

A Technical Issue Brief

The CMS Form-416 Report

*Understanding its Use in Assessing Dental Care Utilization in Medicaid's
Early and Periodic Screening, Diagnostic and Treatment (EPSDT) Service
for Children*

Don Schneider, DDS, MPH

Kathy L. Hayes, DMD, MPH

James J. Crall, DDS, ScD

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INTRODUCTION

Medicaid's Early and Periodic Screening, Diagnostic and Treatment (EPSDT) service forms the basis for the Nation's largest dental benefits program for children. Long-standing concerns about Medicaid-eligible children's ability to access dental services have focused considerable attention on reported measures of EPSDT dental service utilization. The most common source of data on children's utilization of dental services in Medicaid is the federal Centers for Medicare and Medicaid Services (CMS) Form-416 report. Despite heavy reliance by policy makers, advocates, researchers and dental professionals on the CMS Form-416 report, there have been few publications concerning its origins, construction, revisions and uses.^{1,2} The purpose of this Technical Issue Brief is to provide a concise overview of those subjects, along with a commentary on the appropriate use of data found in the Form-416 report and measures that might be derived from them.

MEDICAID AND EPSDT: BACKGROUND

Established as Title XIX of the Social Security Act (the "Act") in 1965, Medicaid serves as a public benefits program for poor children, the disabled poor and others, such as elders dually eligible for services under both Medicare and Medicaid. The program is designed as a state-federal partnership. Federal regulations set a floor of minimum benefits and population groups covered; however, states have leeway to tailor the programs, for example, by increasing the breadth of covered services beyond the minimum required. In recent years, states have acquired the ability to include Medicaid children from somewhat higher income ranges through the State Children's Health Insurance Program (SCHIP).

Because states set their own eligibility standards, policies and administrative procedures, Medicaid programs can vary widely; a family eligible for assistance in one state might not qualify for assistance in a neighboring state. Participation within federal Medicaid guidelines entitles the states to receipt of federal financial participation (i.e., matching funds) to help pay for the health services rendered. The amount of federal Medicaid funding provided to particular states through the partnership varies according to formula, but cannot be less than 50% or more than 83%.³ Federal contributions to SCHIP are somewhat higher.

Medicaid is the largest public program dedicated to financing health benefits for America's poor. According to Medicaid data reported by the states, more than 40 million people received services annually through Medicaid in recent years. The majority of beneficiaries eligible for coverage of services under Medicaid are poor children. In 1998, 51 percent, and in 2000, 54 percent of Medicaid enrollees (more than 24 million individuals) were under the age

¹ American Dental Association. Forward and Introduction. State Innovations to Improve Access to Oral Health Care for Low Income Children: A Compendium. Chicago: American Dental Association: 2003. Available at: <http://www.prnewswire.com/mnr/ada/11207/#>. Accessed July 2004.

² Crall JJ, Szlyk CI, Schneider DA. Pediatric oral health performance measurement: current capabilities and future directions. *J Public Health Dent* 1999; 59(3):136-41.

³ Gavin NI, et al. The use of EPSDT and other health care services by children enrolled in Medicaid: the impact of OBRA'89. *Milbank Q* 1998; 76(2):207-50.

of 21.⁴⁵ To better address the health needs of the Medicaid child population, a program of pediatric interventions—the EPSDT service—was developed in 1967, soon after Medicaid’s inception. The goal of the EPSDT benefit was to “...prevent disease and detect correctable conditions early so that more serious health problems and more costly health care services can be avoided.”⁶ EPSDT services include periodic evaluations of health, developmental and nutritional status, as well as dental, hearing and vision services for Medicaid-enrolled children younger than 21 years of age. When problems are identified during EPSDT evaluation and screening visits, Medicaid programs must cover the services necessary to correct the identified problems, regardless of whether or not those services normally would be covered for other Medicaid enrollees under the state’s Medicaid plan. EPSDT benefits must be provided to all “categorically needy” individuals under the age of 21, and may be provided for the “medically needy” population at the state’s option. If provided to “medically needy” children, EPSDT services must be available to all Medicaid children.⁷

EPSDT STATUTORY ENHANCEMENTS—OBRA’89

Concerns about the states’ EPSDT performance surfaced over the course of the two decades following inception of the benefit. Low medical screening rates were accompanied by low rates of childhood immunization, and even lower rates of dental evaluation and treatment. To improve states’ performance and ultimately children’s health, the Congress made major statutory revisions to the EPSDT benefit in the Omnibus Budget Reconciliation Act (OBRA) of 1989 [OBRA’89, P.L. 101-239].

