Paying for physician services in State Medicaid programs

by John Holahan

This article presents new information on both methods and rates of payment for physician services in State Medicaid programs. A variety of indices comparing State programs with each other and with Medicare are developed and discussed. The information is important for both State policymakers considering cost-containment strategies and for those concerned with Medicaid access to physician services.

Introduction

State Medicaid programs have historically had broad policy discretion, within general Federal guidelines, for designing payments to physicians. State discretion has produced considerable variation between States in actual payment practices. These variations have significant implications for beneficiary access to care and program costs. Several studies have shown that Medicaid reimbursement rates have major effects on physician participation in Medicaid (Hadley, 1979; Sloan and Steinwald, 1979; Sloan et al., 1979; Held et al., 1977; Held et al., 1983). It has also been shown that Medicaid beneficiaries in States with relatively low rates of payment are less likely to use services in hospital outpatient departments (Gold, 1981).

Physician reimbursement rates can also affect program costs. Physician reimbursement policy probably offers different potential for cost savings in different States, depending upon the status of current reimbursement policy and the availability of substitutes for physicians, that is, hospital outpatient departments and emergency rooms. States that currently have high fees and few substitutes could probably reduce Medicaid expenditures by reducing fees. States that have relatively low fees and have many substitutes for private physicians’ care will probably not save money by further cuts in fees. In fact, such States could perhaps even save money by increasing fees. Because low fees discourage private physicians’ participation, Medicaid recipients, as pointed out earlier, are more likely to use hospital outpatient departments and clinics (which are typically more expensive than physicians’ offices) and may be more likely to receive inpatient care. Increased fees will lower Medicaid expenditures if these fees sufficiently reduce the reliance of Medicaid recipients on hospitals. Given the importance of fees for beneficiary access and program costs, better information on current policies seems to be quite important.

This article relies on the results of a 1980-81 survey of State Medicaid policies toward physician payment. The original intent of the survey was to provide the basic information necessary for serious consideration of a more uniform set of policies between Medicare and Medicaid. Questionnaires were distributed by mail to State Medicaid directors, and telephone interviews were conducted when necessary to obtain missing information or to clarify responses. All States responded to at least some portions of the survey. The survey was designed to collect information that was current as of the last half of 1979. Due to delays and deficiencies in many responses and to the length of time required to conduct the telephone followups, all the questionnaires were not completed until April 1981. Thus there is some inconsistency in the time periods to which the responses apply. Some may apply to late 1979 and others to 1980. Attempts have been made to note these differences, but some margin of error undoubtedly remains.

State Medicaid reimbursement systems

To provide some background information necessary for better understanding the fee data presented later, a description of the basic physician reimbursement systems used by State Medicaid programs is given first. Unlike Medicare, which uses the statutorily mandated customary, prevailing, and reasonable (CPR) reimbursement system, State Medicaid programs can use either the CPR system or a fee schedule (FS) method.

The CPR system used by Medicare limits reimbursement to the lowest of the following: a physician’s actual charge, the physician’s median charge in a recent prior period (customary), or the 75th percentile of charges in that same period (prevailing). In some States, the 75th percentile is determined on the basis of physicians’ charges in the same specialty or sub-State area; in others, charge data from all physicians throughout the State is used. In addition, since 1975, an Economic Index 1 has been applied to limit the rate of increase in Medicare prevailing charges; Medicaid programs are required to use this Economic Index as a screen as well. States have considerable discretion in applying CPR principles and may deviate from Medicare to a considerable extent. For example, to derive CPR charges, States may use data from Medicaid participating physicians, update infrequently, or use a lower percentile for prevailing charges than the 75th.

Typically, fee schedules are fixed sets of maximum reimbursement amounts for specific, well-defined procedures. They are frequently derived from Medicare 1

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1The Economic Index was imposed July 1975, in an attempt to limit the rate of increase in prevailing charges. Increases in prevailing charges were limited to those justified by economic changes. The two components of the index are the nationwide average in incomes adjusted for production and the nationwide average increase in expenses of office-based physicians.
or private insurance rates and adjusted over time. In other cases, fee schedules are based on the California relative value studies (CRVS) or a similar relative value studies (RVS) schedule that essentially gives the value of all procedures relative to some chosen standard procedure. Once the RVS system is established, the State determines the price or conversion factor for the standard procedure and multiplies to determine all prices. The 1980-81 survey of State Medicaid policies distinguished between fee schedules without an RVS and fee schedules with an RVS. The essential difference between CPR systems and a fee schedule of either type is that in the former, payment screens can vary between physicians and, in the latter, all physicians or groups of physicians are limited by the same screen.

In August 1979, 25 Medicaid programs used some version of a CPR charge system. Seventeen States employed a fixed-dollar fee schedule, and the remaining 8 used an RVS-conversion factor fee schedule. The type of reimbursement system used by each State is shown in Table 1. While the same number of States use fee schedules as use CPR systems, fee schedule States accounted for 68.3 percent of Medicaid expenditures in fiscal year 1979. The numbers in parentheses provide rankings of the 10 largest (in terms of size of expenditures) Medicaid programs. The numbers indicate that 7 of the Nation's 10 largest Medicaid programs employ fee schedules.

Ten States with CPR systems use the same profiles and pay the same rates as Medicare. The remaining States with CPR systems can have customary and prevailing charges that are below Medicare's. In principle, rates can differ if a State uses different data sources to establish profiles, if it uses the same sources but from different years, if it fails to annually increase profiles, or if it uses lower percentile ceilings.

For example, Hawaii, Ohio, and South Dakota have lower payment screens than Medicare because their data source is Medicaid and because fees have not been increased annually. Charges made to Medicare are typically below charges made to Medicare or private insurers because of differences in the composition of physicians participating in the two programs, that is, physicians with high charge profiles are less likely to participate in Medicare. Arkansas, Kentucky, and Louisiana reported that their profiles are generally lower than Medicare's despite annual increases in profiles because only Medicaid data was used to construct them. Alabama, Kansas, and New Mexico use Medicare data to develop profiles but have not updated regularly. Finally, although Tennessee uses Medicare rates under Medicaid, the State legislature has imposed a 10 percent reduction in prevailing charge levels.

In general, States using CPR systems increase their fees annually. Seventeen States reported that profiles are adjusted annually, while 8 States do not increase profiles regularly. In Table 2, the frequency of increases in charge profiles and dates of the last and next expected payment increases are indicated. Some of the difference in reported years is due to the timing of the States' responses to the questionnaire and to the different fiscal years used among the States.

Fee schedules have typically been based on Medicare or in-State private insurance charges in an early year of program operation. Fee increases seem to depend on the resolution of the conflict resulting from budgetary pressures faced by State governments and political pressures applied by medical societies. In most States, budgetary pressures appear to have heavily influenced the outcome of these negotiations in recent years. Some States give a great deal of attention to the development of fee schedules; most are fairly simplistic. For example, States often use established fee patterns (or RVS schedules) and make revisions to the entire schedule if and when resources permit. Fee schedule States are much less likely to regularly increase their reimbursement rates than are CPR States. In Table 3, the dates of the most recent fee increases, at the time of the survey's completion, are given.

