaid is provided in Table 7.

**Table 7. DWP and Medicaid Participation among Public Safety Net Providers by Site**

Type	Site	Clinic Name	Location	DWP	Medicaid
FQHC	Iowa	All Care Health Centers	Council Bluffs, IA	X	X
		Community Health Care Inc.	Davenport, IA	X	X
		Community Health Center of Ft. Dodge	Fort Dodge, IA	X	X
		Community Health Center of Southern Iowa	Leon, IA	X	X
		Community Health Centers of Southeastern Iowa	Burlington, IA	X	X
			Columbus City, IA	X	X
		Crescent Community Health Center	Dubuque, IA	X	X
		Peoples Community Health Clinic	Waterloo, IA	X	X
			Clarksville, IA	X	X
		Primary Health Care Inc.	Des Moines, IA	X	X
			Marshalltown, IA	X	X
		Promise Community Health Center Inc.	Sioux Center, IA	X	X
		River Hills Community Health Center	Ottumwa, IA	X	X
	Richland, IA		X	X	
	Centerville, IA		X	X	
Out of State	Siouxland Community Health Center	Sioux City, IA	X	X	
	United Community Health Center	Storm Lake, IA	X	X	
	Eagle View Community Health System	Oquawka, IL	X	X	
Stronghurst, IL		X	X		
Community Health Care Inc.		Rock Island, IL	X	X	
	East Moline, IL	X	X		
	Moline, IL	X	X		
Non-FQHC Community Health Center or Non-profit	Iowa	Broadlawns Medical Center	Des Moines, IA	X	X
		Des Moines Health Center	Des Moines, IA		X
		Story County Dental Clinic (Mid-Iowa Community Action)	Ames, IA		X
	Out of State	Hancock County Health Department	Carthage, IL		X
Dental School	Iowa	University of Iowa College of Dentistry & Dental Clinics	Iowa City, IA	X	X
		UIHC Hospital Dentistry Institute	Iowa City, IA	X	X
		Iowa Central Community College	Fort Dodge, IA		X
	Out of State	Creighton University Dental Clinic	Omaha, NE		X
		University of Nebraska Medical Center Dental Plan	Omaha, NE	X	X
		University of Nebraska Medical Center Adult General Dentistry	Omaha, NE		X
Indian Health Services Clinic	Iowa	Meskwaki Dental Health Clinic	Tama, IA	X	X
	Out of State	Winnebago Tribe of Nebraska Dental Clinic	Winnebago, NE		X

In Iowa, 12 FQHCs with 17 clinic locations provided comprehensive dental services to both DWP and Medicaid members (Figure 7). Several public safety net providers in Illinois and Nebraska also participated in DWP and/or Iowa Medicaid, including the University of Nebraska Medical Center, several FQHC and CHC clinics in Illinois, and an IHS clinic in Nebraska. Several non-FQHC safety net providers that participated in Iowa Medicaid were not active DWP providers as of January 2015.

**Figure 7. Locations of Public Dental Safety Net Sites by DWP and Medicaid Participation**



## Provider Panel Overlap

Approximately 43% (403 out of 934) of general dentists who were Medicaid providers were also active DWP providers (Table 8).

Among specialists, 64% of Medicaid providers (76 out of 119) were also contracted with DWP (Table 8). The greatest panel overlap was seen with periodontists, with 7 out of 9 Medicaid providers also contracted with DWP, indicating 78% overlap of the DWP panel with Medicaid. Sixteen DWP prosthodontists were also found to be Medicaid providers; however, we were not able to identify other prosthodontists in the Medicaid dataset since this specialty is not identified by Medicaid.

Overall, 45% of Medicaid dental providers were active DWP providers as of January 2015.