The OBRA’89 amendments to the Act contained substantial clarification of the requirements for EPSDT dental services. These provisions are found in a section of the Act [Section 1905(r)(3)] separate from the requirements of general health “screening services,” and comprise:

1. A definition of dental services as including, at a minimum, “relief of pain and infections, restoration of teeth, and maintenance of dental health.”
2. A requirement that dental services be provided “at intervals which meet reasonable standards of dental practice, as determined by the state after consultation with recognized dental organizations involved in child health care,” and
3. A requirement that dental examinations be provided “at such other intervals, indicated as medically necessary, to determine the existence of a suspected illness or condition.”

Prior to these amendments, the dental periodicity schedule for all states was established at the federal level and required direct referral to a dentist at age three⁸ and annual visits thereafter.

⁴ Centers for Medicare and Medicaid Services. Overview of the Medicaid Program. CMS website <http://www.cms.hhs.gov/publications/overview-medicare-medicaid/default4.asp>. Accessed December 24, 2002 and July 2, 2004.

⁵ Centers for Medicare and Medicaid Services. Medicaid Statistics and Data. CMS website <http://www.cms.hhs.gov/medicaid/mcaidsad.asp>. Accessed December 24, 2002.

⁶ Gavin et al. Ibid.

⁷ Centers for Medicare and Medicaid Services. State Medicaid Manual. CMS Website. Available at: http://www.cms.hhs.gov/manuals/pub45/pub_45.asp. Accessed July 2, 2004.

⁸ Ibid.

OBRA'89 also clarified general health “screening services” to include, at a minimum, a comprehensive health and developmental history and unclothed physical exam, appropriate immunizations, laboratory tests and health education, including anticipatory guidance [Section 1905 (r)(1)(B)]. An oral health evaluation was not included in this minimum set of services, but medical and dental health professionals generally agree that primary care providers routinely should include an oral health assessment as part of their general health screening services. To the extent that a state might decide to mandate a dental assessment as part of the general health screen, OBRA'89 requires that such screens meet reasonable standards of medical and dental practice [Section 1905 (r)(1)(A)].

REPORTING OF EPSDT DENTAL SERVICE UTILIZATION: CMS FORM-416

In addition to adding specificity to the EPSDT dental service delivery requirement, OBRA'89 also requires in Section 1902(a)(43)(D)(iii) of the Act that each state report “*the number of children receiving dental services*” as a data element, separate and distinct from other reporting requirements that include “the number of children provided child health screening services” and “the number of children referred for corrective treatment” (as disclosed by the general health screens). This information is to be provided in a uniform form and manner established by the Secretary of the U.S. Department of Health and Human Services (DHHS) at the end of each federal fiscal year, by age group and basis of eligibility for Medicaid. In compliance with this provision, the Secretary by way of the federal agency responsible for administering the Medicaid program – the Centers for Medicare and Medicaid Services (CMS)⁹ – established the CMS Form-416 Report.

The CMS Form-416 requires states to submit data for each federal fiscal year (FY) – October 1-September 30 – by April 1 of the following year.¹⁰ During FY1992-FY1998, Form-416 required states to report (on Line 13) the “number of eligibles receiving *dental assessments* (italics added).” States were instructed to:

“Enter the unduplicated count of individuals receiving preventive dental services, provided individually or in groups which include:

- Instruction in self-care oral hygiene procedures;
- Oral prophylaxis (cleaning of teeth), both necessary as a precursor to the application of dental caries preventives when indicated, or independent of the application of caries preventives for patients 10 years of age or older; and
- Professional application of dental sealants when appropriate to prevent pit and fissure caries.”