Some Medicaid programs pay different rates for the performance of the same procedure by physicians of different specialties in the same geographic area. Medicare does not require its carriers to distinguish between general practitioners and specialists. Medicare has, however, encouraged carriers to establish separate reimbursement schedules for different specialties and permits them to exercise considerable discretion in defining specialties. The result is that Medicaid specialist reimbursement policies may differ from Medicare policies in the same State. If a Medicaid program

| Table 1 |
| Medicaid reimbursement systems: 1979 |
| Customary and prevailing charges | Fee schedule |
| --- | --- |
| Alabama | California (2) |
| Alaska | Colorado |
| Arkansas | Connecticut |
| Delaware | District of Columbia |
| Georgia | Florida |
| Hawaii | Idaho |
| Indiana | Illinois (5) |
| Iowa | Maine |
| Kansas | Maryland |
| Kentucky | Massachusetts (6) |
| Louisiana | Michigan (4) |
| Minnesota | Mississippi |
| Nebraska | Missouri |
| New Mexico | Montana |
| New York | Nevada |
| North Dakota | New Hampshire |
| Ohio | New Jersey (9) |
| Oklahoma | New York (1) |
| South Carolina | Oregon |
| South Dakota | Pennsylvania (3) |
| Tennessee | Rhode Island |
| Texas (7) | Vermont |
| Utah | Virginia |
| Wisconsin (10) | Washington |
| Wyoming | West Virginia |

1 Arizona does not have a Medicaid program.
2 Since 1979, Georgia has changed to a FS system and Colorado has adopted a CPR system.
3 The numbers in parentheses provide rankings of the 10 largest (in terms of size of expenditures) Medicaid programs.
4 States with RVS-conversion factor type FS.
The absence of fee differentials when practice costs vary across areas may significantly affect access to care for specialists than for general practice physicians. States may also vary fee screens by geographic area. Under the current Medicare reimbursement systems, the carriers have divided the country into more than 250 reimbursement localities, ranging in size from sub-county to statewide areas. Some State Medicaid programs have adopted the same multiple locality structure used by the Medicare carrier in the State; others use statewide reimbursement areas. The purpose of an intrastate locality system is to recognize urban-rural differentials in fees and cost of practice. The absence of fee differentials when practice costs vary across areas may significantly affect access to care for Medicaid patients in urban or rural areas.

In Table 4, specialty and regional differentials as employed by the States are summarized. Specialty and regional differentials exist in 22 States and 12 States distinguishing by both specialty and region; 27 States employ neither type of distinction. Furthermore, Missouri, New Jersey, and New York all have comparatively limited specialty differentials. New Jersey restricts its rate differentials to only two groups—general practitioners and specialists—and Missouri and New York apply separate rates for a limited number of procedures only. States that use CPR systems for reimbursement rate determination are much more likely to differentiate between specialties than States that use fee schedules. In fact, 19 of the 22 States that distinguish by specialty are among the 25 CPR States, while only 3 States—Missouri, New York, and New Jersey—of the 25 non-CPR programs employ specialty differentials.

Eighteen States reported that their specialty categories are identical to those used by the Medicare carrier(s) in their States; these include 3 States—Florida, North Dakota, and South Dakota—that make no specialty distinctions. Seventeen of these 18 States use CPR systems for reimbursement; the exception is Florida, which employs RVS-conversion factor systems statewide. Twenty-eight States do not employ

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**Table 2**

| State          | Irregular | Annual | Last payment update (as of August 1979) |
|----------------|-----------|--------|----------------------------------------|
| Alabama        | X         |        | 1976, 1980                             |
| Alaska         | X         |        | 1979, 1980                             |
| Arkansas       | X         |        | 1979, 1980                             |
| Delaware       | X         |        | 1980, 1980                             |
| Georgia        | X         |        | 1975, 1990                             |
| Hawaii         | X         |        | 1976, 1980                             |
| Indiana        | X         |        | 1980, 1981                             |
| Iowa           | X         |        | 1980, 1981                             |
| Kansas         | X         |        | 1980                                  |
| Kentucky       | X         |        | 1979                                  |
| Louisiana      | X         |        | 1979, 1980                             |
| Minnesota      | X         |        | 1976                                  |
| Nebraska       | X         |        | 1978, 1980                             |
| New Mexico     | X         |        | 1978, 1980                             |
| North Carolina | X         |        | 1979, 1980                             |
| North Dakota   | X         |        | 1980, 1981                             |
| Ohio           | X         |        | 1972, 1982                             |
| Oklahoma       | X         |        | 1979, 1980                             |
| South Carolina | X         |        | 1979, 1980                             |
| South Dakota   | X         |        | 1976                                  |
| Tennessee      | X         |        | 1979, 1980                             |
| Texas          | X         |        | 1979, 1980                             |
| Utah           | X         |        | 1979, 1980                             |
| Wisconsin      | X         |        | 1979, 1980                             |
| Wyoming        | X         |        | 1979, 1980                             |

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**Table 3**

| State          | Reimbursement system | Last update |
|----------------|----------------------|-------------|
| California     | RVS                  | 1979        |
| Connecticut    | FS                   | 1974        |
| District of Columbia | RVS       | 1978        |
| Florida        | RVS                  | 1972        |
| Idaho          | FS                   | 1977        |
| Illinois       | FS                   | 1978        |
| Maine          | FS                   | 1977        |
| Massachusetts  | FS                   | 1974        |
| Michigan       | FS                   | 1978        |
| Missouri       | FS                   | 1978        |
| Montana        | FS                   | 1977        |
| Nevada         | RVS                  | 1979        |
| New Hampshire  | FS                   | 1971        |
| New Jersey     | FS                   | 1973        |
| New York       | RVS                  | 1974        |
| Oregon         | FS                   | 1979        |
| Pennsylvania   | FS                   | 1973        |
| Rhode Island   | FS                   | 1977        |
| Vermont        | FS                   | 1979        |
| Virginia       | FS                   | 1969        |
| Washington     | RVS                  | 1979        |
| West Virginia  | FS                   | 1970        |

