Unlike children in most other economically developed countries, children in the United States are not guaranteed health insurance coverage. Indeed, many U.S. children have no health insurance coverage at all. Their lack of coverage restricts their access to health care services: uninsured children have fewer physician visits per year than children with insurance and are less likely to have a usual source of routine health care. In recognition of the importance of health insurance for children’s access to health care, a number of public programs, the largest of which is the federal-state Medicaid program, have been developed to provide health insurance benefits to poor children and others who would not otherwise have access to health care coverage. Indeed, health insurance coverage for all Americans was a key element of the recent effort to reform health care in the United States.

Because of the importance of health insurance coverage, many surveys and reports are devoted to gathering and disseminating statistics on the number and proportion of the U.S. population (including children) who have health insurance of various types. However, the statistics they present can appear contradictory. For example, for 1993, there were three major estimates of the number of uninsured children: the Employee Benefits Research Institute (EBRI) estimated that there were 11.1 million children without insurance; the Census Bureau, 9.5 million; and the Urban Institute, 8.7 million. These different estimates were all based on a single data source, the 1994 Current Population Survey (CPS). This Child Indicators article examines the CPS as a source of data on health insurance coverage, the reasons for the different estimates of the numbers of uninsured children, recent trends in health insurance coverage for children, and the growing importance of the Medicaid program as both a current and a potential source of health insurance for children.

This analysis suggests that, even though interpretations of CPS data may seem inconsistent, there are some clear trends in health insurance coverage for children. First, the proportion of children 0 to 10 years old who do not have health insurance has declined slightly over the past five years, while the
number and proportion of children ages 11 to 17 who are uninsured has increased. Second, these relatively small changes in the overall number of uninsured children mask larger changes occurring in health insurance coverage for children. Overall, the proportion of children covered by private, employment-based health insurance has been declining, while changes in the rules for eligibility for Medicaid have made that program increasingly important for children, as more and more children become eligible to enroll. If scheduled Medicaid expansions are carried out completely and all children who are eligible for Medicaid now or who will become eligible in the future enroll, then by the end of the century approximately 23 million children will be covered by Medicaid and around 8% of children will be uninsured. These projections are based on current programmatic guidelines for Medicaid and the current state of health insurance coverage for children. However, if the number of children covered by employment-based insurance continues to decline and/or if new restraints are placed on the growth of the Medicaid program (such as those that might emerge from current attempts to control the rate of growth in Medicaid expenditures), many more children will be uninsured than these projections suggest.

**Current Population Survey Data on Health Insurance Status**

Several periodic national surveys attempt to measure the number of people in the United States who have health insurance; however, on the most regularly collected and widely cited source of information on health insurance coverage, the Current Population Survey (CPS). The official source of government statistics on employment, the CPS has been conducted every month by the Census Bureau for 50 years. Each March, a supplement on income and health insurance is added to the core survey. The survey supplement asks several questions about the health insurance coverage during the previous calendar year of approximately 160,000 people in 57,000 households. Two sets of questions ask the source of coverage for each household member during the previous calendar year. It asks whether anyone in the household was covered for all or part of the year by the major sources of health insurance such as Medicare, Medicaid, and employment-based insurance plans. The second set of questions asks about the coverage status of children under the age of 15 in the household in an attempt to identify sources of coverage which may have been overlooked initially. In particular, the second set of questions asks about children’s coverage as dependents on policies of persons outside the household and confirms coverage under public programs.

Because neither set of questions asks directly about whether any member of the
household was uninsured for part or all of the year in question, when the data are analyzed, people are categorized as uninsured only if they answered no to all of the questions about specific types of insurance coverage. This can lead to an overestimate of the number of uninsured because individuals covered under insurance programs not specifically identified in the questionnaire will be classified as uninsured. For example, children enrolled in a number of non-Medicaid government programs for those in low-income families or with special health needs would be classified as uninsured in the CPS because information on participation in these programs is not collected in the survey. On the other hand, persons who were both insured and uninsured during a year are typically classified as insured in analyses of CPS data along with respondents who were insured throughout the year. The uninsured category includes only those who report no coverage at all during the year.

