WCRI Medical Price Index for Workers' Compensation, Eighth Edition (MPI-WC)

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Of course, any errors that remain in the report are the responsibility of the authors.

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INTRODUCTION AND HOW TO USE THIS REPORT

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This is the eighth edition of the Workers Compensation Research Institute (WCRI) annual series that benchmarks the actual prices paid for medical professional services delivered to injured workers across states. Increasing medical costs have been a focus of public policymakers and system stakeholders in recent policy debates in many states. This study focuses on medical professional prices, a key component of medical costs. To help policymakers and stakeholders conduct meaningful comparisons of prices paid across states, and to monitor the price trends in relation to changes in fee schedules, this annual study creates an index for the actual prices paid for professional services based on a marketbasket of the most commonly used services for treating injured workers. Other WCRI studies examine the quantity and mix of medical care;[1] facility payments to ambulatory surgery centers (ASCs);[2,3] hospital outpatient payments related to surgeries;[4] hospital payments for outpatient services unrelated to surgeries and for inpatient services;[1] prevalence of and payments for physician-dispensed drugs;[5,6] use of opioids;[7,8] and the differences in prices paid for professional services and hospital outpatient services between workers' compensation and group health.[9,10] Together with this annual study, WCRI research helps policymakers and stakeholders understand the overall costs associated with medical care for treating injured workers.

This report is an update to the seventh edition of this annual study.[11] Like the previous edition, this report includes 31 large states that represent 85 percent of the workers' compensation benefits paid in the United States.[12] In this eighth edition, we focus on the interstate index comparisons for 2014 and 2015, and expand the growth rate analysis to an eight-year span from 2008 to 2015. The key lessons in this edition are consistent

[1] Belton, Dolinschi, Radeva, Rothkin, Savych, Telles, and Yang. 2016. *CompScope™ Medical Benchmarks, 17th Edition.* 16 vols. Cambridge, MA: Workers Compensation Research Institute.

[2] Savych. 2016. *Comparing Payments to Ambulatory Surgery Centers and Hospital Outpatient Departments, 2nd Edition.* Cambridge, MA: Workers Compensation Research Institute.

[3] Savych. 2016. *Payments to Ambulatory Surgery Centers, 2nd Edition.* Cambridge, MA: Workers Compensation Research Institute.

[4] Fomenko and Yang. 2016. *Hospital Outpatient Payment Index: Interstate Variations and Policy Analysis, 5th Edition.* Cambridge, MA: Workers Compensation Research Institute.

[5] WCRI studies monitoring physician dispensing reforms in various states, for example:
Wang, Thumula, and Liu. 2016. *Monitoring Connecticut Reforms on Physician Dispensing.* Cambridge, MA: Workers Compensation Research Institute.

[6] Wang, Thumula, and Liu. 2016. *Physician Dispensing of Higher-Priced New Drug Strengths and Formulation.* Cambridge, MA: Workers Compensation Research Institute.

[7] Thumula, Wang, and Liu. 2016. *Interstate Variations in Use of Opioids, 3rd Edition.* Cambridge, MA: Workers Compensation Research Institute.

[8] Wang. 2016. *Longer-Term Use of Opioids, 3rd Edition.* Cambridge, MA: Workers Compensation Research Institute.

[9] Fomenko. 2013. *Comparing Workers' Compensation and Group Health Hospital Outpatient Payments.* Cambridge, MA: Workers Compensation Research Institute.

[10] Fomenko and Victor. 2013. *A New Benchmark for Workers' Compensation Fee Schedules: Prices Paid by Commercial Insurers?* Cambridge, MA: Workers Compensation Research Institute.

[11] Yang and Fomenko. 2015. *WCRI Medical Price Index for Workers' Compensation, Seventh Edition (MPI-WC).* Cambridge, MA: Workers Compensation Research Institute.

[12] The states included in this study are Arkansas, Arizona, California, Colorado, Connecticut, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New York, North Carolina, Oklahoma, Oregon, Pennsylvania, South Carolina, Tennessee, Texas, Virginia, and Wisconsin. However, Mississippi, Nebraska, and Oregon were excluded from the 2015 analysis due to an insufficient number of observations in 2015 (half-year) to support the analysis.

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with what was previously reported. In the discussion of substantial price changes, we lead with the discussion of the change in prices paid for professional medical services from 2013 to 2015 in Kentucky, the only study state with major fee schedule changes after June 2014. Kentucky discontinued the use of relative values from Medicare's resource-based relative value scale (RBRVS) for its professional fee schedule. Following this change, the overall prices paid for professional services in Kentucky increased 19 percent from 2013 to 2015. We also retain the discussion of substantial price changes following major fee schedule changes in study states with such changes from 2008 to 2014 for the readers' convenience.

OBJECTIVES OF THE STUDY

This study focuses on the interstate comparisons of levels and trends in prices paid for medical professional services. The objectives of this study are twofold. First, it helps policymakers and stakeholders conduct meaningful comparisons of prices across states and track the price changes in their states. Specifically, it informs the readers on the following topics: how prices paid for medical professional services provided to injured workers in their state compare with other states, how prices in their state are changing, and whether price growth in their state is part of a national phenomenon or unique to their state. The tables and figures in this report meet this objective. Second, this study discusses the price comparison results and price trends in relation to the principal policy tool for regulating prices—fee schedules.[13] The discussion also takes into consideration differences in network participation, another important mechanism that can affect prices paid. The two discussion sections (pages 13–23) accomplish this objective. The *conceptual framework* underlying this discussion is as follows.

Workers' compensation prices are regulated by statutory regulations (i.e., fee schedules) in most states. In states with specified workers' compensation fee schedule rates, workers' compensation prices are either paid at the statutory fee schedule rate or a negotiated rate where the fee schedule is often used as a benchmark.[14] In states with no specified fee schedule rates, workers' compensation prices for out-of-network services are often paid at what the provider charges or some notion of usual and customary charges in the area, while in-network providers are paid at a negotiated rate. Therefore, fee schedule regulations (i.e., the policy choice) and network contracts are the main factors shaping workers' compensation prices and hence the main focus in the discussion of price results in this study.

