ARIZONA HEALTH FUTURES

JUNE 2004

Open Wide:

Dental Care Use and Cost for Low-Income Adults

Part Three: A Report on the Arizona Adult Dental Insurance Project. In the scheme of hot health topics, oral health is a perennial back seat issue. Yet in his 2000 report, *Oral Health in America*, former U.S. Surgeon General David Satcher described oral health as a "silent epidemic" of oral disease, with little attention given to causes and consequences that, left untreated, have a profound impact on individuals, families and the nation's public health.

St. Luke's Health Initiatives
A Catalyst for Community Health

In Parts One and Two of St. Luke's Health Initiatives' *Open Wide* series,[1] we provided an overview of Arizona's oral health delivery system generally and the integration of oral health and primary care specifically. In this third and final part of the series, we report on the results of the Arizona Adult Dental Insurance Project and its implications for public policy and community health.

Adult Oral Health

For every adult without medical insurance, there are three without dental insurance.[8]

The following conditions set the stage for any investigation into ways to improve oral health, with a particular focus on adults:

- Adults lose more than 164 million hours of work each year due to dental disease or dental visits. Over 20% of adults reported some form of oral-facial pain within the past six months.[2]
- A growing body of research confirms the interrelationship between diabetes, cardiovascular disease and periodontal disease, as well as the transmission of bacteria between adults with untreated decay and young children.
- Utilization of health care is associated with self-reported health status. Those who reported their health as *excellent* or *very good* were more likely to have had a dental visit than those reporting their health as *fair* or *poor*. Those who visited a dentist in the past year were less likely to have untreated caries.[3]
- Oral diseases do not resolve over time in the absence of intervention. Lack of dental visits can be used as an indicator of unmet need.
- People with dental coverage are more likely to visit a dentist than those without coverage.[4] Approximately 69% of individuals with insurance reported visiting a dentist in the past year; 44.3% without insurance had not been to a dentist.[5]
- People with higher incomes were more likely to visit a dentist than those with lower incomes. About 68% of adults with incomes greater than $15,000 annually reported seeing a dentist in the past year, compared to 43% of adults in Arizona with incomes less than $15,000 per year.[6]
- Uninsured people report that they are more likely to be unable to access dental services than medical services.[7]
- Dental benefits provided to adults in AHCCCS (Arizona's Medicaid program) are limited to treatment of infection and extraction.

The Arizona Adult Dental Insurance Project

In light of these conditions and other issues discussed in previous *Open Wide* reports, SLHI chose to focus more specifically on the subject of dental insurance for adults. Questions included:

- If low-income adults in Arizona had dental insurance, would their utilization patterns differ from other groups that were already insured?
- What would be the cost to provide dental coverage for what is perceived to be a relatively high-risk population?

Project Description

Partners – The Arizona Dental Insurance Project was a collaborative venture to provide dental insurance to low-income adults. In addition to SLHI, other partners included the Maricopa Department of Public Health (MDPH) and the Arizona Department of Economic Security (DES). MDPH Office of Oral Health provided the overall administration and interface with the enrolled member (a role similar to that of an employer), DES established the eligibility requirements and informed potential members of the program, and SLHI provided funding for the project and evaluation.

Target Population – The target population was adults living in Maricopa County who had children eligible for subsidized child care. Arizona's household eligibility threshold for this population is 165% of the federal poverty level (FPL) – about $20,000 annual income for a family of two and $30,000 for a family of four. After eligibility was established by DES, the applicant was offered the opportunity to enroll in the dental insurance program. Upon completing the enrollment form and submitting it to MDPH, an insurance card was issued, along with information about member benefits and the process for selecting a dentist. Members were also asked to complete a questionnaire about their oral health history and experiences with dental insurance coverage and services.

Insurance Product – The insurance product itself was a standard benefit offered through a commercial carrier with the largest network of dentists in the county. Included were the classes of routine services (diagnostic and preventive), basic services (restorative, oral surgery, endodontics, periodontics, and treatment of pain), and major services (prosthodontics, bridge and denture repair, and crowns). The benefit provided 100%, 80% and 60% coverage respectively for each of these classes, with a calendar year benefit maximum of $1,500. This is similar to a standard dental plan benefit package.

Enrollment – MDPH provided an orientation to the DES eligibility staff, initially with supervisors and later with direct staff at local sites. Enrollment started slowly, with most of the members enrolled at one site. MDPH staff made on-site visits to the various DES offices to provide a second orientation. This resulted in a rapid increase in enrollment in the late fall/winter of 2000/2001. Almost 700 adults were enrolled between June 1, 1999 and February 28, 2001. The program was designed to allow enrollees to have two full years of benefits, which resulted in some being enrolled for up to four years.

