Arizona Health Care Cost Containment System

CYE 2003

Performance Improvement Project:

Children's Oral Health Visits

First Remeasurement of Performance

Prepared by the Division of Health Care Management

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AHCCCS

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CYE 2003 Performance Improvement Project (PIP): Children's Oral Health (Dental Visits) First Remeasurement of Performance

Remeasurement Period: October 1, 2003, through September 30, 2004

I. INTRODUCTION

Background

Tooth decay is a common chronic disease among children, causing pain, infection and tooth loss if left untreated.[1,2] Early tooth loss can result in failure to thrive and impaired speech development. Poor oral health has been related to decreased school performance because children experiencing pain from dental disease miss school or are unable to concentrate.[3]

According to the National Health and Nutrition Examination Survey (NHANES), approximately 28 percent of U.S. children ages 2 through 5 and 49 percent of youngsters 6 through 11 had dental caries (tooth decay) in primary teeth in the period from 1999 through 2002. The overall rate of caries in the two age groups combined was 41 percent, with tooth decay going untreated in approximately 21 percent of these children.[2]

According to the Arizona Office of Oral Health, the percent of all Arizona children who have some tooth decay increases from about 5 percent at 2 years of age to 60 percent by age 8.[4]

A number of studies point to disproportionately low use of dental services among some racial or ethnic groups and low-income people, as well as high rates of dental disease relative to the rest of the population. [1,4-10] Increased access to oral health services, such as the application of topical fluorides and dental sealants, as well as patient/caregiver education, are key to reducing the rate of tooth decay and other oral diseases among children.[1,5]

AHCCCS and Healthy People Goals

AHCCCS has established long-range goals, or benchmarks, for Contractors to achieve in ensuring annual dental visits among children and adolescents, based on an objective set by the U.S. Department of Health and Human Services (DHHS) in *Healthy People 2010*. The Healthy People objective is to increase the proportion of low-income children and adolescents who receive preventive dental services each year to 57 percent. Likewise, AHCCCS has established a benchmark of 57 percent for annual dental visits by members from 3 through 20 years of age. This benchmark applies to acute-care Contractors and the Department of Economic Security's two programs that serve AHCCCS-eligible children, the Comprehensive Medical and Dental Program (CMDP) and the Division of Developmental Disabilities (DDD).

Purpose
The purpose of the Children's Oral Health Performance Improvement Project (PIP) is to increase the rate of annual dental visits among AHCCCS members 3 through 20 years old, in order to make more progress toward AHCCCS and Healthy People 2010 goals. This project specifically focuses on children who are 3 through 8 years old, as this appears to be a critical time in a child's life to ensure that he or she receives regular dental care. Contractors participating in this PIP include acute-care health plans, CMDP, DDD and health plans that serve elderly and physically disabled members through the Arizona Long Term Care System (ALTCS).

Methodology
Using methodology developed by the National Committee for Quality Assurance (NCQA) for the Health Plan Employer Data and Information Set (HEDIS), AHCCCS measured annual dental visits among members ages 3 through 8 who were continuously enrolled during the measurement period with an acute-care Contractor, CMDP, or DDD under Medicaid or KidsCare (the state Children's Health Insurance Program or SCHIP). Because of the relatively small number of physically disabled children covered under ALTCS, all members 3 through 20 years who were continuously enrolled with these Contractors were included in the measurement.

Data for the project were collected from AHCCCS administrative data (i.e., records of claims paid by Contractors, known as encounters). The remeasurement period was the contract year from October 1, 2003, through September 30, 2004. The complete methodology and technical specifications for this project may be found at http://www.azahcccs.gov/Studies.

II. RESULTS AND ANALYSIS

Medicaid and KidsCare Members
A total of 90,491 members ages 3 through 8 years old who were enrolled in AHCCCS under Medicaid or KidsCare were selected for the PIP remeasurement (Table 1). Overall, 52,254 (57.7 percent) of those members had at least one dental visit during the remeasurement period, for a relative increase of 10.5 percent over the baseline measurement. The improvement is significant ($p<.001$).

All Contractors except one, Maricopa Health Plan, showed statistically significant increases from the baseline measurement and/or exceeded the Healthy People 2010 Goal of 57 percent (Tables 1, 3 and 5, Figure 1). Maricopa Health Plan's rate likely was affected by its delays and omissions in submitting encounters to AHCCCS during the remeasurement period.