Medical costs can be seen as a function of price and utilization. While fee schedule and network contracts can affect prices, other policy initiatives can affect utilization of medical services. For example, changes in treatment guidelines, utilization review, and provider choice policies can have direct and indirect effects on utilization and treatment patterns. Some fee schedule initiatives that change the price differentials between different types of services can also affect the mix of services provided and billed. Furthermore, some policy changes in the structure of income benefits may affect the duration of disability benefits and the duration of medical care, which may have an indirect effect on utilization patterns and mix of services. All these factors can affect medical costs at the aggregate level, and often these different types of policy initiatives can be

[13] A fee schedule sets payment rates for medical services provided in workers' compensation, usually with a list of procedure codes and the associated payment amounts. A fee schedule has many design elements (for further explanation, see the discussion in a later section, "Discussion of Substantial Price Changes," on page 17). In this study we use the term *fee schedule changes* to mean changes in any of the design elements as well as any changes in the coding list or billing rules. We use the term *fee regulation type* to identify a state with or without a fee schedule.

[14] The negotiated rates are often discounted prices below the fee schedule rates; sometimes they can be above the fee schedule rates (if the regulation allows), especially when the workers' compensation fee schedule rates in a state are substantially lower than the prices paid by other large payors (such as group health and Medicare).

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implemented simultaneously. To isolate the price effect from the utilization effect of the policy initiatives, we used a marketbasket approach to control for the mix of services across states and years in this study. In other words, when reporting prices, we do not allow utilization to vary. Therefore, the price comparison results and price trends reported in this study mainly measure the effects of fee schedule and network differences on prices. Other WCRI studies examine the effects of policy initiatives on utilization of medical services.[15]

SCOPE OF THE STUDY

WCRI developed the Medical Price Index for Workers' Compensation (MPI-WC) for common professional services to aid policymakers and stakeholders in identifying states where medical prices are unusually high or low or are rising more or less rapidly. This study focuses on prices paid for professional services that are billed by physicians, physical therapists/occupational therapists, and chiropractors.[16] Therefore, the medical price indices exclude services billed by hospitals or ambulatory surgery centers and services billed for durable medical equipment as well as pharmaceuticals.[17] Professional services typically make up 42 percent of total workers' compensation medical expenditures in workers' compensation in a given state (Belton et al., 2016b).

The medical price indices compare prices paid across study states and show the trends within each state. The indices measure prices actually paid and take into account any network or other discounts. Indices are reported for each state on a statewide basis and for major groups of medical services, including evaluation and management, physical medicine, major surgery, pain management injections, major radiology, minor radiology, neurological and neuromuscular testing, and emergency care. Together, these eight groups typically comprise 81 percent of total medical payments for professional services across states (Belton et al., 2016b).[18]

This eighth edition covers 31 large states that represent 85 percent of the workers' compensation benefits paid in the United States. These 31 study states are Arizona, Arkansas, California, Colorado, Connecticut, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New York, North Carolina, Oklahoma, Oregon, Pennsylvania, South Carolina, Tennessee, Texas, Virginia, and Wisconsin. The study states are geographically diverse and represent nearly all industries and a variety of regulation choices for professional service payment under workers' compensation. Other states are not included primarily because the data do not consistently have sufficient cell sizes for those states over time for all service groups analyzed in this study. For each study state, the indices track medical prices from calendar year 2008 through 2015.[19] Also, this study provides snapshots of interstate comparisons on medical price indices for the two most recent study years, 2014 and 2015.

[15] These studies include (but are not limited to) the annual CompScope™ and CompScope™ Medical Benchmarks study series (e.g., Belton et.al., 2016a and 2016b), *Impact of Treatment Guidelines in Texas* (Borba and Yee, 2012), *The Impact of Provider Choice on Workers' Compensation Costs and Outcomes* (Victor, Barth, and Neumark, 2005), *Why Surgery Rates Vary* (Yee, Pizer, and Fomenko, 2015), etc.

[16] Medical professional services include both professional and technical components of diagnostic tests for applicable services among the eight service types covered in this study.

[17] Medical professional services provided in a hospital setting but billed by physicians, physical therapists/occupational therapists, and chiropractors are included in this study. Medical professional services billed by hospitals are excluded.

[18] For a brief description of these service groups refer to Table TA.1.

[19] 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Three study states (Mississippi, Nebraska, and Oregon) were excluded from the trend analysis from 2008 to 2015 because of insufficient sample sizes in 2015 (half-year).

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OUTLINE OF KEY LESSONS

This outline summarizes the key lessons from interstate index comparisons and growth rate comparisons across states. A more extensive discussion can be found in the section "Discussion of Key Lessons," beginning on page 13.

LESSONS FROM INTERSTATE INDEX COMPARISONS

- Prices paid for a similar set of professional services varied significantly across states, ranging from 31 percent below the 31-state median in Florida to 138 percent above the 31-state median in Wisconsin in 2014 (see Figure 1). The price index in 2015 shows similar results (see Figure 2).
- States with no fee schedules for professional services had higher prices paid compared with states with fee schedules—36 to 154 percent higher than the median of the study states with fee schedules in 2014 (see Figure 1 and Table 1). Similar results were observed in 2015 (see Figure 2 and Table 2).

LESSONS FROM GROWTH RATE COMPARISONS ACROSS STATES

- Growth in prices paid for professional services exhibited tremendous variation across states, spanning between negative 18 percent in Illinois[20] and positive 30 percent in Wisconsin over the time period from 2008 to 2015 (see Figure 3).[21]
- Most states with no fee schedules experienced faster growth in prices paid for professional services compared with states with fee schedules—the median growth rate among these non-fee schedule states was 26 percent from 2008 to 2015 compared with the median growth rate of 7 percent among the fee schedule states (see Figure 4 and Table 5). [22,23]

OUTLINE OF SUBSTANTIAL PRICE CHANGES

This outline summarizes the substantial changes in prices paid for professional medical services in the study states. A more extensive discussion can be found in the section "Discussion of Substantial Price Changes," beginning on page 17.