1. Information on next expected updates not available for Kansas, Kentucky, Minnesota, and South Dakota.
2. In Kansas, rates for office, hospital, and nursing home visits were increased in 1980.
Table 4
Specialty and Medicaid regional differentials established for reimbursement purposes

| State         | Specialties only | Regions only | Specialties and regions | Neither specialties nor regions |
|---------------|------------------|--------------|-------------------------|-------------------------------|
| Totals        | 10               | 1            | 12                      | 27                            |
| Alabama       |                 |              |                         |                               |
| Alaska        |                 |              |                         |                               |
| Arkansas      |                 |              |                         |                               |
| California    |                 |              |                         |                               |
| Colorado      |                 |              |                         |                               |
| Connecticut   |                 |              |                         |                               |
| Delaware      |                 |              |                         |                               |
| District of Columbia |     |              |                         |                               |
| Florida       |                 |              |                         |                               |
| Georgia       |                 |              |                         |                               |
| Hawaii        |                 |              |                         |                               |
| Idaho         |                 |              |                         |                               |
| Illinois      |                 |              |                         |                               |
| Indiana       |                 |              |                         |                               |
| Iowa          |                 |              |                         |                               |
| Kansas        |                 |              |                         |                               |
| Kentucky      |                 |              |                         |                               |
| Louisiana     |                 |              |                         |                               |
| Maine         |                 |              |                         |                               |
| Maryland      |                 |              |                         |                               |
| Massachusetts |                 |              |                         |                               |
| Michigan      |                 |              |                         |                               |
| Minnesota     |                 |              |                         |                               |
| Mississippi   |                 |              |                         |                               |
| Missouri      |                 |              |                         |                               |
| Montana       |                 |              |                         |                               |
| Nebraska      |                 |              |                         |                               |
| Nevada        |                 |              |                         |                               |
| New Hampshire |                 |              |                         |                               |
| New Jersey    |                 |              |                         |                               |
| New Mexico    |                 |              |                         |                               |
| New York      |                 |              |                         |                               |
| North Carolina|                 |              |                         |                               |
| North Dakota  |                 |              |                         |                               |
| Ohio          |                 |              |                         |                               |
| Oklahoma      |                 |              |                         |                               |
| Oregon        |                 |              |                         |                               |
| Pennsylvania  |                 |              |                         |                               |
| Rhode Island  |                 |              |                         |                               |
| South Carolina|                 |              |                         |                               |
| South Dakota  |                 |              |                         |                               |
| Tennessee     |                 |              |                         |                               |
| Texas         |                 |              |                         |                               |
| Utah          |                 |              |                         |                               |
| Vermont       |                 |              |                         |                               |
| Virginia      |                 |              |                         |                               |
| Washington    |                 |              |                         |                               |
| West Virginia |                 |              |                         |                               |
| Wisconsin     |                 |              |                         |                               |
| Wyoming       |                 |              |                         |                               |

Medicare specialty distinctions. Data were not available for the remaining 4 States.

In Table 5, the relationship between Medicaid and Medicare reimbursement localities by State are summarized. Again, Medicare carriers are encouraged, but not required, to establish area specific profiles. All thirteen States that utilize regions for Medicaid reimbursement use the same regions employed by the Medicare carrier(s) in those States. In approximately two-thirds (23) of the 37 States that pay statewide Medicaid fees, Medicare—unlike Medicaid—regionizes the States for reimbursement purposes. In Table 5, the number of regions that are in use in the 13 applicable States are also indicated. The number of regions ranges from 2 (North Carolina) to 32 (Texas), with the remaining States reporting between 3 and 11 regions.

Table 5
Comparability of Medicaid and Medicare regions

| Item                                    | Multiple Medicaid regions (N = 13) | No Medicaid regions (N = 37) |
|-----------------------------------------|-----------------------------------|------------------------------|
| Identical to Medicare (N = 27)          |                                   |                              |
| Alabama                                 | (6)                               | Alaska                       |
| Georgia                                 | (4)                               | Arkansas                     |
| Indiana                                 | (3)                               | Colorado                     |
| Iowa                                    | (8)                               | Delaware                     |
| Kentucky                                | (3)                               | District of Columbia         |
| Louisiana                               | (6)                               | New Hampshire                |
| Michigan                                | (3)                               | New Mexico                   |
| Nebraska                                | (3)                               | North Dakota                 |
| New Jersey                              | (3)                               | Rhode Island                 |
| North Carolina                          | (2)                               | South Carolina               |
| Oklahoma                                | (5)                               | Tennessee                    |
| Texas                                   | (32)                              | Utah                         |
| Wisconsin                               | (11)                              | Vermont                      |
| Not Identical to Medicare (N = 23)      |                                   |                              |
| California                              |                                   | Florida                      |
| Connecticut                             |                                   | Hawaii                       |
| Florida                                 |                                   | Idaho                        |
| Illinois                                |                                   | Illinois                     |
| Kansas                                  |                                   | Maine                        |
| Maryland                                |                                   | Maryland                     |
| Massachusetts                           |                                   | Massachusetts                |
| Michigan                                |                                   | Minnesota                    |
| Minnesota                               |                                   | Mississippi                  |
| Missouri                                |                                   | Missouri                     |
| Montana                                 |                                   | Montana                      |
| Nebraska                                |                                   | Nevada                       |
| New York                                |                                   | New York                     |
| North Carolina                          |                                   | Ohio                         |
| South Carolina                          |                                   | Oregon                       |
| South Dakota                            |                                   | Pennsylvania                 |
| Tennessee                               |                                   | South Dakota                 |
| Texas                                   |                                   | Virginia                     |
| Utah                                    |                                   | Washington                   |
| Vermont                                 |                                   | West Virginia                |
| Virginia                                |                                   | Wisconsin                    |
| Wyoming                                 |                                   |                               |

¹The numbers in parentheses are the number of regions in each State.
Fee differentials between Medicaid programs

Actual payment rates established by Medicaid programs affect physician participation rates, access to physician services, and program costs. Several studies have shown that physician participation rates are sensitive to Medicaid fees. Whether low physician participation means limited access for medical care depends on the availability and substitutability of alternatives, such as hospital out-patient departments and clinics. Using the various methods described in the previous section, a large number of States have limited their fees to control costs of their programs, resulting in substantial variation between States in fees for all procedures.

The 1980-81 survey collected data on fees for 61 procedures covering 9 physician specialties and clinical laboratories. Because of differences in procedure coding systems, several States provided fees for fewer than 61 procedures. Other States did not cover some services included in the questionnaire (for example, eye exams with refractions and therapeutic abortions) and therefore did not provide fees for those services. Despite a number of missing fees, sufficient data were provided to permit detailed analysis of variations in fees between States.

To compare States' overall fee levels, it was necessary to create indices for each State by aggregating across procedures, attaching weights reflecting the relative importance of each procedure. Three types of indices were used. First, statewide price indices were developed for all procedures for all specialties. Second, indices for specialists were developed and compared with indices for general practitioners; the same procedures were used for both general practitioners and specialists. Using these fee indices, the relationship between fee levels, geographic area, and type of reimbursement system were examined.

Statewide fee indices

The first set of indices constructed are statewide weighted average fees, developed by aggregating across 41 procedures. Aggregating was done across specialties weighting by both the frequency and the relative value of the procedure. This type of weighting scheme is preferable to one using only frequencies because several relatively inexpensive services are performed very often. As a result, their fees would dominate any price index using only frequency weights. The relative value units in the 1969 CRVS were used as estimates of the relative value of procedures. For estimates of the frequency with which different procedures are performed for a Medicaid population, actual counts of procedures performed by a large sample of California solo and group practice physicians in 1978 were used. Frequency counts were available for each procedure and specialty. Identical weights for each procedure were applied to each fee in each State.