By area, the greatest increase in the rate of dental visits for both Medicaid and KidsCare members occurred in Pima County (Tables 2 and 4).

Overall, the rate of dental visits among members enrolled under KidsCare was significantly higher than for members enrolled under Medicaid. This also was true in each of the three geographic areas analyzed: Maricopa County, Pima County, and the Rural counties ($p<.001$).

Developmentally Disabled (DD) Members
A total of 3,511 members ages 3 through 8 years old who were enrolled with DDD were selected for the PIP remeasurement (Table 6). Overall, 1,326 (37.8 percent) of those members had at least one dental visit during the remeasurement period, for a relative increase of 22 percent over the baseline measurement. The improvement is significant ($p<.001$). DDD also showed significant improvements in its rates among children in Maricopa County and the combined rural counties ($p<.001$).

Approximately two-thirds of members enrolled in DDD have other medical coverage, primarily private insurance. In many cases, routine services such as dental care are paid for by other insurance. Thus, the rate of dental visits among these children probably is higher than the rate reported here because these encounters are not reported to AHCCCS.

ALTCS Physically Disabled Members
Of the 104 physically disabled members selected for the remeasurement, 28 (26.9 percent) had at least one dental visit (Table 7). Overall, there was no significant change from the previous measurement ($p<.696$). Data for physically disabled members was not analyzed by individual Contractor because most ALTCS health plans did not have enough members who met the criteria for inclusion in the remeasurement to make statistical comparisons.

The lower rates of visits among both developmentally disabled and physically disabled children probably reflects the challenges and barriers to dental care faced by these members. Some patients with special health care needs have difficulty cooperating with dental professionals while receiving care, and must have their care done under sedation. For some special needs children, oral diseases may intensify behavior problems.[11] Access to oral health care may be further complicated by limited numbers of dentists with expertise in treating children with disabilities.[12] In addition, an overall focus on treating disabled children's complex medical needs may result in less emphasis on preventive services such as dental care.

III. CONCLUSIONS

Interventions to Improve Quality
To assist Contractors in improving performance, the AHCCCS Clinical Quality Management Unit synthesized research and literature on oral health initiatives from a variety of sources. The Chronic Care Model, developed by Wagner, et al, of the MacColl Institute for Healthcare Innovation at Group Health Cooperative, was adapted for use in organizing various interventions for improving oral health. The model identifies essential elements of a health care system that encourage high-quality care, and are likely to result in healthier patients, more satisfied providers, and cost savings.[12] By using this model, AHCCCS and its contracted health plans can identify gaps in quality-improvement strategies and ensure that each of these components is adequately addressed.

AHCCCS provided baseline data from this study to all Contractors, who further analyzed their data and identified interventions to improve rates of annual dental visits. Contractors have utilized a variety of interventions to improve the use of dental services and oral health among children enrolled in their plans (Table 8).

Performance Improvement

Contractors should strive to meet or exceed the Healthy People 2010 Goal of 57 percent for children's annual dental visits. Under this PIP, a Contractor will have demonstrated improvement when:

- it meets or exceeds the AHCCCS overall average for the baseline measurement if its baseline rate was below the average, and the increase is statistically significant,
- it shows a statistically significant increase if its baseline rate was at or above the AHCCCS overall average for the baseline measurement, or
- it achieves the Healthy People 2010 goal or is the highest performing (benchmark) plan in any remeasurement year, and maintains or improves its rate in successive measurements until the PIP is completed.

AHCCCS continues to work with contracted Health Plans to sustain improvements in children's access to dental services. A second remeasurement, based on the contract year ending September 30, 2005, will be conducted in mid-2006.