- Five study states (Arizona, Illinois, Kentucky, Massachusetts, and Texas) had substantial changes (i.e., an increase or a decrease of 10 percent or more) in overall prices paid following major fee schedule changes during the study period (see page 18).

[20] The price trend in Illinois is discussed in a later section, "Discussion of Substantial Price Changes," beginning on page 17.

[21] Three study states (Mississippi, Nebraska, and Oregon) were excluded from the trend analysis for 2008 to 2015 because of insufficient sample sizes in 2015 (half-year). In the "Statistical Appendix," a bar chart capturing growth in overall prices paid for 31 states between 2008 and 2014 is presented and shows similar results to the 28-state discussion in this section (see Figure SA.1).

[22] Two non-fee schedule states, Iowa and New Jersey, had slower growth in prices paid than the other study states without fee schedules. Results in these two states are discussed in the section "Lessons from Growth Rate Comparisons across States," beginning on page 15.

[23] To compare the price growth between states with fee schedules and the states without, we restricted our attention to the 22 study states with no major fee schedule changes from 2008 to 2015 because including states with major fee schedule changes in this analysis would likely distort the results. The price trends in the states with major fee schedule changes are discussed in a later section, "Discussion of Substantial Price Changes," beginning on page 17.

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- Many study states had substantial price changes at the service-type level. Among these states, California had a major change in the *basis* of its fee schedule that resulted in a substantial shift in relative prices paid for different types of services (see page 22). All other states' substantial price changes in each service type from 2008 to 2015 are summarized in Table 16.

HOW TO USE THIS BENCHMARKING REPORT

The MPI-WC study offers a rich and detailed set of benchmarks, which are organized in an easily accessible format.

- The short narrative scope of the study explains what is covered in this report, including the types of providers and services, the study states and time span, and the focus of the report.
- The section "Discussion of Key Lessons" provides a detailed discussion of comparisons of prices paid for professional services across states and over time.
- The section "Discussion of Substantial Price Changes" provides a detailed discussion of substantial changes in prices paid for professional medical services following major fee schedule changes.
- For those who want to see the medical price index at a glance, Tables A.1 and A.2 show the index values overall as well as for each service group across the 31 study states in 2014 and 2015.
- For those who want to view the graphic presentations of interstate comparisons, there are bar charts for the overall medical price index as well as a price index for each type of service in Figures A.1–A.18.
- For those seeking to understand the overall price growth across all study states, Figure B.1 shows the trends in the overall price index across 31 study states from 2008 to 2015.
- For those who want to focus on the price growth in a specific state, Figures B.2–B.32 highlight the price trends in each of the 31 study states and allow one to compare the trends in the target state with those in other states.[24] In the state-specific notes to these graphs, readers can also find summaries of major fee schedule changes.
- For those who want to compare the price growth by service group in different states, Tables B.1–B.8 summarize the trends of prices paid for each of the eight types of services across all study states. Table 16 further provides a summary of substantial price changes in each service type across all study states.
- For those who want to drill down on the price trend in a specific state, the charts and tables in Figures C.1–C.31 provide the changes in prices paid by service group in each of the 31 study states from 2008 to 2015, along with state-specific summaries of major fee schedule changes in the notes to these graphs. We also provide longer-term price trends from 2002 to 2015 for the 25 states covered in the earlier editions of this study series in the "Statistical Appendix" Table SA.1.
- All tables and graphs may be accessed via links in the "List of Figures and Tables" and the "Quick Reference Guide to Figures and Tables."
- Supplemental figures and tables are presented in the "Statistical Appendix."
- The data and methods are fully described in the "Technical Appendix." This report also contains a short summary of the "Technical Appendix" entitled "Data and Methods."

Note: Each page of this report contains a "Back to Previous View" button that allows the reader to click

[24] The Figure B series contains numbers for all 31 study states. The numbers in three study states (Mississippi, Nebraska, and Oregon) are available from 2008 to 2014 because of insufficient sample sizes in 2015 (half-year). The other 28 states have numbers available from 2008 to 2015.

on a link to another section and then return to the original page, eliminating the need for bookmarking.

WCRI MPI-WC: State-Level Measure of Workers' Compensation Price Inflation

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The method for developing this Medical Price Index for Workers' Compensation is similar to that of the Consumer Price Index for medical care services (CPI-M), published by the U.S. Department of Labor's Bureau of Labor Statistics (BLS). Both price indices measure changes in price while holding utilization constant over the period studied.

The WCRI MPI-WC is an in-depth, independent measure that benchmarks workers' compensation price inflation for most commonly used medical professional services for treating injured workers. The BLS CPI-M includes the prices of all medical professional services provided to the U.S. population. Many types of services have little or no relevance for tracking medical prices for the care provided to injured workers. The WCRI MPI-WC focuses only on those medical professional services that are most commonly provided to injured workers—largely related to diagnosis and treatment of trauma and orthopedic conditions.

The WCRI MPI-WC is a state-level price index, including all metropolitan areas and rural areas, while the BLS CPI-M for professional services is reported for the national level and the regional level based on selected metropolitan areas. Figure 5 shows that price growth under workers' compensation systems exhibit tremendous variation across states, which is likely related to differences in state workers' compensation fee regulations—the principal policy tool for regulating prices—and network participation (see the conceptual framework in the earlier section "Objectives of the Study").

Furthermore, since workers' compensation prices paid in the fee schedule states are shaped by the fee schedule regulations and, in the states without fee schedules, arise out of the negotiations between workers' compensation insurers and providers, there is no reason to expect workers' compensation prices to be similar to prices paid by other types of payors in the local markets. In particular, previous WCRI studies showed that workers' compensation typically paid higher prices than group health.[25,26] Hence, the WCRI MPI-WC better captures the inflation rates in medical professional services specific to workers' compensation as compared with more general measures of medical price inflation.