The fee indices are presented in Table 6. The average fee for each State can be seen in the "Fee" column. The mean fee for all States is $63.93, with standard deviation of $17.18. Average fees ranged from $21.56 in Pennsylvania and $35.41 in New York to $113.65 in Alaska and $98.01 in Nevada. In general, fees are highest in the West South Central (Arkansas, Louisiana, Oklahoma, and Texas), Far West, and Mountain States and lowest in the New England and Middle Atlantic States. Average fees by Census tract are shown below:

| Region          | Average Fee |
|-----------------|-------------|
| New England     | 46.07       |
| Middle Atlantic | 33.77       |
| East North Central | 64.43     |
| West North Central | 65.82     |
| South Atlantic  | 60.04       |
| East South Central | 65.32     |
| West South Central | 81.71     |
| Mountain        | 73.27       |
| Far West        | 78.32       |

The variation between fees is somewhat overestimated by the indices in Table 6 because of the use of CPR systems by some States and fee schedules by others. The reported fees are the maximum fees paid by each State. In CPR States, most physicians will face their own customary charge rather than the prevailing charge as the relevant screen on their payment rate. As a result, the rates reported for CPR States overestimate average payment rates. The extent of overestimation depends on the variance in the distribution of customary charges. In most fee schedule States, the physician is paid whatever is lower—the actual fee or the fee schedule. The reported fee is far more likely to be the actual fee paid.

The substantial variance in fees between States remains after adjusting for differences in the cost of living (see "Adjusted Fee"). In fact, the coefficient of variation for fee indices adjusted for cost-of-living differences exceeds that for the unadjusted fee indices. While States such as Alaska and Hawaii are exceptions, the cost-of-living adjustment had the general effect of increasing the differences between States in fees. Southern and Western States, which pay higher fees to begin with, had fees adjusted upward with the cost-of-living index. Several New England and Middle Atlantic States, with relatively low fees, had fee indices reduced by the cost-of-living index.

Each State's average fee (unadjusted for cost-of-living differences) relative to the national average can be seen in column 4. This national average is not a simple mean. Each State's average fee is weighted by physician expenditures in the State. Thus, average fees of States with large physician expenditures have greater weight than States with smaller expenditures. The index numbers show, for example, that average fees in Wyoming and Wisconsin exceed the national average by 24 percent, while fees in Colorado, Connecticut, and Maryland are 28 percent below the national average. Similar comparisons for fee indices adjusted for the cost of living can be seen in column 5.
### Table 6
Statewide fee indices, all procedures: 1979

| State                | Reimbursement system | Fee 1 | Adjusted fee 2 | Fee relative to national average 3 | Adjusted fee relative to national average 4 |
|----------------------|----------------------|-------|----------------|-----------------------------------|---------------------------------------------|
| Alaska               | CPR                  | $113.85 | $ 96.31        | 1.88                              | 1.59                                        |
| Nevada               | RVS                  | 96.01  | 108.04         | 1.22                              | 1.78                                        |
| Louisiana            | CPR                  | 84.83  | 96.88          | 1.04                              | 1.60                                        |
| Delaware             | CPR                  | 83.78  | 85.77          | 1.03                              | 1.42                                        |
| Oklahoma             | CPR                  | 83.55  | 90.96          | 1.02                              | 1.50                                        |
| Arkansas             | CPR                  | 82.85  | 90.28          | 1.02                              | 1.50                                        |
| Nebraska             | CPR                  | 80.36  | 85.99          | 1.03                              | 1.42                                        |
| Hawaii               | CPR                  | 79.97  | 65.60          | 0.83                              | 1.08                                        |
| New Mexico           | CPR                  | 79.51  | 84.56          | 1.05                              | 1.40                                        |
| South Carolina       | CPR                  | 78.50  | 84.54          | 1.05                              | 1.40                                        |
| North Carolina       | CPR                  | 77.82  | 84.12          | 1.06                              | 1.39                                        |
| Tennessee            | CPR                  | 77.60  | 89.75          | 1.11                              | 1.48                                        |
| Texas                | CPR                  | 76.41  | 85.94          | 1.12                              | 1.42                                        |
| Wyoming              | CPR                  | 75.16  | 82.47          | 1.14                              | 1.26                                        |
| Wisconsin            | CPR                  | 74.93  | 72.58          | 1.15                              | 1.20                                        |
| Utah                 | CPR                  | 74.14  | 75.75          | 1.16                              | 1.25                                        |
| California           | RVS                  | 73.32  | 75.70          | 1.17                              | 1.25                                        |
| Montana              | FS                   | 72.45  | 77.72          | 1.23                              | 1.28                                        |
| North Dakota         | CPR                  | 71.20  | 73.68          | 1.19                              | 1.21                                        |
| Idaho                | FS                   | 70.47  | 75.67          | 1.15                              | 1.23                                        |
| Kentucky             | CPR                  | 68.55  | 72.96          | 1.21                              | 1.20                                        |
| Minnesota            | CPR                  | 68.22  | 67.63          | 1.23                              | 1.20                                        |
| Indiana              | CPR                  | 67.89  | 71.46          | 1.12                              | 1.18                                        |
| Michigan             | FS                   | 65.94  | 85.19          | 1.09                              | 1.08                                        |
| Kansas               | CPR                  | 64.98  | 70.46          | 1.10                              | 1.16                                        |
| Alabama              | CPR                  | 64.69  | 73.93          | 1.11                              | 1.22                                        |
| Oregon               | FS                   | 62.81  | 64.85          | 1.04                              | 1.04                                        |
| Washington           | RVS                  | 61.84  | 63.22          | 1.02                              | 1.04                                        |
| Missouri             | FS                   | 61.22  | 65.34          | 1.01                              | 1.08                                        |
| Georgia              | CPR                  | 61.14  | 70.01          | 1.01                              | 1.16                                        |
| Iowa                 | CPR                  | 59.78  | 64.53          | 0.99                              | 1.07                                        |
| Ohio                 | CPR                  | 58.82  | 60.32          | 0.97                              | 1.00                                        |
| South Dakota         | CPR                  | 57.27  | 58.85          | 0.95                              | 0.97                                        |
| Illinois             | FS                   | 54.55  | 55.13          | 0.90                              | 0.91                                        |
| District of Columbia | RVS                  | 52.51  | 48.52          | 0.99                              | 0.80                                        |
| Virginia             | FS                   | 50.87  | 47.10          | 0.84                              | 0.78                                        |
| Mississippi          | FS                   | 50.62  | 59.90          | 0.91                              | 0.99                                        |
| Vermont              | FS                   | 50.23  | 53.31          | 0.88                              | 0.89                                        |
| Maine                | FS                   | 49.84  | 51.51          | 0.87                              | 0.88                                        |
| West Virginia        | FS                   | 46.83  | 50.04          | 0.83                              | 0.83                                        |
| New Hampshire        | FS                   | 46.52  | 47.77          | 0.87                              | 0.79                                        |
| Florida              | RVS                  | 45.52  | 52.54          | 0.87                              | 0.79                                        |
| Rhode Island         | FS                   | 45.06  | 43.60          | 0.74                              | 0.72                                        |
| New Jersey           | FS                   | 44.34  | 40.70          | 0.73                              | 0.67                                        |
| Colorado             | RVS                  | 43.85  | 44.73          | 0.72                              | 0.74                                        |
| Connecticut          | RVS                  | 43.86  | 42.37          | 0.72                              | 0.70                                        |
| Maryland             | FS                   | 43.58  | 42.74          | 0.72                              | 0.71                                        |
| Massachusetts        | FS                   | 41.34  | 34.22          | 0.68                              | 0.58                                        |
| New York             | RVS                  | 35.41  | 31.25          | 0.58                              | 0.52                                        |
| Pennsylvania         | FS                   | 21.56  | 21.68          | 0.36                              | 0.36                                        |