IV. REFERENCES

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Table 1

Arizona Health Care Cost Containment System (AHCCCS)

CYE 2003 PERFORMANCE IMPROVEMENT PROJECT (PIP):

CHILDREN'S ANNUAL DENTAL VISITS

Members Ages 3 through 8 Years Enrolled under Medicaid and KidsCare, by Contractor

Remeasurement Period: October 1, 2003, to September 30, 2004

Contractor	Number of Members	Number with One or More Dental Visits	Percent with One or More Dental Visits	Relative Percent Change From Previous Period	Statistical Significance
AZ Physicians IPA	**32,583**	**18,190**	**55.8%**	**11.6%**	**p<.001**
	28,021	14,019	50.0%		
DES/CMDP	**1,075**	**656**	**61.0%**	**-0.5%**	**p=.887**
	722	443	61.4%		
Health Choice AZ	**10,763**	**6,753**	**62.7%**	**23.9%**	**p<.001**
	7,254	3,673	50.6%		
Maricopa Health Plan	**5,544**	**2,335**	**42.1%**	**-16.7%**	**p<.001**
	5,048	2,553	50.6%		
Mercy Care	**23,695**	**14,213**	**60.0%**	**9.5%**	**p<.001**
	20,346	11,144	54.8%		
Phoenix Health Plan/CC	**12,846**	**7,764**	**60.4%**	**9.5%**	**p<.001**
	8,972	4,951	55.2%		
Pima Health System	**2,034**	**1,216**	**59.8%**	**13.9%**	**p<.001**
	1,151	604	52.5%		
University Family Care	**1,951**	**1,127**	**57.8%**	**13.8%**	**p<.001**
	2,196	1,115	50.8%		
TOTAL	**90,491**	**52,254**	**57.7%**	**10.5%**	**p<.001**
	73,710	38,502	52.2%		

Shaded rows are totals and percentages from the baseline measurement period, October 1, 2001, through September 30, 2002.

Table 2

Arizona Health Care Cost Containment System (AHCCCS)

CYE 2003 PERFORMANCE IMPROVEMENT PROJECT (PIP):

CHILDREN'S ANNUAL DENTAL VISITS

Members Ages 3 through 8 Years Enrolled under Medicaid, by County

Remeasurement Period: October 1, 2003, to September 30, 2004

County	Number of Members	Number with One or More Dental Visits	Percent with One or More Dental Visits	Relative Percent Change From Previous Period	Statistical Significance
Maricopa County	**48,076**	**27,726**	**57.7%**	**7.6%**	**p<.001**
	35,636	19,093	53.6%		
Pima County	**13,243**	**7,685**	**58.0%**	**21.1%**	**p<.001**
	12,098	5,799	47.9%		
Rural Counties	**20,111**	**10,790**	**53.7%**	**8.8%**	**p<.001**
	18,103	8,925	49.3%		
TOTAL	**81,430**	**46,201**	**56.7%**	**10.5%**	**p<.001**
	65,837	33,817	51.4%		

Shaded rows are totals and percentages from the baseline measurement period, October 1, 2001, through September 30, 2002.

Table 3

Arizona Health Care Cost Containment System (AHCCCS)

CYE 2003 PERFORMANCE IMPROVEMENT PROJECT (PIP):

CHILDREN'S ANNUAL DENTAL VISITS

Members Ages 3 through 8 Years Enrolled under Medicaid, by Acute-care Contractor

Remeasurement Period: October 1, 2003, to September 30, 2004

Contractor	Number of Members	Number with One or More Dental Visits	Percent with One or More Dental Visits	Relative Percent Change From Previous Period	Statistical Significance
AZ Physicians IPA	**29,561**	**16,303**	**55.2%**	**11.3%**	**p<.001**
	25,075	12,428	49.6%		
DES/CMDP	**1,075**	**656**	**61.0%**	**-0.5%**	**p=.887**
	722	443	61.4%		
Health Choice AZ	**9,724**	**6,001**	**61.7%**	**23.9%**	**p<.001**
	6,521	3,248	49.8%		
Maricopa Health Plan	**4,959**	**2,032**	**41.0%**	**-16.2%**	**p<.001**
	4,468	2,186	48.9%		
Mercy Care	**21,099**	**12,389**	**58.7%**	**9.5%**	**p<.001**
	18,170	9,746	53.6%		
Phoenix Health Plan/CC	**11,328**	**6,687**	**59.0%**	**9.4%**	**p<.001**
	7,861	4,242	54.0%		
Pima Health System	**1,892**	**1,121**	**59.2%**	**15.5%**	**p<.001**
	1,057	542	51.3%		
University Family Care	**1,792**	**1,012**	**56.5%**	**12.9%**	**p<.001**
	1,963	982	50.0%		
TOTAL	**81,430**	**46,201**	**56.7%**	**10.5%**	**p<.001**
	65,837	33,817	51.4%		

Shaded rows are totals and percentages from the baseline measurement period, October 1, 2001, through September 30, 2002.