As shown in Figure 5, the median growth in the WCRI MPI-WC among the study states with fee schedules was 7 percent from 2008 to 2015, with 1 percent average annual growth. The median growth in the WCRI MPI-WC among the study states without fee schedules was 23 percent during this period, with an average annual growth rate of 3 percent. The growth in the BLS CPI-M for professional services at the national level was 16 percent from 2008 to 2015, with 2.2 percent average annual growth. The table for Figure 5 also includes an alternative measure of price inflation for medical professional services published by BLS—the Producer Price Index (PPI) for physician care. Unlike the BLS CPI-M which is based on household out-of-pocket expenses for medical services, the BLS PPI for physician care is computed based on payments received by physicians. From 2009 to 2015, the growth in the BLS PPI for professional services at the national level was 6 percent, with 1 percent average annual growth (see the table for Figure 5).

[25] Fomenko and Victor. 2013. *A New Benchmark for Workers' Compensation Fee Schedules: Prices Paid by Commercial Insurers?* Cambridge, MA: Workers Compensation Research Institute.

[26] Fomenko. 2013. *Comparing Workers' Compensation and Group Health Hospital Outpatient Payments.* Cambridge, MA: Workers Compensation Research Institute.

DISCUSSION OF KEY LESSONS

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This section provides a detailed discussion of comparisons of prices paid for professional medical services across states and over time. An outline summarizing the main points of this discussion can be found in the earlier section "Introduction and How to Use This Report." The following two major topics are addressed here:

- Lessons from interstate index comparisons
- Lessons from growth rate comparisons across states

The discussion of these topics focuses on the experience of states with different fee regulation types (i.e., states with fee schedules versus states without fee schedules) and the comparative results across states. We describe the observed patterns of variation in medical price indices for professional services across states and by different fee regulation types. Then we further examine the significance of the observed patterns using a linear regression model of an association between the levels of prices paid for professional services and the fee regulation type, adjusted for network participation rates. The conceptual framework underlying the focus of the discussion and the choice of variables in the statistical analyses is explained in the earlier section "Introduction and How to Use This Report." Note that in the second topic, we focus on states without major fee schedule changes only, since including states with major fee schedule changes in the descriptive and regression analyses of the relationship between the fee regulation types and price growth rates would distort the results characterizing this relationship.[1]

This report is an update to the seventh edition of this annual study with an additional year of data in 2015. In this eighth edition, the interstate index comparisons focus on 2014 and 2015, and the growth rate analysis is expanded to an eight-year span from 2008 to 2015. The key lessons in this eighth edition are consistent with what was previously reported.

LESSONS FROM INTERSTATE INDEX COMPARISONS

- **Prices paid for a similar set of professional services for treating injured workers varied significantly across states** (see Figure 1 and Table 1). In 2014, the overall level of prices paid ranged from 31 percent below the 31-state median in Florida to 138 percent above the 31-state median in Wisconsin. In other words, the overall level of prices paid in the highest-price study state, Wisconsin, was more than three times the level in Florida, the lowest-price study state. The price index in 2015 for 28 states shows similar results (see Figure 2 and Table 2).[2,3]

[1] Six study states with major fee schedule changes are discussed separately in the next section, "Discussion of Substantial Price Changes." These states are Arizona, California, Illinois, Kentucky, Massachusetts, and Texas.

[2] Three study states (Mississippi, Nebraska, and Oregon) were excluded in 2015 because of insufficient sample sizes in 2015 (half-year).

[3] Note that the interstate variation in prices paid for medical professional services in workers' compensation had little correlation with the geographic differences in the costs of maintaining a physician's office, which can be measured by the Medicare physician fee schedule geographic practice cost indices (GPCIs). Table D.1 shows the GPCIs for practice expense (PE), physician work (Work), and malpractice insurance (MP) as of April 2015. An earlier WCRI study, *A New Benchmark for Workers' Compensation Fee Schedules: Prices Paid by Commercial Insurers?* (Fomenko and Victor, 2013), also found that workers' compensation prices were not well-related to the interstate differences in provider expenses. Analysis in this study shows that fee schedule regulations and network contracts are the main factors shaping workers' compensation prices.

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- **States with no fee schedules for professional services had higher prices paid than states with fee schedules** (Figure 1). Six study states had no fee schedules in 2014 and 2015, namely Indiana, Iowa, Missouri, New Jersey, Virginia, and Wisconsin. In 2014, the overall levels of prices paid in five of these states (Indiana, Iowa, Missouri, New Jersey, and Virginia) were 36 to 64 percent higher than the median of the study states with fee schedules. The prices paid in Wisconsin were the highest of the 31 study states, more than twice the median of the study states with fee schedules and 81 percent higher than the median of the study states without fee schedules. Moreover, the median among non-fee schedule study states had an overall level of prices paid for common professional services of about 40 percent higher than that in the typical (i.e., median) fee schedule study state for similar services.[4,5] The results for 2015 were similar to those for 2014. Furthermore, the regression analysis results support these observations, showing that aggregate prices for the same set of professional services were statistically significantly higher for non-fee schedule states than for fee schedule states while controlling for differences in network penetration rates (Table 3).[6] In particular, the estimates suggest that, on average, prices in non-fee schedule states were 55 percent higher than those in fee schedule states. Also, a 10 percentage point higher network penetration rate was associated with about 7 percent lower price levels. The choice of control variables (i.e., the type of professional fee regulation and the network penetration rate) as main factors explaining prices paid is informed by the conceptual framework described in the earlier section "Introduction and How to Use This Report."
- **States with fee schedules for professional services had relatively lower prices paid compared with states without fee schedules, except for Illinois and Oregon** (Figure 1). Twenty-five of the 31 study states had workers' compensation fee schedules for professional services in 2014 and 2015.[7] Except for Illinois and Oregon, the overall level of prices paid in these states in 2014 ranged from 26 percent below to 27 percent above the median of the fee schedule study states. These numbers were lower than the price levels in non-fee schedule study states. The results in 2015 were similar (see Figure 2 and Table 2). Illinois and Oregon had higher prices, mainly due to higher fee schedule rates. The overall level of prices paid in Oregon was within the range of price levels of states without fee schedules, 42 percent higher than the median of the fee schedule study states in 2014. The overall levels of prices paid in Illinois was 34 percent higher than the median of the fee schedule study states in 2014 and close to the price level in Virginia, a state with no fee schedule. In 2015, Illinois was ranked in the middle of the non-fee schedule states on the overall level of prices paid.[8] Note that both states had higher fee schedule rates compared with most other study states with fee schedules (Table 4).