1 Fee is adjusted weighted average fee for each State.  
2 Adjusted fee is the weighted average fee for each State adjusted for the cost of living.  
3 The ratio of each State's fee to a weighted national average fee with the weights reflecting the physician expenditures.  
4 The ratio of each State's fee to a weighted national average fee, adjusted for the cost of living.

Of the 10 States with the largest Medicaid programs, 6 have fee indices that are below the national average. Four of these States are well below national average fees. The adjusted fee relative to the national average in these States is .67 for New Jersey, .58 for Massachusetts, .52 for New York, and .36 for Pennsylvania. On the other hand, relative to the national average, Texas (1.42), Wisconsin (1.20) and California (1.25) fees are well above.

**General practitioner—specialist differentials**

Several States pay higher fees to specialists than to general practitioners to encourage specialists' participation in Medicaid so as to increase access to those practitioners for Medicaid beneficiaries. General practitioner and specialist fee indices were developed employing 29 procedures for which fees were available for both general practitioners and specialists.
In the indices used to make GP-specialist comparisons, it was necessary to construct GP and specialist average prices based on the assumption that each provided the same mix of services. Since specialists typically provide more complicated services than GP's, specialists will have higher average prices even if States make no distinction in fees for individual procedures. To compare GP and specialist fees for similar service mixes, an adjusted GP fee index was constructed by applying specialist weights to GP fees.

In Table 7, general practitioner and specialist indices for each State are given. In column 1, the States that allow specialty differentials are listed. The large differences between the average general practitioner fees (column 2) and the average specialist fees (column 4) are due to the very different mixes of services. In column 3, general practitioner fee indices are developed as if general practitioners performed the same mix of services as specialists. In column 5, the ratio of the specialist fee indices to this constructed GP index is displayed. Twenty-two States show differentials favoring specialists, while 26 States show no difference. Two States did not report sufficient data to permit calculating these indices. Of the 22 States with specialty differentials, 10 States have fee differentials of less than 10 percent, and 6 States have differentials between 10 and 20 percent. Specialists are reimbursed 25 percent more than general practitioners in Georgia, Utah, and Wyoming; 26 percent more in Kentucky and Louisiana; and 30 percent more in South Carolina. Of the 10 largest States (in terms of program size), only New Jersey (14 percent), New York (4 percent), Texas (12 percent) and Wisconsin (7 percent) have higher rates for specialists. California, Illinois, Massachusetts, Michigan, Ohio, and Pennsylvania make no distinctions.

Medicaid and Medicare rates compared

Differences between Medicare and Medicaid fees have assumed considerable importance because of recurring proposals for the federalization of Medicaid. If Medicaid were to become a Federal program, it would be difficult to justify wide (if any) differences in rates of payment for different recipients for the same services. Thus the immediate cost of increasing Medicaid fees to Medicare levels is of current interest.

To assess the impact, Medicaid rates were compared to Medicare's. The fee data described above are used to develop aggregated Medicaid rates. For Medicare, fiscal year 1980 prevailing charge data were used. The rates for both programs therefore apply to the same time periods. These data consist of the maximum allowable charge (the 75th percentile unless adjusted by the Economic Index) for 100 physician procedures. Medicare prevailing charge data are available for each locality recognized by the program.

Medicaid and Medicare fee indices were created for both general practitioners and specialists. To develop these indices, 10 procedures were used for general practitioners and 22 procedures for specialists. Aggregation was again done across procedures by applying weights based on the frequency of performance times the relative value of the procedure.

In 34 States, Medicare develops separate prevailing charge data for 2 or more substate areas (localities). In 13 of these States, the Medicaid program also uses the Medicare localities for the purposes of physician reimbursement. To obtain statewide indices, aggregation was done across localities in both programs, using each locality's proportion of Medicare beneficiaries in the State as weights. Thus, the statewide fee indices are weighted averages of locality-specific indices.

The net result is that for each State for each program two statewide fee indices are created: general practitioners and specialists. In addition, fee indices for general practitioners and specialists were created for each locality for each program. The Medicaid-Medicare fee ratio for each of the statewide and locality-specific indices was then computed. These ratios are the basis of the comparisons between physicians' fees in the Medicare and Medicaid programs.

As explained earlier, the gap between Medicare and Medicaid fees is somewhat overestimated in the indices in Tables 8 and 9 for States that use fee schedules. In States where both Medicare and Medicaid use CPR systems, the reported fees for both programs are the maximum fees paid. As a result, the reported CPR rates overestimate average payment rates. This does not cause a problem when both programs use CPR systems. However, 25 State Medicaid programs use fee schedules that give fixed fees for each procedure. As mentioned earlier, in most fee schedule States, the physician is paid whatever is lower: the actual charge or the fee schedule. The reported fee is far more likely to be the actual fee paid. However, the differences between Medicare and Medicaid rates in the fee schedule States are substantial, and it seems reasonable to conclude that average Medicare payment rates exceed average Medicaid rates by wide margins in those States.

In Table 8, fee ratios for general practitioners and specialists are reported. For general practitioners the ratio of Medicaid to Medicare fee indices range from .38 in New Jersey to 1.13 in Nevada. The three large States, Pennsylvania, New York, and New Jersey pay less than half of Medicare prevailing charges. Seventeen other States pay less than 80 percent of Medicare rates. These include most of the States with the largest Medicaid program in terms of total expenditures. Ten States pay the same rates as Medicare.