The initial reporting instructions accompanying the OBRA '89 changes were viewed by some as internally inconsistent. For example, the requested data appear to focus on a limited number of *preventive services*, rather than on the broader scope of *dental services* required by statute (as clarified by the OBRA '89 amendments). Others found those instructions to be confusing.

⁹ Formerly the Health Care Financing Administration, or HCFA.

¹⁰ Data changes may be revised or updated for months or years after the report's initial due date.

As a result, some states (i.e., those that only reported on the procedures listed as examples in the instruction) might have under-counted utilization by not counting dental diagnostic or treatment services; while other states might have over-counted utilization by, for example, including self-care oral hygiene instruction provided *en masse* to children in classrooms.

To reduce this confusion, standardize data collection and assure that data reporting mirrored the regulatory definition of EPSDT “dental services,”¹¹ CMS revised the Form-416 for use in dental service reporting beginning in FY 1999.^{12,13} The revised Form-416 required reporting annual dental visits stratified by age ranges; two additional measures were incorporated:

- 1) children receiving preventive dental services and
- 2) children receiving dental treatment services.

The revised Form-416 also linked reporting of dental services to the American Dental Association’s Current Dental Terminology (CDT) codes¹⁴ and to the CMS Healthcare Common Procedures Coding (HCPC) system, which incorporates ADA procedure codes. The table below summarizes the corresponding instructions for completing the revised CMS Form-416 report.

Table 1. Revised CMS Form-416 Instruction, Dental Services
Line 12a - Total Eligibles ¹⁵Receiving Any Dental Services - Enter the unduplicated number of children receiving any dental service as defined by HCPC codes D0100-D9999 (ADA codes 00100-09999).
Line 12b - Total Eligibles Receiving Preventive Dental Services - Enter the unduplicated number of children receiving a preventive dental service as defined by HCPC codes D1000-D1999 (ADA codes 01000-01999). "Unduplicated" means that each child is counted only once even if more than one preventive service was provided.
Line 12c - Total Eligibles Receiving Dental Treatment Services - Enter the unduplicated number of children receiving treatment services as defined by HCPC codes D2000-D9999 (ADA codes 02000-09999). Unduplicated means that each child is counted only once even if more than one treatment service was provided.

The revised CMS-Form 416 instructions further note:

- “Lines 12b and 12c do not equal to total services reflected on line 12a”
- With respect to line 12a, “‘Unduplicated’ means that each child is counted only once for purposes of this line, even if multiple services were received,” and

¹¹ Medicaid “dental services” are further defined in 42 CFR 440.100 to mean “diagnostic, preventive, or corrective procedures provided by or under the supervision of a dentist in the practice of his profession...” and the “dentist means an individual licensed to practice dentistry or dental surgery.”

¹² The CMS Form-416 and Form Instructions may be found on the CMS Internet page at <http://www.cms.hhs.gov/medicaid/epsdt/default.asp>. Accessed Apr 1, 2004.

¹³ Use of the new form was optional in FY 1999 and became mandatory thereafter.

¹⁴ <http://www.ada.org/prof/prac/manage/benefits/cdt4.html>. Code on dental procedures and nomenclature. CDT-4 manual. American Dental Association.

¹⁵ The term “eligibles” refers to those children enrolled in Medicaid who are eligible to receive the EPSDT service; they are already enrolled in Medicaid. There may be some children enrolled in Medicaid who are ineligible to receive EPSDT services, as discussed in the Form-416 Instructions.

- “For purposes of reporting the information on dental services, ‘unduplicated’ means that each child is counted once for each line of data requested. For example, a child is counted once on line 12a for receiving any dental service and counted again for line 12b and/or 12c if the child received a preventive and/or treatment dental service. These numbers reflect services received in fee-for-service and managed care arrangements.”