[4] In this report, we use the terms *median* and *typical* interchangeably.

[5] This comparison of medians reflects unadjusted results. Consistently throughout the report, when we present the findings adjusted for network participation rates and time-invariant, state-specific factors, we use the terms *regression analysis* or *statistical technique*. In all other cases, the comparisons based on medians rely on unadjusted results.

[6] For a more complete description of the statistical method, refer to the "Technical Appendix."

[7] These states are Arizona, Arkansas, California, Colorado, Connecticut, Florida, Georgia, Illinois, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Nebraska, New York, North Carolina, Oklahoma, Oregon, Pennsylvania, South Carolina, Tennessee, and Texas.

[8] Oregon was not included in the interstate comparison for 2015 because of an insufficient sample size in 2015 (half-year).

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LESSONS FROM GROWTH RATE COMPARISONS ACROSS STATES

- **Growth in prices paid for common professional services exhibited tremendous variation across states.** In the 28 study states for which we could do a trend analysis from 2008 to 2015, growth rates in the overall prices paid varied from negative 18 percent in Illinois to positive 30 percent in Wisconsin (see Figure 3).[9]
- **Most states with no fee schedules experienced faster growth in prices paid compared with states with fee schedules** (see Figure 4 and Table 5). Here we focus on the 22 study states with no major fee schedule changes from 2008 to 2015.[10] In four out of the six non-fee schedule study states, the overall increase in prices paid was between 21 percent and 30 percent from 2008 to 2015. These four states are Indiana, Missouri, Virginia, and Wisconsin. The median growth rate among these four states was 26 percent over the study period. In contrast, the median growth rate in prices paid among the fee schedule states was 7 percent over the eight-year study span. In terms of the average annual growth rate, the median increase in prices paid among these four non-fee schedule states was 3.4 percent per year from 2008 to 2015, while the median annual growth rate in prices paid among the fee schedule states was 1.0 percent per year. This observation is supported by results from a statistical technique that controls for interstate differences in growth rate of overall professional price levels due to differences in growth of network participation rates.[11] In particular, this method estimated that annual growth among states without fee schedules was on average 3.7 percent per year, about a 1.7 percentage point more rapid growth, on average, than that in the study states with fee schedules (see Table 6). In addition, the same statistical method showed a strong inverse association between growth in network participation rate and professional prices.

  Two non-fee schedule states, Iowa and New Jersey, experienced slower growth in prices paid than the other study states without fee schedules. From 2008 to 2015, the cumulative growth in prices paid was 7 percent in Iowa and 8 percent New Jersey (see Figure 4). In Iowa, the overall prices paid grew 11 percent from 2008 to 2011, similar to the experience in other non-fee schedule states during this period (see Figure B.1). However, after 2011, prices paid in Iowa remained fairly stable from 2011 to 2015. During the same period, we observed that the share of payments made to in-network providers for common professional services in Iowa continued to increase—from 2011 to 2015, this measure increased 8 percentage points (or 10 percent) in the state (see Table 7). The slower growth in prices paid in New Jersey over the study period was mainly due to a 13 percent decrease in 2013, which was an atypical change among the non-fee schedule states in that year (see Figure B.1). At the same time, the share of payments made to in-network providers for common professional services in New Jersey increased nearly 10 percentage points (or 11 percent) over one year, from 79 percent in 2012 to 88 percent in 2013 (see Table 7). Moreover, according to the payment data, in New Jersey, the prices paid to in-network providers were lower than to out-of-network providers for similar professional services, indicating the cost-saving nature of networks in the state. Note that the trends in prices paid in New Jersey before and

[9] Three study states (Mississippi, Nebraska, and Oregon) were excluded from the trend analysis for 2008 to 2015 because of insufficient sample sizes in 2015 (half-year). In the "Statistical Appendix," a bar chart capturing growth in overall prices paid for 31 states between 2008 and 2014 is presented and shows similar results to the 28-state discussion in this section (see Figure SA.1).

[10] As we mentioned earlier, since some study states had major changes in their professional fee schedules, the inclusion of those states in the descriptive and regression analyses of the fee regulation types and growth rates would likely distort results. Therefore, to characterize growth rates of prices paid between states with fee schedules and the states without, we restricted our attention to the 22 study states with no major fee schedule changes from 2008 to 2015 in this bullet point. The trends of prices paid in states with major changes in their professional fee schedules are discussed in the next section, "Discussion of Substantial Price Changes."

[11] For a more complete description of the statistical method, refer to the "Technical Appendix."

after 2013 were similar to the experience among the other non-fee schedule states during the same periods—the overall prices paid in New Jersey increased 15 percent from 2008 to 2012; after the decrease in 2013, this measure grew 8 percent from 2013 to 2015.

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DISCUSSION OF SUBSTANTIAL PRICE CHANGES

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This section provides a detailed discussion of substantial changes in prices paid for professional medical services. An outline summarizing the main points of this discussion can be found in the earlier section "Introduction and How to Use This Report." The following two major topics are addressed here:

- A discussion of substantial changes in overall prices following major fee schedule changes
- A discussion of substantial changes in prices at the service-type level

This report offers an abundant body of metrics that track price changes at the overall level as well as in each of the eight service types in every study state over a long period of time. To provide a more targeted discussion here, we consider a price increase or a price decrease of 10 percent or more as a *substantial* price change and focus on these changes only.