Other important problems with using CPS data to measure the health insurance status of U.S. children have been identified. First, the answers to the two sets of questions about health insurance status for children are sometimes inconsistent. Some children could be considered uninsured based on one question but would be classified as insured based on others. In the 1994 CPS, responses for about 9% of children in the survey sample showed these inconsistencies. This translates to 5.2 million children on a national basis. A second problem is that CPS data on the number of people in Medicaid (the government-run health insurance program for the poor) are not consistent with other data measuring participation in the Medicaid program. The Medicaid program’s administrative data show a higher number of participants than the number of persons in the CPS data file who report participation in Medicaid. Therefore, unadjusted data from the CPS underestimate participation in Medicaid, and as a consequence, overestimate the number of uninsured people. Finally, because not all health insurance plans cover the same services in the same way, data from the CPS and other surveys that consider only the presence or absence of health insurance coverage are not able to present a complete picture of the adequacy of that coverage (see Box 1 for further discussion of this issue).

Despite these difficulties, the CPS is still the best regular source of information about health insurance status available. To better understand the data, adjustment procedures have been developed. Different organizations follow different procedures in interpreting inconsistent responses and in determining the Medicaid status of children. These procedures also yield different counts of uninsured children, since survey respondents are classified as uninsured when they are not placed in an insurance category.

Figure 1 contains estimates of the percentage of children under age 18 who were uninsured, covered by private health insurance and/or by Medicaid in 1993. The estimates presented are all based on 1994 CPS data but reflect the different approaches taken to the limitations of the CPS data by the U.S. Bureau of the Census, the Employee Benefit Research Institute, and the Urban Institute.

The U.S. Bureau of the Census takes the CPS data nearly on face value. When the responses are inconsistent, the Census counts a child as insured if either set of questions indicates that the child is insured. The Census Bureau does not make any modifications to the CPS counts of Medicaid enrollees. In addition, the Census Bureau counts respondents who indicate coverage under both Medicaid and private insurance in both categories. Altogether, approximately 3.9 million children (5.6% of all children) were classified by the Census Bureau as covered by both Medicaid and private insurance in both categories. All of the data reported in Figure 1 reflect the categorization of children with both Medicaid and private coverage in both categories. As a result of this “double-counting” of individuals who report multiple sources of coverage, the percentages reported in Figure 1 sum to more than 100%. These Census procedures yield an estimate of 9.6 million uninsured children in 1993 (13.7% of 0- to 17-year-olds).
Like the Census Bureau, the Employee Benefit Research Institute (EBRI), another institution which regularly analyzes the CPS health insurance data, does not adjust for any undercounting of Medicaid participation and counts children covered by both Medicaid and private insurance in each category. However, when there are inconsistent responses for children under age 15, instead of simply assigning children with one positive response to the “insured” category as the Census Bureau does, EBRI calls them insured only if they meet certain conditions. Children whose coverage came from within the household are assumed to have private health insurance only if the family head also has private health insurance. Children whose coverage came from outside the household are considered insured only if their family reported receiving some financial assistance from outside the household, such as child support or alimony.8 Because these definitions make it more difficult to be categorized as insured, more children in the EBRI estimates (11.1 million or 16.1%) are considered to be uninsured than in the Census report, as shown in Figure 1.8

The Urban Institute has developed a statistical model, called TRIM2, for counting the insured and uninsured using CPS data. In dealing with the problem of inconsistent responses, the Urban Institute takes an approach similar to that of EBRI, with conditions that are less strict. If a child is reported to be a dependent on an insurance policy of an adult living in the household, the child is assigned to the “insured” category only if there is an adult in the household who has health insurance.14 TRIM2 also adjusts the data to compensate for the fact that the CPS count of the number of Medicaid participants is lower than the number of participants shown in the
The data for this chart come from interpretations of the 1994 Current Population Survey (CPS) by the U.S. Bureau of the Census, the Employee Benefits Research Institute (EBRI), and the Urban Institute. The survey measured health insurance coverage for all age groups in 1993. Each organization interprets the data differently, so estimates of the insurance coverage of children vary. The estimates presented include all children who were reported as having coverage under each type of insurance at some time during 1993; therefore, because children can be covered by more than one type of insurance in a year, the percentages sum to more than 100%.