TABLE 1 | ETHNIC DISTRIBUTION OF ELIGIBLE POPULATION COMPARED TO THOSE ENROLLED

Ethnicity	Child Care Eligible Percentage	Project Enrolled Numbers	Project Enrolled Percentage
Asian	N/A	2	<1
White, Non-Hispanic	43	349	50
Hispanic	41	166	24
Native American	5	31	4
African American	11	91	13
Other/Not Reported		57	8

Findings

Demographics

As one might expect from a program targeting families receiving subsidized child care, the great majority of enrollees were women – 90%.

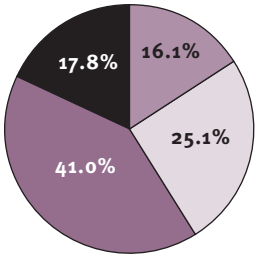
Table 1 compares the ethnic distribution of those eligible for subsidized child care and those who enrolled in the dental insurance program. Slightly more White and African-American adults enrolled in the project, while significantly fewer Hispanics enrolled.

Experience with Dental Coverage

Of the 696 people who enrolled:

- 61 (8.8%) had other dental coverage; 635 (91.2%) did not.
- 308 (44.3%) had dental insurance at some time in the past; 388 (55.7%) did not. Of those who had dental insurance previously:
  - 146 of the 308 (47.4%) reported that they paid for the insurance themselves (at least in part).
  - 181 of the 308 (58.8%) reported that their employer paid (at least in part).
  - 219 of the 308 (71.1%) reported that they had used the dental insurance coverage in the past.
  - 230 of the 308 (74.7%) reported that they used dental services more when they had insurance.
- 678 (97.4%) said they thought it was important to get regular dental checkups and cleanings. Eighteen (2.6%) did not believe it was important.

FIGURE 1
SCHOOL OR WORK ABSENCES DUE TO DENTAL PROBLEMS



Number of Times Missed Work or School Due To Dental Problems

- Once a year 110 Responses
- Twice a year 172 Responses
- Never 280 Responses
- Do not know 122 Responses

History of Missing Work or School Due to Dental Problems

As shown in Figure 1, over 40% of the target population reported missing work or school each year because of dental conditions.

General Utilization

- Of the 696 persons who enrolled between 6/1/99 and 2/28/01, 377 (54.2%) used services; 319 (45.8%) did not.
- The percentage of persons who reported ever having dental insurance was higher among those who used procedures under the pilot – 48.0% (181 of 377) – compared to 39.8% (127 of 319) for persons who did not use services.

TABLE 2 | ETHNIC DISTRIBUTION OF ELIGIBLE POPULATION COMPARED TO THOSE ENROLLED

Race/Ethnicity	Did Not Utilize Services		Utilized Services	
	NUMBER	PERCENT	NUMBER	PERCENT
Asian	1	50.0	1	50
White, Non-Hispanic	148	42.4	201	57.6
Hispanic	82	49.4	84	50.6
Native American	20	64.5	11	35.5
African American	41	45.1	50	54.9
Other	3	30.0	7	70.0
Two or more races	12	42.9	16	57.1
Not reported	12	63.2	7	36.8

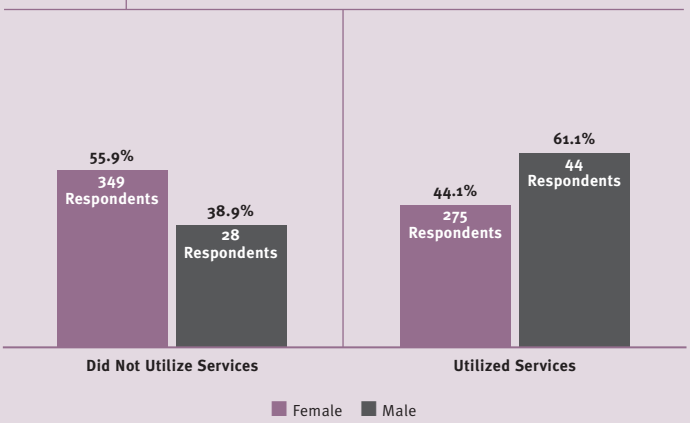
Demographics and Utilization

The demographics of utilization patterns are shown in Table 2 and Figure 2. More female enrollees utilized services than did male enrollees. There were few significant differences in utilization among races and ethnicities. The exception was Native Americans, who underutilized services (35.5%) compared to other groups.

Utilization By Procedure

Services utilized varied over the four years of the project. As shown in Table 3, the most commonly used services were diagnostic and restorative. Their relative weight within each year generally remained constant.