**Table 8. Provider overlap between DWP and Medicaid providers in all practice settings**

	<b>DWP Total</b>	<b>DWP only</b>	<b>DWP <u>and</u> Medicaid</b>	<b>Medicaid only</b>	<b>Medicaid Total</b>	<b>DWP overlap with Medicaid<sup>2</sup></b>
General Dentists	549	146	403	531	934	43%
Endodontists	6	3	3	2	5	60%
Oral Surgeons	49	7	42	26	68	62%
Pediatric Dentists	10	2	8	13	21	38%
Periodontists	11	4	7	2	9	78%
Prosthodontists	21	5	16	*	16	100%
<b>Total</b>	<b>646</b>	<b>167</b>	<b>479</b>	<b>574</b>	<b>1,053</b>	<b>45%</b>

\*Unknown

# Appendix A – Supplemental Information

**Table A1. Dentist to population ratios by county**

County	DWP			Medicaid		
	Members (Number)	General Dentists (FTEs)	General Dentists per 1,000 Members	Members (Number)	General Dentists (FTEs)	General Dentists per 1,000 Members
Adair	170	1.00	5.88	114	2.00	17.54
Adams	88	2.00	22.73	103	3.00	29.13
Allamakee	346	0.50	1.45	216	2.00	9.26
Appanoose	673	2.00	2.97	545	4.00	7.34
Audubon	152	0.00	0.00	119	1.00	8.40
Benton	701	3.00	4.28	473	4.00	8.46
Black Hawk	5629	36.50	6.48	4165	45.50	11.16
Boone	735	0.00	0.00	475	2.50	5.26
Bremer	404	4.00	9.90	269	8.00	29.74
Buchanan	661	4.00	6.05	410	2.00	4.88
Buena Vista	524	1.14	2.18	394	4.50	11.42
Butler	506	2.00	3.95	233	3.00	12.88
Calhoun	296	1.14	3.86	193	1.00	5.18
Carroll	1100	4.00	3.64	487	10.50	21.56
Cass	420	2.00	4.76	396	2.00	5.05
Cedar	426	2.50	5.87	279	1.00	3.58
Cerro Gordo	1859	3.83	2.06	1179	17.75	15.06
Cherokee	311	2.67	8.57	185	2.00	10.81
Chickasaw	288	0.00	0.00	179	3.00	16.76
Clarke	313	0.00	0.00	256	1.00	3.91
Clay	489	0.00	0.00	307	4.00	13.03
Clayton	403	3.50	8.68	225	5.00	22.22
Clinton	2266	9.00	3.97	1817	18.00	9.91
Crawford	406	1.00	2.46	282	5.00	17.73
Dallas	1111	4.00	3.60	763	7.50	9.83
Davis	269	0.00	0.00	174	0.00	.00
Decatur	367	1.00	2.72	260	2.00	7.69
Delaware	331	5.00	15.11	302	3.00	9.93
Des Moines	2069	1.00	0.48	1590	4.75	2.99
Dickinson	412	3.33	8.09	244	2.25	9.22
Dubuque	2858	16.00	5.60	2259	59.67	26.86
Emmet	291	0.00	0.00	176	3.00	17.05
Fayette	817	4.00	4.90	613	4.00	6.53
Floyd	687	4.00	5.82	476	7.75	18.38
Franklin	235	1.50	6.38	167	2.00	11.98
Fremont	218	1.00	4.59	184	1.00	5.43
Greene	329	0.00	0.00	220	3.00	13.64
Grundy	207	2.00	9.66	132	1.50	11.36
Guthrie	270	0.00	0.00	205	2.00	9.76
Hamilton	484	1.00	2.07	315	2.00	6.35