RATES OF DENTAL SERVICE UTILIZATION DERIVED FROM REVISED CMS-FORM 416 DATA

When the number of “Total Eligibles Receiving Any Dental Services” (Line 12a, Form-416, as revised for FY 1999) is divided by the number of “Total Individuals Eligible for EPSDT” (Line 1, Form-416), and the resulting ratio is multiplied by 100, an annual utilization percentage (or rate) of children eligible for EPSDT who received “any dental service” in a given year is obtained.¹⁶ Similarly, annual utilization rates for “any dental *preventive* service” and “any dental *treatment* service” can be derived. Furthermore, these rates may be constructed for children in specific age ranges, i.e., less than age 1, 1-2, 3-5, 6-9, 10-14, 15-18 and 19-20.

USES OF EPSDT DENTAL UTILIZATION DATA

Both the raw numbers and the percentages/rates of children receiving *any dental service*, *any preventive service* or *any treatment service* may be of interest to policymakers, advocates, researchers and dental health professionals. These measures yield information about children’s access to dental care, which in turn may affect oral health outcomes.

The *number* of children receiving these services in a given state, when compared over time, can aid oral health stakeholders in understanding the overall size of the population receiving care. That is, a doubling of the number of children receiving dental services over the course of two reporting years may indicate a substantial effort on the part of the state and dental providers, even if proportional growth in the EPSDT-eligible child population resulted in no change in the *rate* of utilization (i.e., the proportion of eligible children who received services).

The *rate* of dental utilization, on the other hand, provides an estimate of the child population’s access to EPSDT services that takes into account changes in the eligible population, and can aid in public policy and program assessment, development and implementation. In 1996, the DHHS Office of the Inspector General used data from (pre-1999 revision) Form-416 reports for FY1993 to assess the rate at which Medicaid children received annual preventive dental

¹⁶ Certain populations are not included in any state’s count if they are (1) medically needy individuals under the age of 21 and the state does not provide EPSDT services for the medically needy population; 2) individuals eligible for Medicaid only under a §1115 waiver as part of an expanded population for which the full complement of EPSDT services is not available; 3) undocumented aliens who are eligible only for emergency Medicaid services; or 4) other groups of individuals under age 21 who are eligible only for limited services as part of their Medicaid eligibility (i.e., pregnancy-related services). From Form-416 Instructions, CMS Internet Page.

assessments in each state.¹⁷ That report received widespread circulation and is largely credited with spurring subsequent efforts at the federal and state level to improve access to EPSDT dental services.

The addition of Form-416 data on *preventive and treatment services* may assist stakeholders in their efforts to assess whether children are receiving appropriate levels of both types of services, or whether programs appear to be geared toward one aspect of care, perhaps at the expense of another. A state Medicaid agency, for example, might use these data to help determine if some Medicaid program intermediaries (e.g., dental benefits plans or managers) or providers might be focusing on provision of less expensive preventive services, rather than addressing more costly and time-consuming treatment needs. These indicators also can highlight regional variations in utilization within a state, which may suggest problems with the number or service capacity of participating Medicaid providers in certain regions.

Generally, these data should be used as indicators to identify variations in utilization of services or variances from expected utilization benchmarks. Additional assessments are necessary to determine whether such variations or variances are the result of inappropriate, fraudulent or abusive practices, or merely reflect differences in underlying treatment needs within the covered population. Accordingly, these data may best be used as part of continuous quality improvement (CQI) programs in which efforts are directed toward understanding the causes underlying low levels of performance or unexpected variations within state Medicaid programs, and developing solutions geared toward improving the systems involved in the administration of benefits or delivery of services.

Stakeholders also may compare a state's Form-416 dental utilization rates with statistics describing the level of dental services utilization in the general pediatric population. Data from national epidemiologic or utilization surveys – e.g., the National Health and Nutrition Examination Survey (NHANES), Medical Expenditure Panel Survey (MEPS), and National Health Interview Survey (NHIS) – may be used as a general guide for expected levels of disease, treatment needs or utilization among Medicaid-eligible children. Dental utilization data from these surveys often are expressed as “the number of children who made any dental visit in a year,” a statistic comparable to the “annual dental utilization rates” produced from Form-416 reports. Unfortunately, these national surveys do not have sufficient sample sizes at the state level to provide statistically valid state-level information. As a result, state-specific survey data, ideally from representative samples, are preferred for benchmark comparisons with a state's Form-416 data.