FIGURE 2 | SERVICE UTILIZATION BY GENDER



Utilization Compared to a Standard Group

The insurance carrier compared service utilization for the period 1/1/99 to 12/31/01 by persons enrolled in the Adult Dental Insurance Project to a similar group insured by the carrier in its standard employer-based dental insurance programs. The result: Enrollees in the limited time project had a lower use rate of preventive and diagnostic services compared to the standard group, but a higher use of basic and major services. One can reasonably infer that persons enrolled in a short term program take care of vital repair and restoration services first, which typically are more expensive than preventive and diagnostic services. Conversely, the longer persons are enrolled in a dental insurance program, the more likely they are to use preventive and diagnostic services on a regular basis. Time-limited programs like the Adult Dental Insurance Project are likely to cost more than longer term programs over the same time period.

TABLE 3 | PROCEDURES BY CATEGORY OVER PROJECT PERIOD

Service Category	Number of Procedures 6/1/99 - 5/31/00	Number of Procedures 6/1/00 - 5/31/01	Number of Procedures 6/1/01 - 5/31/02	Number of Procedures 6/1/02 - 5/31/03
Adjunctive General Services	15	52	51	27
Diagnostic	223	786	516	511
Endodontics	15	62	24	34
Fixed Prosthodontics	0	9	24	10
Maxillofacial Prosthetics	0	0	1	0
Oral Surgery	53	179	103	101
Orthodontics	0	0	2	0
Periodontics	37	155	61	60
Preventive	45	147	145	124
Removable Prosthodontics	6	12	9	5
Restorative	147	421	290	302
Total	**541**	**1,823**	**1,226**	**1,174**

TABLE 4 PROCEDURES BY CATEGORY FOR ALL ENROLLEES [6/1/99 THROUGH 5/31/03]

Service Category	Number of Procedures	Patient Payment Cost	Insurer Payment Cost
Adjunctive General Services	145	$4,839	$6,329
Diagnostic	2,036	$8,863	$65,919
Endodontics	135	$14,825	$43,639
Fixed Prosthodontics	43	$11,558	$13,326
Maxillofacial Prosthetics	1	$0	$55
Oral Surgery	436	$14,934	$41,908
Orthodontics	2	$347	$186
Periodontics	313	$10,451	$33,825
Preventive	461	$2,484	$21,626
Removable Prosthodontics	32	$8,254	$8,497
Restorative	1,160	$84,543	$115,453
Total	**4,764**	**$161,097**	**$350,763**

Cost of Services

The cost of services was shared by the member and the insurer (SLHI). The insurer paid an administrative fee for each member enrolled, ranging over the years from $4.38 per member/month to $1.16 per member/month. The member was responsible for the co-pay, which varied for each class of services. Table 4 shows the distribution of services and the payment allocation. The total cost for services was $511,860. Of this, the member's portion was $161,097 – 31%, while the insurer picked up $350,763 – 69%.

FIGURE 3 BREAKDOWN OF COSTS BETWEEN PATIENT, INSURER AND ADMINISTRATION [6/1/01 –5/31/03]

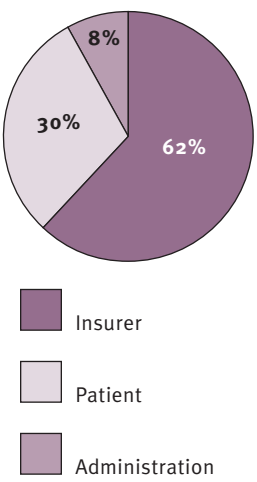
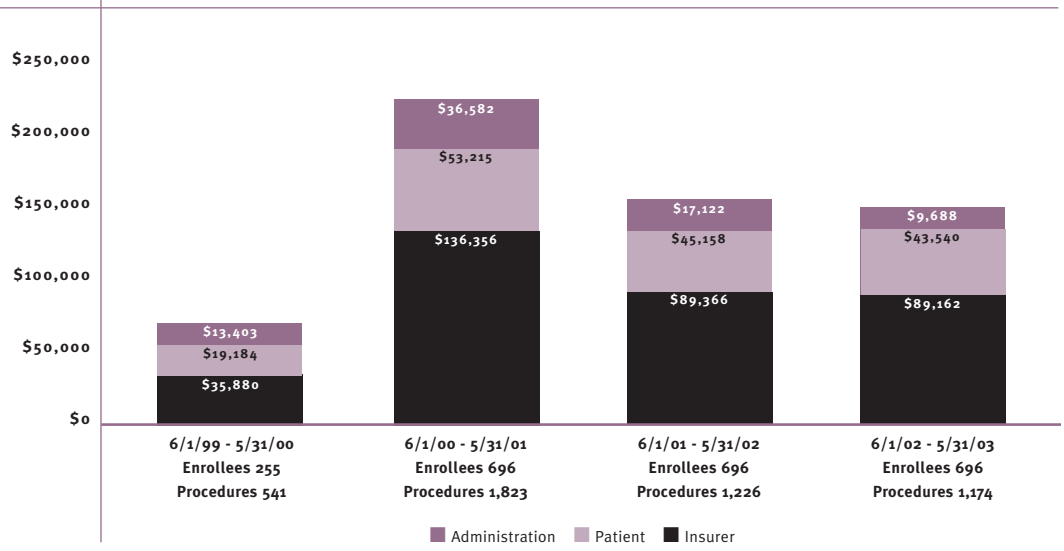