Table 4

Arizona Health Care Cost Containment System (AHCCCS)

CYE 2003 PERFORMANCE IMPROVEMENT PROJECT (PIP):

CHILDREN'S ANNUAL DENTAL VISITS

Members Ages 3 through 8 Years Enrolled under KidsCare, by County

Remeasurement Period: October 1, 2003, to September 30, 2004

County	Number of Members	Number with One or More Dental Visits	Percent with One or More Dental Visits	Relative Percent Change From Previous Period	Statistical Significance
Maricopa County	**5,900**	**4,045**	**68.6%**	**9.8%**	**p<.001**
	4,722	2,949	62.5%		
Pima County	**1,326**	**885**	**66.7%**	**24.9%**	**p<.001**
	1,389	742	53.4%		
Rural Counties	**1,835**	**1,123**	**61.2%**	**8.5%**	**p<.004**
	1,762	994	56.4%		
TOTAL	**9,061**	**6,053**	**66.8%**	**12.3%**	**p<.001**
	7,873	4,685	59.5%		

Shaded rows are totals and percentages from the baseline measurement period, October 1, 2001, through September 30, 2002.

Table 5

Arizona Health Care Cost Containment System (AHCCCS)

CYE 2003 PERFORMANCE IMPROVEMENT PROJECT (PIP):

CHILDREN'S ANNUAL DENTAL VISITS

Members Ages 3 through 8 Years Enrolled under KidsCare, by Acute-care Contractor

Remeasurement Period: October 1, 2003, to September 30, 2004

Contractor	Number of Members	Number with One or More Dental Visits	Percent with One or More Dental Visits	Relative Percent Change From Previous Period	Statistical Significance
AZ Physicians IPA	**3,022**	**1,887**	**62.4%**	**15.6%**	**p<.001**
	2,946	1,591	54.0%		
Health Choice AZ	**1,039**	**752**	**72.4%**	**24.8%**	**p<.001**
	733	425	58.0%		
Maricopa Health Plan	**585**	**303**	**51.8%**	**-18.1%**	**p<.001**
	580	367	63.3%		
Mercy Care Plan	**2,596**	**1,824**	**70.3%**	**9.4%**	**p<.001**
	2,176	1,398	64.2%		
Phoenix Health Plan/CC	**1,518**	**1,077**	**70.9%**	**11.2%**	**p<.001**
	1,111	709	63.8%		
Pima Health System	**142**	**95**	**66.9%**	**1.4%**	**p=.880**
	94	62	66.0%		
University Family Care	**159**	**115**	**72.3%**	**26.7%**	**p=.002**
	233	133	57.1%		
TOTAL	**9,061**	**6,053**	**66.8%**	**12.3%**	**p<.001**
	7,873	4,685	59.5%		

Shaded rows are totals and percentages from the baseline measurement period, October 1, 2001, through September 30, 2002.

Figure 1
Arizona Health Care Cost Containment System (AHCCCS)
CYE 2003 PERFORMANCE IMPROVEMENT PROJECT(PIP):
CHILDREN'S ANNUAL DENTAL VISITS
Members Enrolled under Medicaid and KidsCare, by Contractor
First Remeasurement Period Compared with the Baseline Measurement