The differences in the estimates stem from two factors:

- First, answers to questions about health insurance for children are sometimes inconsistent. Each model is based on different assumptions about how to count those children.
- Second, the CPS data are not consistent with other data measuring participation in the Medicaid program. The Urban Institute adjusts the data to increase the level of participation in the survey to the level recorded by the federal bureau that runs Medicaid. EBRI and the Census Bureau do not adjust the CPS Medicaid data. Regardless of the interpretation used, it is clear that Medicaid is a very important program for children.

The differences in methodology provide a range of estimates for the proportion of children who are uninsured. In 1993, between 13% and 16% of children under age 18 were uninsured.

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administrative records of the Medicaid program.\textsuperscript{15} To correct for this problem, TRIM2 uses the information available in the CPS to test each respondent for Medicaid eligibility based on the rules of the state in which they reside and classifies additional eligible respondents as Medicaid enrollees to match the enrollment each state reports in its administrative data. As shown in Figure 1, this process yields higher Medicaid enrollment estimates and decreases the estimate of the number of uninsured relative to other sources.

The Urban Institute estimate of the number of children without any insurance during 1993 (8.7 million or 12.6\%) is lower than the estimates from the Census Bureau and from EBRI. Its estimate of the number of children covered by Medicaid, including those who had both Medicaid and private insurance coverage in 1994 (20.2 million or 29.5\%), is almost one quarter higher than the EBRI and Census Bureau estimates, as shown in Figure 1.

Each set of estimates from the CPS has advantages and disadvantages; however, estimates of insurance status based on the Urban Institute procedure are used in the remainder of this article. The TRIM2 correction for participation in Medicaid is important for assessing trends in sources of coverage for children, and the assessment of individual eligibility for Medicaid allows for analysis of the number and proportion of children who are eligible for Medicaid but are not participating at any given time.\textsuperscript{16} Trends in sources of health insurance coverage and in eligibility for public programs are the focus of the balance of this article.

**Trends in Health Insurance Coverage for Children**

Over the past five years, the two major trends in health insurance coverage in the United States have been the expansion of enrollment in the Medicaid program and the decline in enrollment in employment-based insurance plans. These trends and their impact on the proportion of people without insurance for an entire year are shown in Figure 2 for three age groups (0 to 10 years, 11 to 17 years, 18 to 64 years) based on TRIM2 adjustments of CPS data.\textsuperscript{17} For 0- to 10-year-olds, the increase in coverage under Medicaid exceeded the decline in employment-based coverage so that the percentage of children without insurance in this age group declined to 10.7\% from 12.0\%. For older children and adults younger than 65, however, the decline in employment-based coverage exceeded the increase in coverage under Medicaid. As a result, the proportion without insurance grew by 3 percentage points: over one million more 11- to 17-year-olds were uninsured in 1993 than in 1988.

Growth in Medicaid, the health insurance program for the poor that is jointly financed by states and the federal government, has been substantial in recent years. Overall enrollment in Medicaid has risen from 21.2 million enrollees in 1988 to about 33.5 million in 1993, and enrollment of children increased from 12.5 million in 1988 to 20.2 million in 1993.\textsuperscript{18} Figure 2 shows that the proportion of the population covered under Medicaid has increased for all age groups but most substantially for young children. Approximately 28\% of children ages 0 to 10 were covered by Medicaid in 1993, compared with 18\% of children in that age group in 1988. For children ages 11 to 17, 17\% were covered by Medicaid in 1993, up from 13\% in 1988.\textsuperscript{19}

A series of federal legislative changes expanding the eligibility of pregnant women and young children for Medicaid were the most important factors in the growth of the program.\textsuperscript{20} Before 1986, coverage by Medicaid was typically linked to participation in the Aid to Families with Dependent Children (AFDC) program, which restricted eligibility to a very limited population. A series of changes to the program between 1986 and 1990 greatly expanded eligibility, and coverage is scheduled to continue to expand under the Omnibus Budget Reconciliation Act of 1990 (OBRA-90) so that by 2002 all children under age 19 with incomes below the poverty level will be eligible for Medicaid coverage.\textsuperscript{21}
Urban Institute estimates from the Current Population Surveys for 1988 and 1993 are used in this chart. Two major trends in health insurance coverage for children are evident:

- Medicaid coverage of children, particularly of young children, increased substantially between 1988 and 1993, largely as a result of expansions of eligibility. About 28% of children ages 0 to 10 were covered by Medicaid in 1993, compared with 18% of children in that age group in 1988.