FIGURE 4 ANNUAL SERVICE AND ADMINISTRATIVE CLAIMS PAID BY THE INSURER, AND PORTION PAID BY PATIENTS.



The average cost per enrollee/year increased from $268 in the initial year to $325 in the second year, then lowered to $218 and $204 in the final two years. The initial year reflects a partial year, with fewer than half the target number of enrollees. The reduction in the final years was significantly impacted by the changes in the administrative fees.

Because this was a new population group for the insurance carrier, there was no experience on which to base the administrative costs. The final per member/per month administrative fee of $1.16 is probably the most accurate reflection of administrative costs for a low income population beyond the initial of program recruitment and implementation.

Policy Implications

- The utilization rate for the low income population enrolled in the Adult Dental Insurance Project (54%) was similar to the utilization rate for the general population (60%). Not only did the project group utilize services, but they contributed a significant amount of the cost (30%) out of their own pocket. This suggests that there is a general acceptance of the importance of dental care among low income persons. Given an opportunity, many will choose to use their own income for that purpose.

- If low income individuals understand the importance of oral health and regular dental care, as this study suggests, then policy leaders might consider reframing communication strategies to reach this underserved population. Instead of focusing the message solely on *why* regular dental care is important, the preferred strategy might be to focus on *how* to access insurance and services. People know they need dental care, but they don't necessarily know how to access it in an efficient and regular way.

- Dental insurance is important, but it is not sufficient by itself to ensure good oral health. Making the first visit is another important factor in utilization. Some individuals in the project study needed assistance in selecting a dentist and making the initial appointment. Once engaged, however, they stayed engaged. As the study shows, members who had used services in the past were more likely to continue to use services. Once again, learning *how* to access services is the key.

- Individuals with dental insurance are more likely to receive preventive and restorative dental services. This translates into increased economic and social productivity, as they are more likely to be selected for a job, and less likely to miss work because of dental-related problems.

- AHCCCS currently enrolls approximately 365,000 adults in various full coverage, acute care programs. Based on the final average annual cost of $204 per member in the Arizona Adult Dental Insurance Project – and with patients assuming 30 percent of the costs themselves – it would cost approximately $52 million annually to add a standard dental benefit package for this population, with costs slightly higher in the initial years of program implementation. With federal matching dollars of approximately 67 percent (2:1), additional state dollars required would be about $17 million. Costs could well be significantly lower if AHCCCS were to negotiate lower administrative and service reimbursement rates, or adjust cost sharing rates for higher income eligibility populations.

Sources

1. Parts One and Two of the *Open Wide* series are available at www.slhi.org.
2. *Oral Health in America*; Surgeon General's Report on Oral Health 2000. www.surgeongeneral.gov/library/oralhealth.
3. Ibid.
4. Richard Manski, DDS, et. al., *Private Dental Coverage: Who Has It and How Does It Influence Dental Visits and Expenditures*, Journal of the American Dental Association, November 2002, pp. 1551-1559.
5. Dental Service Use and Dental Insurance Coverage – United States Behavioral Risk Factor Surveillance System, 1995, MMWR, December 19, 1997/46(50); 1199-1203.
6. National Oral Health Surveillance System, Centers for Disease Control. *Arizona Dental Visits, BRFSS, 1999*; www.cdc.gov.
7. *Oral Health in America*, op. cit.
8. Ibid.

Our Mission

To improve the health of people and their communities in Arizona, with an emphasis on helping people in need and building the capacity of communities to help themselves.

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St. Luke's Health Initiatives is a public foundation formed through the sale of the St. Luke's Health System in 1995. Our resources are directed toward service, public education and advocacy that improve the health of all Arizonans, especially those in need.

Project Evaluation:
B.J. Tatro, Ph.D.

Analyst:
Jane Pearson, RN, BSN

Editor:
Roger A. Hughes

Graphic Design:
Chalk Design

2375 East Camelback Road
Suite 200
Phoenix Arizona 85016

www.slhi.org
info@slhi.org

602.385.6500
602.385.6510 fax

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