In the first topic, we discuss the results in five study states that experienced substantial price changes at the overall level following major changes in fee schedules during the study period. In these discussions, we describe the substantial price changes observed in the data following the major changes in fee schedules—the principal policy tool for regulating prices—and note the changes in network participation, another important mechanism that can affect prices paid. The conceptual framework underlying the focus of the discussion is explained in the earlier section "Introduction and How to Use This Report."

Many study states had substantial price changes at the service-type level. In the second topic, we focus the detailed discussion on California—the only study state that had a major change to the *basis* of its fee schedule (i.e., the most fundamental design element of a fee schedule) that resulted in a substantial shift in relative prices paid for different types of services. We also provide a brief summary of all the substantial price changes in each service type across all study states during the study period.

A fee schedule sets payment rates for medical services provided in workers' compensation, usually by a list of procedure codes and the associated payment amounts. As another WCRI study[1] explained, a workers' compensation fee schedule has many design elements, including the basis of the fee schedule (RBRVS-based or not), conversion factor (single or multiple conversion factors), regional variation (single statewide or multiple regional fee schedules), and level of the fee schedule (how high or low to set the maximum payment rates).[2] In this study we use the term *fee schedule changes* to mean changes in any of the design elements as well as any changes in the coding list or billing rules (for example, the coding change discussed in the second topic above).

[1] Fomenko and Liu. 2016. *Designing Workers' Compensation Medical Fee Schedules, 2016.* Cambridge, MA: Workers Compensation Research Institute.

[2] See Table 8 for the characteristics of workers' compensation fee schedules for professional medical services.

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DISCUSSION OF SUBSTANTIAL CHANGES IN OVERALL PRICES FOLLOWING MAJOR FEE SCHEDULE CHANGES

Five study states—Arizona, Illinois, Kentucky, Massachusetts, and Texas—had substantial changes in overall prices paid following major fee schedule changes during the study period. In this section, we describe the fee schedule changes and the changes in prices paid in each of these states, organized in chronological order, starting with the policy change effective June 2014 in Kentucky.

- **Kentucky discontinued the use of relative values from Medicare's RBRVS for its professional fee schedule in June 2014.**[3] Instead, it transitioned to state-specific relative values based on historic data from Fair Health Commercial Database Values. Following this policy change, the overall prices paid for professional services in Kentucky increased 19 percent from 2013 to 2015 (see Figure B.13). For comparison, the median growth rate of overall prices among the fee schedule states changed little during this period (see Figure B.1). The price increase in Kentucky is also reflected in the interstate ranking—the state moved from being lower than typical in 2013 to being similar to the median study state in 2015 (see Figure 6).[4] Note that the network participation rate in Kentucky increased slightly from 82 percent in 2013 to 83 percent in 2015 (Table 7).

  The average price paid for many types of services in Kentucky increased from 2013 to 2015, with the magnitudes of increases ranging from 6 percent for major surgery to 33 percent for physical medicine services (see Figure C.12). Particularly, prices paid increased substantially for evaluation and management (i.e., office visits), emergency services, and physical medicine from 2013 to 2015—22 percent increase for office visits, 31 percent increase for emergency services, and 33 percent for physical medicine. The interstate ranking for Kentucky changed significantly for these services. For physical medicine, Kentucky changed from 10 percent lower than the median of the study states in 2013 to 17 percent higher than the median state in 2015 (see Table 9). For office visits and emergency services, Kentucky moved from well below the median state in 2013 to at the median state in 2015. Table 10 further illustrates the price changes at the procedure level—the prices paid for the most common evaluation and management and physical medicine procedures all had double-digit increases in Kentucky from 2013 to 2015. On the other hand, prices paid for radiology services remained stable in Kentucky (Figure C.12). As shown in Table 10, while the prices paid for the professional component of the most common major radiology procedures decreased after the fee schedule change, the prices paid for the whole procedures changed little between 2013 and 2015.[5] In addition, prices paid for neurological/neuromuscular testing services in Kentucky decreased 23 percent from 2013 to 2015 (Figure C.12). This price decrease was mainly related to the fundamental change in the coding for nerve conduction studies that was implemented by the Centers for Medicare & Medicaid Services (CMS).[6]

[3] According to the WCRI study *Designing Workers' Compensation Medical Fee Schedules, 2016* (Fomenko and Liu, 2016), the overall fee schedule rate in Kentucky in 2016 was 29 percent higher compared with that in 2011. Before the 2014 policy change, the professional fee schedule in Kentucky was based on Medicare's RBRVS, with multiple conversion factors for different types of services, and was updated periodically.

[4] The ranking comparisons for Kentucky are based on 28 study states because Mississippi, Nebraska, and Oregon were excluded for 2015 due to insufficient sample sizes in the half-year data.

[5] Radiology services can be billed and paid as the professional component (e.g., reviewing the results) of the whole procedure, the technical component (e.g., using the radiology machine or devices) of the whole procedure, or the whole procedure (including both professional and technical components of the procedure). For more discussion on identifying modified services for radiology, see "Technical Appendix."

[6] For more discussion on this coding change, see the following subsection titled "Discussion of Substantial Changes in Prices at Service-Type Level."

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- **Arizona implemented increases in fee schedule rates for evaluation and management, physical medicine, and certain surgeries in October 2013.**[7] The overall prices paid for professional services in Arizona increased 10 percent from 2013 to 2014 following this fee schedule change (see Figure B.3). For comparison, the median growth rate of overall prices among the fee schedule states changed little in 2014 (see Figure B.1). Note that the network participation rate in Arizona increased from 80 percent in 2013 to 85 percent in 2014, and this increase was similar to the experience in many study states in that year (Table 7). As to the interstate ranking results, the overall prices paid in Arizona changed from being typical of the study states in 2013 to 10 percent higher than the median state in 2014 (see Table 11).