Surprisingly, five States have higher general practitioner fee indices for Medicaid than for Medicare. This occurs for different reasons in different States:

- Nevada uses a fee schedule and does not compare with Medicare.
- Minnesota uses Medicare fees from one of its two carriers and thus pays more than Medicare for several procedures in different parts of the State.
- Delaware uses Medicare rates but does not recognize GP-specialty distinctions, with the result that some GP rates are higher for Medicaid.
## Table 7
General practitioner (GP) and specialty fee indices, all procedures: 1979

| State            | States with specialty differentials | GP fee index | GP fee index (specialty weights) | Specialty fee index | Ratio of specialty fee to GP fee (specialty weights) |
|------------------|-------------------------------------|--------------|----------------------------------|---------------------|-----------------------------------------------|
| Alabama          | X                                   | $31.68       | $ 64.58                          | $68.58              | 1.06                                          |
| Alaska           | X                                   | 49.47        | 103.09                           | 107.09              | 1.04                                          |
| Arkansas         | X                                   | 33.19        | 82.39                            | 85.72               | 1.04                                          |
| California       |                                    | 32.99        | 74.65                            | 74.65               | 1.00                                          |
| Colorado         |                                    | 21.54        | 43.63                            | 44.19               | 1.01                                          |
| Connecticut      |                                    | 19.64        | 42.18                            | 42.21               | 1.00                                          |
| Delaware         |                                    | 36.62        | 81.11                            | 81.11               | 1.00                                          |
| District of Columbia |                                | 23.27        | 45.05                            | 45.05               | 1.00                                          |
| Florida          |                                    | 20.81        | 43.66                            | 43.65               | 1.00                                          |
| Georgia          | X                                   | 24.38        | 47.94                            | 59.72               | 1.25                                          |
| Hawaii           |                                    | 31.87        | 66.09                            | 72.43               | 1.10                                          |
| Idaho            |                                    | 31.56        | 72.11                            | 72.11               | 1.00                                          |
| Illinois         |                                    | 22.40        | 51.95                            | 51.95               | 1.00                                          |
| Indiana 1        | X                                   | ---          | ---                              | ---                 | ---                                           |
| Iowa             | X                                   | 23.97        | 47.57                            | 49.24               | 1.04                                          |
| Kansas           |                                    | 27.97        | 64.71                            | 64.71               | 1.00                                          |
| Kentucky         |                                    | 25.76        | 51.54                            | 65.04               | 1.26                                          |
| Louisiana        | X                                   | 30.06        | 67.83                            | 85.36               | 1.26                                          |
| Maine            |                                    | 21.41        | 49.20                            | 49.03               | 1.00                                          |
| Maryland         |                                    | 19.98        | 44.45                            | 44.45               | 1.00                                          |
| Massachusetts    |                                    | 17.81        | 34.92                            | 34.92               | 1.00                                          |
| Michigan         |                                    | 26.80        | 66.29                            | 66.29               | 1.00                                          |
| Minnesota        |                                    | 30.24        | 64.37                            | 64.37               | 1.00                                          |
| Mississippi      |                                    | 22.23        | 50.00                            | 49.99               | 1.00                                          |
| Missouri         | X                                   | 23.77        | 61.51                            | 69.50               | 1.13                                          |
| Montana          |                                    | 32.68        | 75.91                            | 75.91               | 1.00                                          |
| Nebraska         | X                                   | 34.47        | 75.67                            | 81.40               | 1.08                                          |
| Nevada           |                                    | 41.79        | 93.73                            | 93.69               | 1.00                                          |
| New Hampshire    |                                    | 19.06        | 42.98                            | 42.98               | 1.00                                          |
| New Jersey       | X                                   | 17.40        | 38.86                            | 44.27               | 1.14                                          |
| New Mexico       | X                                   | 31.10        | 65.06                            | 76.48               | 1.18                                          |
| New York         | X                                   | 18.72        | 36.31                            | 37.85               | 1.04                                          |
| North Carolina   | X                                   | 31.71        | 75.19                            | 77.39               | 1.03                                          |
| North Dakota     |                                    | 30.30        | 65.49                            | 65.49               | 1.00                                          |
| Ohio             |                                    | 26.89        | 61.52                            | 61.52               | 1.00                                          |
| Oklahoma         | X                                   | 34.60        | 81.54                            | 84.73               | 1.04                                          |
| Oregon           |                                    | 26.35        | 56.85                            | 56.65               | 1.00                                          |
| Pennsylvania     |                                    | 11.02        | 20.49                            | 20.49               | 1.00                                          |
| Rhode Island     | 2                                   | ---          | ---                              | ---                 | ---                                           |
| South Carolina   | X                                   | 27.05        | 62.31                            | 81.19               | 1.30                                          |
| South Dakota     |                                    | 25.19        | 51.91                            | 51.91               | 1.00                                          |
| Tennessee        | X                                   | 28.42        | 64.34                            | 76.70               | 1.19                                          |
| Texas            | X                                   | 29.19        | 64.03                            | 71.95               | 1.12                                          |
| Utah             | X                                   | 27.93        | 62.59                            | 78.06               | 1.25                                          |
| Vermont          |                                    | 21.23        | 49.19                            | 49.19               | 1.00                                          |
| Virginia         |                                    | 21.27        | 48.52                            | 48.52               | 1.00                                          |
| Washington       |                                    | 27.86        | 59.51                            | 59.51               | 1.00                                          |
| West Virginia    |                                    | 18.98        | 44.74                            | 44.74               | 1.00                                          |
| Wisconsin        | X                                   | 30.01        | 64.93                            | 69.27               | 1.07                                          |
| Wyoming          | X                                   | 27.59        | 60.64                            | 75.61               | 1.25                                          |

1Indiana did not provide enough data to create a GP index.
2Rhode Island does not cover several procedures if performed by a GP.

- Alabama and Louisiana programs use different data sources for developing profiles and end up with a number of higher fees for general practitioners.

The fee ratios for specialists vary from .24 in New York to 1.1 in Nevada. Seven States—New York, New Jersey, Pennsylvania, Maryland, and Florida; and Rhode Island and Connecticut—pay less than half of Medicare rates for specialists. Half the States pay less than 80 percent of Medicare levels. This includes 8 of the 10 largest Medicaid programs (Michigan, Ohio, Illinois, Massachusetts, California, New Jersey, Pennsylvania, and New York). Three States have higher specialist indices for Medicaid than for Medicare. Nevada and Minnesota have higher GP indices for the reasons cited earlier. South Carolina reported much higher radiology fees for Medicaid than for Medicare, despite lower fees for medicine and pathology, and the aggregate index was higher for Medicaid as a result.
### Table 8
Medicaid to Medicare fee ratios, general practitioners and specialists: 1979