In addition to their more obvious uses in national and state policy setting and advocacy, these utilization rates and benchmark comparisons also may be useful in efforts to assess whether payments for Medicaid services are “consistent with efficiency, economy, and the quality of care and are sufficient to enlist enough providers so that such care and services are available under the (state Medicaid) plan *at least to the extent that such care and services are available to the general population in the geographic area*” (emphases added), as required under section 1902(a)(30)(A) of the Act. [See 42 CFR 447.204.]”

¹⁷ DHHS Office of Inspector General. Children's dental services under Medicaid: access and utilization. OEI-09-93-00240. 1996.

CAUTIONS IN USING FORM 416 DATA AND DERIVED UTILIZATION RATES

Recent computer program and hardware upgrades and implementation of HIPAA compliance programs have contributed to many improvements in state Medicaid agencies' Medicaid data management systems. Electronic transmission of dental claims by providers, as well as other state innovations¹⁸ also has improved the quality of administrative claims data sets, upon which states base their Form-416 reports. The 1999 Form-416 revisions defining dental services in terms of ADA CDT codes have facilitated a strong link between the Form-416 and the states' administrative claims files. The fact that administrative claims data bases are intensely reviewed by states as a routine part of provider reimbursement and fraud and abuse surveillance, and that the same data are involved in determining Medicaid federal financial participation (federal matching of state funds) and subject to audit and other controls, speaks to the reliability of these data sets and the Form-416 data.

Nevertheless, users of Form-416 data should be aware of the following caveats when comparing and interpreting these data:

- As noted earlier, states may revise, correct and update their Form-416 data at any time. However, once reports for a given year are uploaded to the CMS website, updates or changes to the web-accessible files generally are not made; thus the available data may be "out-of-date" in the opinion of state Medicaid officials.
- Some states that rely to a large degree on managed care organizations to administer their Medicaid dental benefit programs have reported gaps in obtaining dental claims data, with the attendant potential for varying degrees of utilization under-counting.
- Under-counting of utilization data also may occur in states with large populations of children receiving services on a prospective payment basis. In a few states, the authors have encountered such situations involving Federally Qualified Health Centers and/or Indian Health Service facilities.
- States sometimes lose data, especially during years when states undertake major conversion of their electronic and computerized data systems, as has occurred during HIPAA implementation or during a change in managed care organizations working on a contractual basis.
- Despite specific instructions for completing the Form-416, some states have idiosyncratic policies that yield data that are not equivalent to other states' data.

Individual state CMS Form-416 reports for FY1995-FY2000 are available on the CMS Internet page.¹⁹ **Those seeking to compare states' EPSDT dental utilization over time using these reports need to be aware of the effects of the FY 1999 Form-416 dental data changes (noted above) that limit direct comparisons of the data before and after that year.**

Together, these concerns suggest that state-to-state comparisons of Form-416 dental data should be pursued with considerable caution. Direct contact with state Medicaid personnel

¹⁸ American Dental Association. Medicaid Issues. Available at: http://www.ada.org/prof/advocacy/issues/medicaid_issues.asp. Accessed July 2004.

¹⁹ <http://www.cms.hhs.gov/medicaid/epsdt/default.asp>.

familiar with the respective states' data collection histories, systems and potential idiosyncrasies may well be appropriate.