  At the service-type level, the average price paid for evaluation and management (i.e., office visits) and physical medicine services in Arizona increased 18 percent and 15 percent, respectively, in 2014 (see Figure C.2). Note that the median growth rate of prices paid among fee schedule states for both types of services was about 1 percent in that year (see Tables B.1 and B.2). Arizona moved up in the interstate ranking of prices paid for office visits and physical medicine after the price increase for these services (see Table 11). For major surgery, Arizona had a slight increase of 2 percent in the average price in 2014 (see Figure C.2), and the interstate ranking of Arizona remained in the group of states with higher prices for major surgery in 2014 (Table 11).
- **In September 2011, the Illinois workers' compensation fee schedule rates for all types of medical services underwent an across-the-board decrease of 30 percent.**[8] Following this policy change, the overall prices paid for professional services in Illinois decreased 27 percent from 2010 to 2012 (see Figure B.10). In contrast, the median growth rate of overall prices among the fee schedule states had a small increase of 2 percent during this period (see Figure B.1). After this price decrease, the overall prices paid in Illinois still ranked among the highest of the study states (see Table 12). Note that during this period, the network participation rate in Illinois increased 6 percentage points, from 50 percent in 2010 to 56 percent in 2012, while most other study states experienced smaller changes on this measure (Table 7). Another WCRI study pointed out that part of this increase in network participation in Illinois may be related to stronger incentives of providers to participate in networks in order to increase the volume of

[7] Arizona publishes its fee schedule annually with effective dates of October 1 through September 30 of the following year. The Commission reviews the fee schedule rates annually with a focus each year on one of four specific groups of codes and rotates through these specific groups of codes every four years. To calculate the fee schedule rates for the codes under review, the Commission surveys the workers' compensation fee schedules from the states of Colorado, Nevada, New Mexico, North Carolina, Oregon, Utah, and Washington and uses the following methodology: (a) current Arizona values between the 75th and 100th percentile of the states surveyed will not be adjusted; (b) current Arizona values over the 100th percentile of the states surveyed will be reduced to the 100th percentile; and (c) current Arizona values below the 75th percentile will be increased to the 75th percentile subject to the following: Increases shall be capped at 25 percent, unless and except as necessary to bring a current value up to the 50th percentile. For the fee schedule effective October 2013, the groups of codes that were reviewed and adjusted were evaluation and management, physical medicine, surgery codes from 25000 to 39599, and anesthesiology relative values. Note that the fee schedule rates for many common surgeries remained unchanged or had only small increases.

[8] Illinois introduced workers' compensation medical fee schedules for the first time in 2006. The maximum allowable payments for medical procedures, treatments, or services were set at 90 percent of the 80th percentile of charges and fees in 2002–2004 within each of the 29 geozip areas of the state. A WCRI study found that the fee schedule rates for professional services showed large variations across the 29 geozip areas, and the variations were particularly significant for specialty care (Fomenko and Liu, 2012). For example, for major surgeries, the fee schedule rates ranged from a low of 277 percent above Medicare to a high of 498 percent above Medicare, a difference of 221 percentage points. In contrast, the fee schedule rates for office visits ranged from a low of 11 percent to a high of 50 percent over Medicare. Starting in January 2012, Illinois discontinued its use of the 29 geozip areas for physicians and other nonhospital providers in favor of four county-based regions, and the intrastate differences in fee schedule rates among regions in Illinois decreased noticeably. Over time, the fee schedule rates have been adjusted on an annual basis to reflect changes in the U.S. Consumer Price Index for All Urban Consumers (CPI-U).

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workers' compensation patients they treat.[9] Note that even after the fee schedule decrease, the prices paid for workers' compensation patients in Illinois for most types of services (with the exception of office visits) were still much higher than those for other patients (such as group health and Medicare patients), as an earlier WCRI study found.[10]

The average prices paid for all types of services in Illinois decreased from 2010 to 2012, with the magnitudes of decreases ranging from 18 percent for emergency visits to 31 percent for neurological/neuromuscular testing services (see Figure C.9). After this fee schedule reduction, the interstate ranking for Illinois changed significantly for prices paid for office visits (i.e., evaluation and management), from 14 percent higher than the median of the study states in 2010 to 20 percent below the median state in 2012 (see Table 12). Effective July 2014, Illinois increased the fee schedule rates for certain evaluation and management procedures to a level more comparable to Medicare rates, and we observed the prices paid for evaluation and management services in Illinois increase 10 percent from 2013 to 2015 (as of June). After this price increase for office visits, the interstate ranking for Illinois became 15 percent below the median state in 2015, still in the group of states with lower prices paid for evaluation and management services (see Figure A.4).

For prices for other service groups, Illinois moved down in the interstate ranking slightly after the 2011 fee schedule decrease, but remained in the higher group of states. For example, for major surgeries, the average price paid in Illinois was the highest of the study states in 2010, 163 percent above the median state. After the price decrease following the 2011 fee schedule change, the average price paid for major surgeries in Illinois became 82 percent above the median state in 2012, still among the highest of the study states. For the changes in Illinois' ranking for other service groups, please refer to Table 12.

- **In 2011, the fee schedule rates in Texas increased for most professional services.**[11] Following this fee schedule increase, the overall prices paid for professional services in Texas increased 16 percent from 2010 to 2011 (see Figure B.30). By contrast, the median growth rate of overall prices among the fee schedule states was less than 1 percent in that year (see Figure B.1). As to the interstate ranking results, the overall price in Texas changed from being slightly below the median state in 2010 to being the median of the study states in 2011 (see Table 13). Note that the network participation rate in Texas had a significant decrease from 74 percent in 2010 to 23 percent in 2011, following the elimination of voluntary (informal) networks in the state effective January 1, 2011. Another WCRI study pointed out that in addition to the fee schedule increases, the elimination of voluntary networks was likely a factor in the observed price increase in Texas because discount fee contracts between health care providers and payors were no longer available except through certified networks.[12]

[9] Radeva. 2014. *CompScope™ Medical Benchmarks for Illinois, 15th Edition.* Cambridge, MA: Workers Compensation Research Institute.

[10] Yang and Fomenko. 2014. *The Effect of Reducing the Illinois Fee Schedule.* Cambridge, MA: Workers Compensation Research Institute.