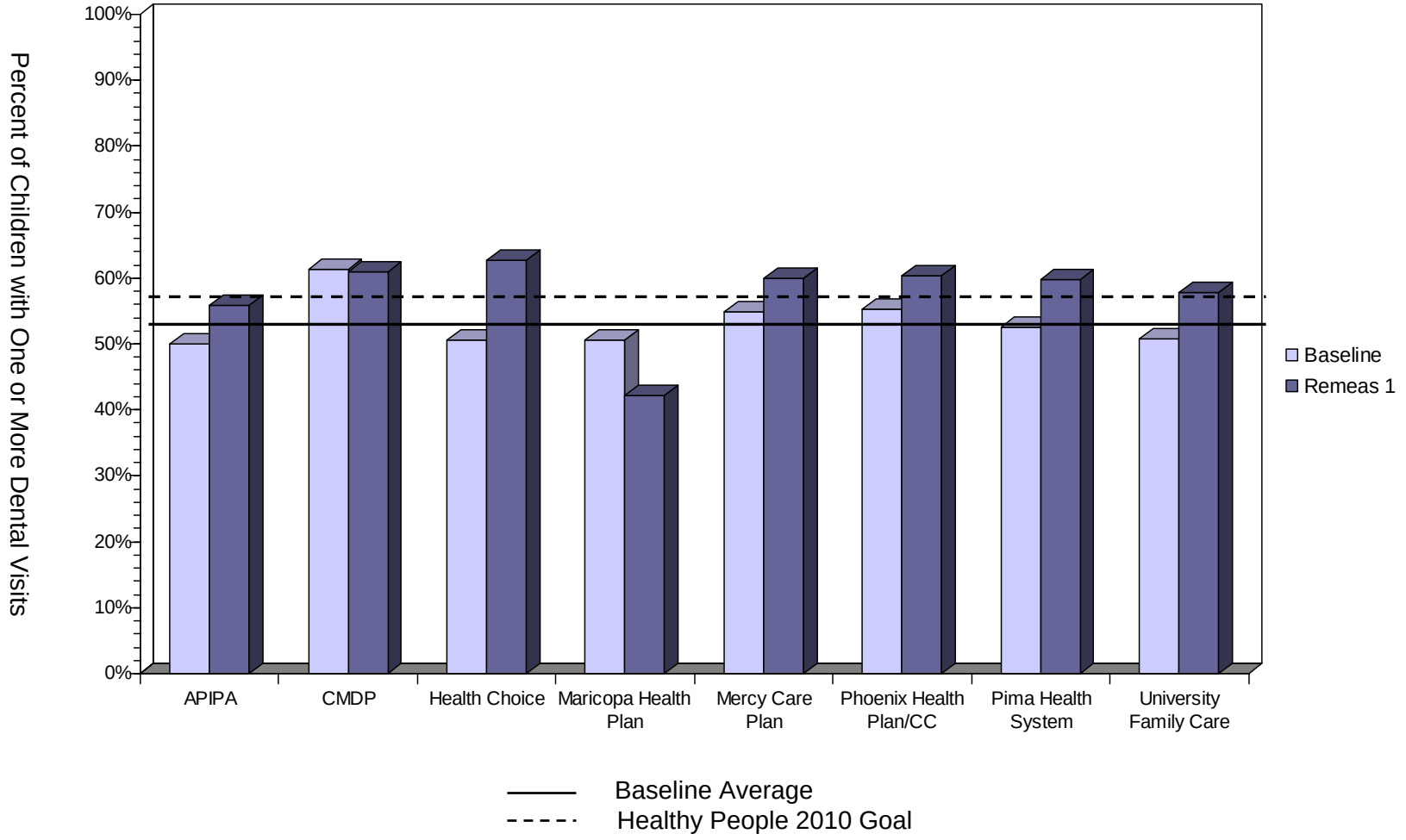

Table 6

CYE 2003 PERFORMANCE IMPROVEMENT PROJECT (PIP):

CHILDREN'S ANNUAL DENTAL VISITS

Members Ages 3 through 20 Years Enrolled in DDD, by County

Remeasurement Period: October 1, 2003, to September 30, 2004

County	Number of Members	Number with One or More Dental Visits	Percent with One or More Dental Visits	Relative Percent Change From Previous Period	Statistical Significance
Maricopa County	**2,434**	**895**	**36.8%**	**18.0%**	**p<.001**
	1,922	599	31.2%		
Pima County	**472**	**182**	**38.6%**	**7.5%**	**p=.405**
	432	155	35.9%		
Rural Counties	**605**	**249**	**41.2%**	**55.8%**	**p<.001**
	564	149	26.4%		
TOTAL	**3,511**	**1,326**	**37.8%**	**22.0%**	**p<.001**
	2,918	903	30.9%		

Shaded rows are totals and percentages from the baseline measurement period, October 1, 2001, through September 30, 2002.