- Employment-based insurance coverage of children and adults decreased. Two-thirds of children under age 18 were insured under employment-based plans in 1988, but that proportion dropped to 58% in 1993. This decrease may be due to the increasing prices of insurance coverage, the changing nature of the workforce, the increase in Medicaid coverage of children, and other factors.

A second reason for growth in the Medicaid program between 1988 and 1993 is that Medicaid is an entitlement program with eligibility for children based largely on age and family income. Therefore, when unemployment rose and family income declined during the recession of 1990–1992, the number of people who qualified for and enrolled in Medicaid increased.22

Another consistent change shown for all age groups in Figure 2 is the decline in employment-based coverage. Approximately 66% of children 0 to 17 years old were insured under employment-based plans at some time during 1988. This proportion dropped to 58% in 1993, a decline of eight percentage points. The decline in employment-based coverage for adults ages 18 to 64 was about six percentage points over the same period. Several factors have been hypothesized as contributing to this decline. First, between 1980 and 1991, business spending on health care for each insured employee rose by 60% in constant dollars.23 Since then, health insurance premiums have continued to grow. Some employers have reacted to the rising costs of employee health insurance benefits by no longer providing coverage for the dependents of employees or for the employees themselves. Others have shifted part of their health care costs to their employees in the form of increased deductibles, higher copayments, and increased sharing of premium costs.24 In addition, the increased use of temporary and contract workers (who do not receive benefits) has probably contributed to the decline in employer-based coverage for all age groups.25

Another probable reason for the decline in employment-based coverage for children is related to the increase in Medicaid coverage. It is likely that, as eligibility criteria were liberalized, some individuals who would have been covered under private insurance became insured instead under Medicaid. This switching from private to public sources of health insurance coverage, called “crowding out,” is particularly likely to happen when individuals are required to purchase health insurance on their own or to contribute to employment-based insurance payments. Because publicly provided Medicaid coverage is free to eligible enrollees, switching from private insurance to Medicaid can result in a substantial savings to individuals who must pay for insurance out of their own pocket. A recent analysis found that, as Medicaid eligibility for children was liberalized in recent years, there was an associated reduction in private insurance coverage.22 The analysis also suggested that some of the reduction in private coverage for children came as workers dropped insurance coverage or switched from family coverage to individual coverage, leaving their newly eligible dependents to be covered by Medicaid. Much of the reduction in private insurance coverage for adults, however, was due to economic and demographic factors and to changes in employer behavior unrelated to changes in Medicaid.

Eligibility for Public Programs

Another important issue connected with the health insurance status of children is the substantial number of individuals, including children and adults, who are both uninsured and eligible for Medicaid but who are not enrolled in the program. Figure 3 illustrates the distribution of children under age 18 by their health insurance status in 1993, using 1994 CPS data as adjusted by the TRIM2 model. Based on survey information on family income and assets and state-specific eligibility criteria, it is estimated that at least 2.4 million of the 8.7 million children classified as uninsured were eligible for Medicaid but not enrolled. In addition, another 700,000 uninsured children under age 18 would be eligible for Medicaid coverage if the OBRA-90 requirement that states phase in Medicaid coverage for all children under age 18 by October 2000 in families with incomes below 100% of the poverty level were implemented immediately.26

The reasons uninsured but eligible individuals do not enroll in Medicaid are not fully understood, but a number of potential contributing factors have been identified. Not enrolling may be related to lack of

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**At least 2.4 million of the 8.7 million children classified as uninsured were eligible for Medicaid but not enrolled.**
These estimates of children’s health insurance coverage were made by researchers at the Urban Institute, using their TRIM2 model, with data from the 1994 Current Population Survey (CPS), which asks respondents about their coverage in 1993. Using information available on the CPS, the TRIM2 model is able to estimate the proportion of children who are eligible for Medicaid but not enrolled in the program.