PROPOSALS FOR ADDITIONAL ADJUSTMENTS TO FORM-416 DENTAL SERVICES DATA

Through discussions with state personnel regarding Form-416 dental services data, the authors have been made aware of concerns regarding current instructions for reporting EPSDT dental utilization data. States have argued, for example, that the following adjustments should be considered:

- Some feel that Form-416 data should be adjusted to account for those children who may not be enrolled for an entire year, either by (1) counting only those children continuously enrolled for the entire year, (2) counting only those children continuously enrolled, but having a single break in eligibility of no more than 30 days—the HEDIS® method, (3) counting only those children who were not enrolled in the prior year—the “new enrollee” method; (4) recording the total number of children eligible for EPSDT by calculating the portion of the reporting year that individuals were Medicaid eligible—“the Average Period of Eligibility methodology;” and (5) counting only those enrolled for various lengths of time, e.g., 10 months, 9 months, etc.
- Others have suggested that Form-416 data should be adjusted to account for each state's dental periodicity schedule, so that in some states children less than one, two, three or four years of age or above age 18 might be excluded.

These proposed adjustments would likely result in increases in “any dental service utilization” rates compared to the current approach, and could complicate longitudinal and interstate comparisons.

Given that Lines 12(a), (b) and (c) require submission of dental services data for all specified age ranges, it is clear that an age modification is not supported by the current Form-416 reporting Instructions. The Instructions, however, are less clear with respect to use of an “Average Period of Eligibility” methodology. The Instructions (in Lines 2-10 of Form-416) may appear initially to describe such an adjustment; however, closer scrutiny reveals that this adjustment methodology is specific to “general health screenings,” (i.e., it refers to Physician Current Procedural Terminology (CPT), rather than CDT codes, and input of general health screening periodicity schedules). Thus, the Instructions, although leading to an eligibility-based adjustment for physician screens, do not apply to assessments of the extent to which children are receiving dental services.

In the opinion of the authors, it is reasonable for CMS to entertain a discussion as to whether the Form-416 should be revised to include adjustment of dental utilization data by age and/or enrollment. Arguments may be made for and against each of the proposed adjustments noted above. With respect to age adjustment, for example, it might be argued that excluding children under age one from Form-416 reporting is reasonable since guidelines established by the ADA and American Academy of Pediatric Dentistry suggest that children should begin visits to the dentist by age one. Inclusion of children less than age one may artificially decrease utilization rates since the vast majority of infants under age one do not visit a dentist. On the other hand, it may be argued that low-income children enrolled in Medicaid are at high risk for

dental disease and, as such, a visit to the dentist to provide the family with anticipatory guidance and oral health education, as recommended by the AAP, would not be inappropriate prior to age one.²⁰

Similarly, with respect to Medicaid enrollment adjustments, it may be argued that fluctuations in a child's Medicaid eligibility due to changes in family income or residence should be accounted for when calculating a state's dental utilization rate. Yet, the retort might be, "Should minor and perhaps fairly substantial breaks in enrollment limit a state's responsibility to assure that children visit a dentist on a regular basis?"²¹

Permutations for adjusting EPSDT dental utilization rates abound. Clearly, any consideration of proposed changes needs to be mindful of the full range of implications associated with any modifications of the current approach. Research on the impact of proposed adjustment methods and explanations of how resultant rate changes should be interpreted by health policy decision makers are essential antecedents in this process..

CONCLUSION

This paper was developed to assist policymakers, advocates, researchers and the dental professional community to better understand the origins, history and issues underlying use of CMS Form 416 data. These data represent the only statutorily required information on dental services utilization by Medicaid-enrolled children. Revisions recently made to data collection procedures and processes have strengthened the utility of these data. The data have considerable reliability because they are interconnected with dental provider reimbursement and federal-state Medicaid financing systems, and are subject to state and federal audit procedures. Data collection variability across states, however, suggests that these data are best used to observe changes in dental utilization over time within states and with considerable caution for cross-state comparisons. If used appropriately, these data provide a valuable tool for continuous quality improvement efforts and for tracking how improvements in Medicaid dental program policies, procedures and systems affect access to dental care for children covered by Medicaid.

²⁰ Hale KJ et al. Oral health risk assessment timing and establishment of the dental home: policy statement. *Pediatrics*, 111(5): 1113-6, May 2003.

²¹ The issue of adjusting Medicaid enrollment data to recognize part-year eligibility for EPSDT may be less of an issue in states that have implemented continuous Medicaid eligibility by which a child remains eligible for EPSDT benefits regardless of income fluctuation.