| Census region              | Medicaid reimbursement system | General practitioner ratio | Rank | Specialist ratio | Rank |
|----------------------------|-------------------------------|----------------------------|------|------------------|------|
| New England                |                               |                            |      |                  |      |
| Maine                      | FS                            | 0.69                       | 38   | 0.61             | 36   |
| New Hampshire              | FS                            | 0.69                       | 36   | 0.68             | 30   |
| Vermont                    | FS                            | 0.75                       | 34   | 0.68             | 31   |
| Massachusetts              | FS                            | 0.67                       | 39   | 0.56             | 41   |
| Rhode Island               | FS                            | 0.63                       | 41   | 0.44             | 45   |
| Connecticut                | RVS                           | 0.59                       | 44   | 0.48             | 44   |
| Middle Atlantic            |                               |                            |      |                  |      |
| New York                   | RVS                           | 0.42                       | 49   | 0.24             | 50   |
| New Jersey                 | FS                            | 0.38                       | 50   | 0.43             | 47   |
| Pennsylvania               | FS                            | 0.45                       | 48   | 0.29             | 49   |
| East North Central         |                               |                            |      |                  |      |
| Ohio                       | CPR                           | 0.87                       | 28   | 0.61             | 35   |
| Indiana                    | CPR                           | 1.00                       | 6    | 1.00             | 4    |
| Illinois                   | FS                            | 0.60                       | 42   | 0.61             | 37   |
| Michigan                   | FS                            | 0.77                       | 32   | 0.79             | 25   |
| Wisconsin                  | CPR                           | 1.00                       | 6    | 1.00             | 4    |
| West North Central         |                               |                            |      |                  |      |
| Minnesota                  | CPR                           | 1.09                       | 3    | 1.02             | 2    |
| Iowa                       | CPR                           | 1.00                       | 6    | 1.00             | 4    |
| Missouri                   | FS                            | 0.51                       | 47   | 0.57             | 40   |
| North Dakota               | CPR                           | 0.97                       | 18   | 0.98             | 16   |
| South Dakota               | CPR                           | 0.92                       | 22   | 0.88             | 22   |
| Nebraska                   | CPR                           | 1.00                       | 5    | 1.00             | 4    |
| Kansas                     | CPR                           | 0.64                       | 40   | 0.76             | 27   |
| South Atlantic             |                               |                            |      |                  |      |
| Delaware                   | CPR                           | 1.13                       | 2    | 0.99             | 15   |
| Maryland                   | FS                            | 0.59                       | 43   | 0.43             | 48   |
| District of Columbia       | RVS                           | 0.76                       | 33   | 0.59             | 39   |
| Virginia                   | FS                            | 0.58                       | 45   | 0.65             | 33   |
| West Virginia              | FS                            | 0.70                       | 35   | 0.95             | 34   |
| North Carolina             | CPR                           | 1.00                       | 6    | 1.00             | 4    |
| South Carolina             | CPR                           | 0.87                       | 27   | 1.02             | 3    |
| Georgia                    | CPR                           | 0.98                       | 16   | 0.77             | 26   |
| Florida                    | RVS                           | 0.56                       | 46   | 0.44             | 46   |
| East South Central         |                               |                            |      |                  |      |
| Kentucky                   | CPR                           | 0.98                       | 17   | 0.98             | 14   |
| Tennessee                  | CPR                           | 0.90                       | 25   | 0.90             | 21   |
| Alabama                    | CPR                           | 1.06                       | 4    | 0.60             | 38   |
| Mississippi                | FS                            | 0.88                       | 26   | 0.65             | 32   |
| West South Central         |                               |                            |      |                  |      |
| Arkansas                   | CPR                           | 0.09                       | 24   | 0.92             | 19   |
| Louisiana                  | CPR                           | 1.05                       | 5    | 0.98             | 17   |
| Oklahoma                   | CPR                           | 1.00                       | 6    | 1.00             | 4    |
| Texas                      | CPR                           | 1.00                       | 6    | 1.00             | 4    |
| Mountain                   |                               |                            |      |                  |      |
| Montana                    | FS                            | 0.79                       | 31   | 0.72             | 29   |
| Idaho                      | FS                            | 0.93                       | 21   | 0.85             | 23   |
| Wyoming                    | CPR                           | 1.00                       | 6    | 1.00             | 4    |
| Colorado                   | RVS                           | 0.91                       | 23   | 0.51             | 43   |
| New Mexico                 | CPR                           | 0.94                       | 20   | 0.94             | 18   |
| Utah                       | CPR                           | 1.00                       | 6    | 1.00             | 4    |
| Nevada                     | RVS                           | 1.13                       | 1    | 1.13             | 1    |
| Pacific                    |                               |                            |      |                  |      |
| Washington                 | RVS                           | 0.87                       | 29   | 0.73             | 28   |
| Oregon                     | FS                            | 0.86                       | 30   | 0.93             | 24   |
| California                 | RVS                           | 0.69                       | 37   | 0.54             | 42   |
| Alaska                     | CPR                           | 1.00                       | 6    | 1.00             | 4    |
| Hawaii                     | CPR                           | 0.98                       | 19   | 0.90             | 20   |
Comparisons of Medicaid and Medicare fee ratios were also made for each Medicare locality in 15 of the largest States. In general, the intrastate comparisons showed that Medicaid fees in major cities are lower relative to Medicare than they are for the State as a whole. This is true for Los Angeles, Seattle, Miami, Chicago, Detroit, Boston, Nevada, New York City, Philadelphia, and Pittsburgh. There are exceptions, notably San Francisco, Atlanta, and cities in Wisconsin and Texas. In most cases, this pattern is explained by the fact that many Medicaid programs use statewide fee schedules, while Medicare establishes payment profiles for multiple localities within a State.

The result is that Medicaid rates relative to Medicare are higher in urban areas than in rural. When Medicaid rates do not vary within the State, Medicaid-Medicare ratios will be higher in rural areas and lower in urban areas. This pattern does not occur in Georgia, Indiana, Texas, and Wisconsin, where Medicaid programs recognize multiple localities. In Georgia, even though the statewide Medicaid fees are less than Medicare's, fees in Atlanta are higher than in other areas in the State.

Summary

This article has presented considerable information on how Medicaid programs pay for physician services. In addition, detailed data on rates of payment were provided. Half the States were found to use a version of Medicare's CPR method and half fee schedules. However, States with fee schedules account for 68 percent of all Medicaid expenditures. Fee schedule States were found to increase their fees much less frequently than CPR States. However, a majority of the CPR States placed constraints on their rate of payment, reducing them below Medicare levels.

Data were presented, showing that fees vary considerably across States. Cost-of-living adjustments had the effect of increasing rather than reducing the variation between States. Most of the large Medicaid programs had large average fees relative to the other States. Medicaid fees were then compared with Medicare rates within each State and showed substantial discrepancies. For example, 12 States, including Massachusetts, New York, New Jersey, Pennsylvania, and California, reimbursed specialists at rates less than 60 percent of Medicare fees (see Table 8).

Medicaid and Medicare fee indices were used to estimate the cost of raising Medicaid fees to Medicare levels. No behavioral responses by physicians were assumed; this probably leads to a serious overestimate of the effect of raising fees on Medicaid expenditures.

Using HCFA's estimates of 1983 expenditures for each service, three estimates of the expenditures resulting from an increase in Medicaid fees to Medicare levels were made, assuming that all services are provided by general practitioners; all services are provided by specialists; half of physician services are provided by general practitioners and half by specialists. The first two assumptions permit the obtaining of upper and lower bounds on the expenditure increase.