- The majority of children in the United States (87%) are covered by health insurance of some kind.
- Medicaid, the government-run health insurance program for the poor, is an important source of health insurance for children. Nearly 30% of children in the United States were enrolled in this program in 1993.
- At least 2.4 million children who are currently uninsured are eligible for Medicaid but not enrolled in the program.
- If the Medicaid expansions enacted in the Omnibus Budget Reconciliation Act of 1990 are carried out completely, if all children who are currently eligible enroll in Medicaid, and if the remainder of the health insurance picture stays the same as it is today, approximately 8% of children will be uninsured in 2002.

knowledge about the program and its eligibility criteria, difficulties in enrollment because of language, procedural and other barriers, and the stigma associated with being a recipient of public assistance. For some families, the period of eligibility may be brief and if there is no demand for health services during the time when they are eligible, they will have little incentive to enroll.

A conundrum arises because, in some sense, children eligible for but unenrolled in Medicaid have health insurance coverage. For example, it is quite likely that if these children or other eligible members of their families present themselves for health care at a hospital emergency room, clinic, or another provider that accepts Medicaid patients, they will receive health care services and become enrolled in Medicaid so that the provider can receive reimbursement from the program. From the child health perspective, however, children who are eligible for but unenrolled in Medicaid may not benefit from the substantial array of preventive screenings and anticipatory guidance services which are part of the Medicaid benefit package, and they may not receive timely care for acute health problems because their parents are not aware that those services would be covered for their child.

Conclusion
Universal health insurance coverage was a key element of the most recent attempt to reform the U.S. health care system. In the aftermath of that effort, some attention has focused on a piecemeal approach to extend health insurance coverage gradually to certain population groups. Others have focused on the savings that may be achieved by modifying the existing health care system, with particular attention to Medicare, the national health insurance system for the elderly and disabled, and Medicaid, the public health insurance system for the poor. Information about the proportion of the population of children and adults who are insured and uninsured plays an important part in informing these efforts.

As children’s coverage shifts away from the private sector, the importance of the Medicaid program for children is increased. In 1993, approximately 20.2 million children (29% of all children) were covered by Medicaid, an additional 2.4 million (3.5% of all children) were eligible for Medicaid but unenrolled, and almost 700,000 (1.1% of all children) were scheduled under current legislation to be phased into the Medicaid program by the end of the decade. Furthermore, if history is a reliable guide to the future, the ranks of children covered by Medicaid probably will swell with the coming of the next economic downturn. While the number of children who are now covered and scheduled to be covered is encouraging, current attempts to reduce the growth in Medicaid expenditures in some states and proposals to cap the growth in federal Medicaid expenditures threaten both the quality and the scope of the program. Whether currently scheduled expansions in enrollment will actually occur also must be
regarded as uncertain at this time. Given the importance of the Medicaid program for so many of America’s children, however, policymakers should proceed with extreme care and consider the effects of changes in the program on the health of the many children who depend on Medicaid.

Finally, the data underscore how relatively few children under age 18, approximately 5.6 million, are uninsured, ineligible for Medicaid, and not likely to be covered under currently scheduled Medicaid expansions. The fact that less than 8% of children would need to be targeted under any effort to extend basic health insurance coverage to all children might well give hope to those who advocate for universal coverage for children.

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2. The relationship between health and health insurance coverage is unclear, although it is easy to believe that sick children who have access to health care services may end up in better health than those who do not have access to services. General perceptions of health, as measured on the 1987 National Medical Expenditure Survey, are better for children who have private insurance than for children who are uninsured. However, the general perception of health is worse for children on public insurance than for those who are uninsured. This latter finding may, in part, be due to the fact that children qualify for certain public programs only if they are in poor health. (Short, P.F., and Lair, T.J. Health insurance and health status: Implications for financing health care reform. Inquiry [Winter 1994–95] 31:425–37.)