Table A1. Continued

	DWP			Medicaid		
County	Members (Number)	General Dentists (FTEs)	General Dentists per 1,000 Members	Members (Number)	General Dentists (FTEs)	General Dentists per 1,000 Members
Hancock	230	4.33	18.84	154	4.00	25.97
Hardin	548	8.00	14.60	334	6.00	17.96
Harrison	446	3.33	7.47	326	7.50	23.01
Henry	731	5.50	7.52	535	5.25	11.68
Howard	209	0.00	0.00	155	2.00	12.90
Humboldt	256	0.00	0.00	169	0.50	2.96
Ida	172	1.50	8.72	101	1.00	9.90
Iowa	769	4.50	5.85	292	6.00	23.97
Jackson	725	7.00	9.66	488	7.00	14.34
Jasper	1280	2.67	2.08	908	6.50	7.16
Jefferson	951	3.00	3.15	472	6.00	12.71
Johnson	3475	14.83	4.27	2127	22.50	10.58
Jones	508	3.50	6.89	399	3.33	8.35
Keokuk	391	0.50	1.28	235	3.00	12.77
Kossuth	312	1.00	3.21	222	5.50	24.77
Lee	1757	3.50	1.99	1443	5.00	3.47
Linn	8996	33.69	3.74	5649	75.47	13.36
Louisa	360	3.00	8.33	269	3.00	11.15
Lucas	334	3.00	8.98	267	2.00	7.49
Lyon	160	2.00	12.50	104	2.00	19.23
Madison	355	0.00	0.00	213	2.00	9.39
Mahaska	841	1.00	1.19	646	3.33	5.16
Marion	842	9.00	10.69	589	8.50	14.43
Marshall	1663	2.04	1.23	1040	12.90	12.40
Mills	341	3.00	8.80	260	6.00	23.08
Mitchell	209	1.00	4.78	139	3.00	21.58
Monona	368	0.50	1.36	201	2.00	9.95
Monroe	237	0.00	0.00	200	2.00	10.00
Montgomery	406	3.00	7.39	329	3.00	9.12
Muscatine	1855	7.00	3.77	1335	13.00	9.74
O'Brien	309	1.50	4.85	236	6.25	26.48
Osceola	111	2.00	18.02	86	0.00	.00
Page	513	5.14	10.03	459	5.00	10.89
Palo Alto	246	1.00	4.07	176	2.50	14.20
Plymouth	443	1.67	3.76	325	4.50	16.92
Pocahontas	223	0.00	0.00	166	3.50	21.08
Polk	20530	70.23	3.42	11500	109.50	9.61
Pottawattamie	4346	18.83	4.33	3326	31.67	9.52
Poweshiek	447	2.00	4.47	317	3.67	11.57
Ringgold	152	0.00	0.00	111	0.00	.00
Sac	212	1.29	6.06	152	1.00	6.58
Scott	8362	18.50	2.21	6271	34.00	5.42

**Table A1. Continued**

	<b>DWP</b>			<b>Medicaid</b>		
<b>County</b>	<b>Members (Number)</b>	<b>General Dentists (FTEs)</b>	<b>General Dentists per 1,000 Members</b>	<b>Members (Number)</b>	<b>General Dentists (FTEs)</b>	<b>General Dentists per 1,000 Members</b>
Shelby	247	1.00	4.05	238	4.50	18.91
Sioux	402	7.64	19.01	212	8.00	42.45
Story	1900	4.88	2.57	983	15.85	16.12
Tama	562	1.50	2.67	390	2.50	6.41
Taylor	195	0.00	0.00	154	1.00	6.49
Union	478	2.00	4.18	352	3.00	8.52
Van Buren	274	0.00	0.00	213	2.00	9.39
Wapello	2033	2.50	1.23	1489	8.00	5.37
Warren	1015	4.00	3.94	604	6.00	9.93
Washington	645	4.50	6.98	411	6.50	15.82
Wayne	201	1.50	7.46	156	2.00	12.82
Webster	2099	2.00	0.95	1304	5.50	4.22
Winnebago	256	3.00	11.72	185	6.00	32.43
Winneshiek	481	0.00	0.00	249	9.00	36.14
Woodbury	4875	21.81	4.47	3178	33.50	10.54
Worth	184	0.00	0.00	108	1.00	9.26
Wright	345	0.67	1.93	232	1.75	7.54

**(Footnotes)**

- 1) Includes FMAP and SSI adults aged 19-64 years
- 2) Percentage of Medicaid providers who are also DWP providers