The results are shown in Table 9. If all services were provided by general practitioners, payments to physicians would increase by 39.5 percent. If all services were provided by specialists, payments to physicians would increase by 71.9 percent. Under the more realistic assumption, that half the services are provided by general practitioners and half by specialists, expenditures increase by 55.7 percent. With this assumption, national (Federal and State Medicaid) payments to physicians in FY 1983 would have increased from $3.0 billion to $4.7 billion. Payment would have been increased greater in the States with the lower relative fees. For example, payments to physicians would increase from $209.4 million to $693.7 million in New York, from $60.3 million to $173.4 million in Pennsylvania, and from $63.3 million to $155.8 million in New Jersey.

Whether or not total costs increase in response to higher physician fees depends on the behavior of both physicians and hospitals. As pointed out in the Introduction, low rates of payment in States with large urban areas appear to have led to low rates of private physician participation and to a reliance on outpatient departments for ambulatory services. These departments are often in hospitals with excess capacity and are also often expensive teaching facilities (Hadley, 1981). Inpatient admissions appear to be higher in these States. If fee increases lead to greater participation by private physicians, payments to physicians will increase; however, overall costs may fall if hospital outpatient and inpatient services decline. Even the effect on physician payments may be muted if the newly participating physicians are less likely to provide return visits, diagnostic services, and so forth.

3These indices are not shown but are available from the author.

4HCFA's estimates were not available for laboratory and X-ray services. To estimate outlays for these services, we assumed that laboratory and X-ray expenditures are the same percentage of physician expenditures as they were in 1979. The estimated lab and X-ray expenditures are added to the fiscal year 1983 physician expenditures.
Table 9  
Estimates of changes in Medicaid expenditures for physician services assuming no behavioral responses

| State                  | 1983 estimated expenditures for physician, lab, and X-ray services | Assumption (1) general practitioners | Assumption (2) specialists | Assumption (3) average |
|------------------------|--------------------------------------------------------------------|---------------------------------------|---------------------------|------------------------|
| **Total**              | $3,039.7                                                           | $4,239.0                              | $5,226.1                  | $4,734.2               |
| Alabama                | $46.1                                                              | $43.5                                 | 78.3                      | 59.9                   |
| Alaska                 | 8.5                                                                | 8.5                                   | 8.5                       | 8.5                    |
| Arkansas               | 45.2                                                               | 50.1                                  | 49.1                      | 49.6                   |
| California             | 1796.8                                                             | 1,150.8                               | 1,477.7                   | 1,314.2                |
| Colorado               | 29.9                                                               | 32.6                                  | 59.0                      | 45.8                   |
| Connecticut            | 17.6                                                               | 29.9                                  | 38.3                      | 33.1                   |
| Delaware               | 67.7                                                               | 59.8                                  | 68.7                      | 64.3                   |
| District of Columbia   | 21.3                                                               | 27.8                                  | 35.8                      | 31.3                   |
| Florida                | 43.1                                                               | 77.3                                  | 97.9                      | 87.6                   |
| Georgia                | 65.5                                                               | 66.8                                  | 84.7                      | 75.7                   |
| Hawaii                 | 22.9                                                               | 23.8                                  | 25.3                      | 24.6                   |
| Idaho                  | 6.5                                                                | 7.0                                   | 7.7                       | 7.3                    |
| Illinois               | 133.8                                                              | 223.0                                 | 220.3                     | 221.6                  |
| Indiana                | 30.0                                                               | 30.0                                  | 30.0                      | 30.0                   |
| Iowa                   | 28.7                                                               | 28.7                                  | 28.7                      | 28.7                   |
| Kansas                 | 16.2                                                               | 25.2                                  | 21.4                      | 23.4                   |
| Kentucky               | 57.4                                                               | 58.6                                  | 57.9                      | 58.2                   |
| Louisiana              | 54.4                                                               | 52.6                                  | 55.7                      | 54.1                   |
| Maine                  | 13.1                                                               | 19.1                                  | 21.6                      | 20.3                   |
| Maryland               | 29.1                                                               | 48.1                                  | 67.3                      | 58.2                   |
| Massachusetts          | 63.1                                                               | 93.8                                  | 112.4                     | 103.1                  |
| Michigan               | 216.9                                                              | 261.8                                 | 273.9                     | 277.6                  |
| Minnesota              | 48.1                                                               | 40.6                                  | 55.6                      | 48.1                   |
| Mississippi            | 35.0                                                               | 39.9                                  | 53.5                      | 48.7                   |
| Missouri               | 24.7                                                               | 48.8                                  | 43.2                      | 46.0                   |
| Montana                | 10.7                                                               | 13.7                                  | 14.8                      | 14.3                   |
| Nebraska               | 12.6                                                               | 12.6                                  | 12.6                      | 12.6                   |
| Nevada                 | 10.7                                                               | 9.4                                   | 9.4                       | 9.4                    |
| New Hampshire          | 6.7                                                                | 8.3                                   | 8.4                       | 8.4                    |
| New Jersey             | 63.3                                                               | 165.3                                 | 146.2                     | 155.8                  |
| New Mexico             | 16.3                                                               | 17.5                                  | 17.4                      | 17.4                   |
| New York               | 209.4                                                              | 500.5                                 | 886.8                     | 693.7                  |
| North Carolina         | 50.1                                                               | 50.1                                  | 50.1                      | 50.1                   |
| North Dakota           | 5.2                                                                | 5.4                                   | 5.3                       | 5.8                    |
| Ohio                   | 83.5                                                               | 96.4                                  | 136.5                     | 116.4                  |
| Oklahoma               | 38.8                                                               | 38.8                                  | 38.8                      | 38.8                   |
| Oregon                 | 38.6                                                               | 42.4                                  | 44.3                      | 43.3                   |
| Pennsylvania           | 60.3                                                               | 135.2                                 | 211.5                     | 173.4                  |
| Rhode Island           | 7.5                                                                | 12.0                                  | 16.8                      | 14.4                   |
| South Carolina         | 36.7                                                               | 42.0                                  | 36.0                      | 39.0                   |
| South Dakota           | 4.0                                                                | 4.3                                   | 4.5                       | 4.4                    |
| Tennessee              | 58.8                                                               | 65.4                                  | 65.4                      | 65.4                   |
| Texas                  | 218.4                                                              | 218.4                                 | 218.4                     | 281.4                  |
| Utah                   | 11.8                                                               | 11.8                                  | 11.8                      | 11.8                   |
| Vermont                | 8.1                                                                | 10.7                                  | 11.9                      | 11.3                   |
| Virginia               | 44.0                                                               | 76.2                                  | 68.0                      | 72.1                   |
| Washington             | 40.6                                                               | 46.9                                  | 55.4                      | 51.7                   |
| West Virginia          | 2.1                                                                | 2.9                                   | 3.3                       | 3.1                    |
| Wisconsin              | 61.9                                                               | 31.9                                  | 81.9                      | 81.9                   |
| Wyoming                | 2.3                                                                | 2.3                                   | 2.3                       | 2.3                    |

National percent increase  

|                        | 39.5 | 71.9 | 55.7 |
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