4. For example, the National Health Interview Survey has asked respondents about their coverage several times, most recently in 1993. The National Medical Expenditure Survey, most recently fielded in 1987, asked respondents detailed questions about their insurance coverage. The Survey on Income and Program Participation also determines individuals' participation in insurance programs, particularly public programs such as Medicare or Medicaid.


7. See note no. 5, Winterbottom, Liska, and Obermaier, p. 240.


9. See note no. 5, Winterbottom, Liska, and Obermaier, p. 244.

10. Using data from the CPS to measure insurance status also presents challenges that are common to all complicated information collected by survey. Because of the complexities of health insurance, respondents simply may not know the correct answer to a question. For example, some individuals may assume that they are covered by Medicaid if their child is covered by Medicaid when they are actually not covered under the program. Answering survey questions in reference to the proper time frame can also be difficult. In the CPS, respondents are asked about their insurance coverage for the previous calendar year. Some analysts believe that, when people are asked about their coverage for the previous calendar year in the CPS, they often answer in terms of their current coverage. (Swartz, K. Interpreting the estimates from four national surveys of the number of people without health insurance. Journal of Economic and Social Measurement [1986] 14:233–42.)
11. See note no 5, Winterbottom, Liska, and Obermaier, pp. 244–45.


13. In addition to the health insurance categories shown in Figure 1 (private, employment-based insurance and Medicaid), a small number of children have health insurance coverage through Medicare or military health insurance programs.

14. However, children whose coverage comes from outside the household are counted as insured regardless of whether the family receives support payments from outside the household. See note no. 5, Winterbottom, Liska, and Obermaier, p. 245.

15. Researchers at the National Bureau of Economic Research also have constructed a model which determines the Medicaid eligibility of individuals in the CPS. However, because they do not regularly publish statistics on insurance status, this article focuses only on the TRIM2 model. For more information, see Currie, J., and Gruber J. Saving babies: The efficacy and cost of recent expansions of Medicaid eligibility for pregnant women. Working Paper No. 4644. Cambridge, MA: National Bureau of Economic Research, February 1994. Appendix.

16. There are some limitations of the TRIM2 model, particularly related to underreporting of coverage and eligibility for coverage. Because the model is based on CPS data, estimates of children’s eligibility for public programs are largely limited to the information available in the survey. The most significant limitation for children is the lack of information about disabilities and the Supplemental Security Income (SSI) program, which makes it difficult to correct for underreporting of health insurance coverage for these children. (Colin Winterbottom, Research Associate, Urban Institute. Personal communications, July 26, 1995, and August 7, 1995.)


18. The term “enrollees” used here refers to all of the individuals who have enrolled in the Medicaid program and whose health care providers can be reimbursed by the Medicaid program for the individuals’ medical expenses. The Health Care Financing Administration, the federal government organization that runs Medicaid, refers to these individuals as “eligibles.” (Colin Winterbottom, Research Associate, Urban Institute. Personal communication, August 3, 1995.)

19. Unlike the numbers presented in Figure 1, in Figure 2 the Medicaid group includes only individuals who had Medicaid coverage exclusively in 1988 and 1994. Individuals with employment-based coverage in addition to Medicaid are included in the employment group. This categorization highlights the decline over the five-year period of the proportion of the population in all three age groups with any source of employment-based coverage and the growth in dependence on Medicaid exclusively.


26. The precise OBRA-90 requirement is that children born after September 30, 1983, in families with incomes below 100% of poverty who have attained age 6 are eligible for Medicaid until they reach age 19. This stipulation effectively created a cohort of children, those born after the cutoff date, who maintain eligibility for Medicaid as they age, and a cohort born before the cutoff date who will never be eligible under the specific age and income requirements of the law. Effectively, the minimum age for eligibility advances by one year annually as the cohort born after September 30, 1983, ages. It is the hypothetical advance in the minimum age for eligibility which gives rise to the concept of “future” eligibles.
27. See note no. 20, Hill.

28. On the other hand, it is likely that parents of these eligible but unenrolled children may not be aware themselves of these services, even if enrolled, without substantial outreach and educational activities to get them more involved with the health care system for their children.