Table 7

CYE 2003 PERFORMANCE IMPROVEMENT PROJECT (PIP):

CHILDREN'S ANNUAL DENTAL VISITS

Physically Disabled Members Ages 3 through 20 Years Enrolled in ALTCS, by Contractor

Remeasurement Period: October 1, 2003, to September 30, 2004

County	Number of Members	Number with One or More Dental Visits	Percent with One or More Dental Visits	Relative Percent Change From Previous Period	Statistical Significance
Maricopa County	**41**	**6**	**14.6%**	**-23.2%**	**p=.722**
	21	4	19.0%		
Pima County	**7**	**1**	**14.3%**	**-50.0%**	**p=1.00**
	7	2	28.6%		
Rural Counties	**56**	**21**	**37.5%**	**43.8%**	**p=.220**
	46	12	26.1%		
TOTAL	**104**	**28**	**26.9%**	**10.7%**	**p=.696**
	74	18	24.3%		

Notes:

Cochise Health Systems is not included because no members meeting the enrollment criteria were selected for this Contractor.

Shaded rows are totals and percentages from the baseline measurement period, October 1, 2001, through September 30, 2002.

Table 8
Contractor Interventions to Improve Rates of Annual Dental Visits by Children

The following table includes interventions that one or more AHCCCS Contractors are using to ensure children's access to oral health services and improve rates of annual dental visits during this PIP. The Chronic Care Model, developed by Wagner, et al, was adapted for use in organizing these interventions. The model identifies essential elements of a health care system that encourage high-quality care, and help ensure increased use of or access to services.[1]

Community Linkages	**Health System**	**Self-Management Support**	**Delivery System Design**	**Decision Support**	**Clinical Information Systems**
Tie in outreach efforts with related activities/events; e.g., National Children's Dental Health Month, community health fairs Collaborate with programs such as Head Start and WIC to assist in reaching members; educate these programs about oral health issues and AHCCCS-covered services Utilize resources of the Arizona Department of Health Office of Oral Health (OOH) for provider and/or member education	Utilize "pay-for-performance" strategies to reward PCPs and/or dentists who met specific benchmarks for dental services Utilize Health Plan staff dedicated to dental outreach and assisting families/members in making and keeping appointments	Mail annual reminders to parents about dental visit; send follow-up reminders to members who do not subsequently receive services Reinforce education through newsletters, telephone hold messages, etc.) to members/parents/ caregivers about: • the importance of good oral health and its relationship to overall health • the positive outcomes of preventive dental care • importance of keeping scheduled appointments	Work with programs that provide services in schools (ADHS, Healthy Kids Dental) and coordinated to follow up on member needs Provide case management services to children in foster care or those with special health care needs/disabilities Recruit additional dental providers to improve access	Educate Primary Care Providers (physicians, PAs, NPs) and office/ clinic staff about: • early detection of dental disease • EPSDT requirements/ referral for treatment or preventive visits advising parents about the importance of regular dental care Survey parents/caregivers or case managers on reasons dental care was not obtained and develop or enhance activities to address those reasons	Routinely monitor dental performance measure/utilization rates: • overall • by county/ geographic area • by provider group Utilize tracking systems to identify members with no dental services or those who missed appointments and attempt to contact and schedule or reschedule an appointment and arrange for transportation if needed

Community Linkages	Health System	Self-Management Support	Delivery System Design	Decision Support	Clinical Information Systems
Collaborate with the Arizona School of Dentistry and Oral Health to provide services and enhance training of dental professionals, especially in the care of special populations (e.g., individuals with disabilities) Use Health Plan staff and/or dental providers to make presentations in schools; provide educational materials and other items, such as toothbrushes, to take home		Offer incentives to members to encourage them to seek dental care Follow up with members who miss appointments and arrange for transportation when necessary Make or collaborate with organizations that make home visits to reinforce education about oral health and the importance of regular dental care		Utilize dental consultants to review utilization patterns, practice guidelines and/or treatment plans for specific members Capture dental referral data from EPSDT Tracking Forms for follow up to ensure that appointment was completed	Incorporate medical and/or dental chart audits into the performance monitoring processes Develop provider utilization profiles and send feedback to providers on visit rates or lists of specific members in need of services

[1] Improving Chronic Illness Care. Overview of the Chronic Care Model. Available at: http://www.improvingchroniccare.org/change/model/components.html