[11] The workers' compensation fee schedule for professional services in Texas is RBRVS based. Texas publishes state conversion factors for service groups annually based on changes in the Medicare Economic Index; since 2009, these published conversion factors have been effective January 1 through December 31 of the stated year. The fee schedule regulation in Texas requires that the fee schedule rates reflect the most current reimbursement methodologies, models, and values or weights used by the federal Centers for Medicare & Medicaid Services. Previously in March 2008, Texas increased fee schedule rates for professional services, especially for surgeries. In August 2003, Texas implemented a significant decrease in fee schedule rates for surgery and radiology, and a substantial increase in rates for evaluation and management services.

[12] Telles. 2014. *CompScope™ Medical Benchmarks for Texas, 15th Edition.* Cambridge, MA: Workers Compensation Research Institute.

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Double-digit increases in prices were observed across almost all types of services except for major and minor radiology (see Figure C.29). For example, Texas had a 17 percent increase in office visit (i.e., evaluation and management) prices in 2011, compared with a more moderate 5 percent increase in the median growth rate among the fee schedule states (see Table B.1). The major surgery prices in Texas increased 21 percent in 2011, while the fee schedule state median growth rate changed little in that year (see Table B.3). The magnitudes of price increases among the other service groups with double-digit growths from 2010 to 2011 ranged from 10 percent for emergency visits to 20 percent for neurological/neuromuscular testing. The interstate comparison results for different types of services in Texas changed differently. Table 13 summarizes the changes in Texas' interstate ranking by service group. For instance, in 2010, the office visit price in Texas was slightly above the median of the study states (6 percent higher than the median state). After the price increase, this measure in Texas moved up into the higher group of states (19 percent above the median state) in 2011. For major surgery, however, Texas ranked in the lower group of states before and after the fee schedule increase.

- **Massachusetts increased the fee schedule rates for most professional services effective April 2009. Notably, the fee schedule rates for many major surgeries were increased by factors of 2 or 3 to be more in line with the median prices paid, due to negotiations between payors and providers.**[13] The overall prices paid for professional services in Massachusetts increased 15 percent from 2008 to 2010 following this fee schedule change (see Figure B.15). For comparison, the median growth rate of overall prices among the fee schedule states increased 4 percent during this period (see Figure B.1). Note that the network participation rate in Massachusetts decreased 6 percentage points, from 37 percent in 2008 to 31 percent in 2010, while most other study states had smaller changes during this period.[14] The interstate ranking of overall prices paid for professional services in Massachusetts changed from being among the lowest of the study states in 2008 (15 percent below the median state) to being similar to the median state in 2010 (see Table 14).

  Price increases in Massachusetts were observed in all types of services except for neurological/neuromuscular testing services (see Figure C.14). The average price paid for major surgery experienced a particularly large increase of 27 percent from 2008 to 2010.[15] By contrast, the median growth rate in major surgery prices among the fee schedule states was 4 percent over the two years (see Table B.3). As to the interstate ranking results, the average price paid for major surgery in Massachusetts

[13] Prior to the 2009 change, the Massachusetts fee schedule for professional services had not been updated since September 2004. A WCRI study showed that major surgeries were often paid above the fee schedule rates (Eccleston, 2006). This study found that for many of these surgeries, it was not uncommon for the median prices paid to be two or three times the fee schedule amount. Typically, 50–60 percent of these surgical procedures were paid above the fee schedule rate. System participants indicated that payors in the state were willing to negotiate with surgeons because injured workers had better outcomes and return to work was faster (Radeva, 2014b). The 2009 change increased the fee schedule rates for surgeries substantially to be in line with the median prices paid; the fee schedule rates for some surgeries increased to 2–3 times the previous rates.

[14] The substantial price increase for major surgeries in Massachusetts was unlikely to be affected by the decrease in network participation rate, as the negotiated prices for these services were substantially higher than the fee schedule rates (Radeva, 2014b). For other services, since the network participation rate in Massachusetts was among the lowest of the study states, only a small portion of the services was affected by the potential discounted prices through networks; thus, the potential effect of this decrease in network participation rate on the price increases was likely to be limited.

[15] Part of this increase in average price paid for major surgeries reflected the fee schedule increase for the surgeries that were paid at or below fee schedule levels before the 2009 fee schedule change. Based on a WCRI study, for many common surgeries in Massachusetts, typically 50–60 percent of these surgical procedures were paid above the fee schedule rates, and the rest of them were paid at or below the fee schedule rates before the 2009 change (Eccleston, 2006). Furthermore, system participants indicated that continued negotiation between the medical providers and payors during the period of the 2009 fee schedule change was likely to be another factor underlying the increase in average price paid for major surgeries (Radeva, 2015).

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was 16 percent higher than the median state in 2008. After the large price increase following the fee schedule change, this measure in Massachusetts became 44 percent above the median of study states in 2010, among the highest of the study states. The magnitudes of price increases for the other service groups ranged from 7 percent for minor radiology to 12 percent for physical medicine and emergency visits. Table 14 summarizes the changes in Massachusetts' interstate rankings for these service groups.

Discussion of Substantial Changes in Prices at Service-Type Level

During the study period we observed substantial price changes at the service-type level in many study states. Among these states, California is the only one that had a major change in the *basis* of its fee schedule; we discuss the results in California in detail. We then provide a brief summary of all the substantial price changes during the study period in each service type across all study states.

California had a major change in the basis of its fee schedules during the study period, and this change shifted the relative prices paid for different types of services substantially.

- **Effective January 2014, the fee schedule for professional services in California started a four-year transition to an RBRVS-based fee schedule.**[16] Before this policy change, California used the Official Medical Fee Schedule (OMFS) to regulate the payment of professional services, and the fee schedule rates in the OMFS had remained unchanged since 2007.

  Following this fee schedule change, the prices paid for primary care services (for example, office visits) increased, while prices paid for specialty care (for example, surgeries) decreased in California (see Figure C.3). In particular, from 2013 to 2014, prices paid for evaluation and management (i.e., office visits) and physical medicine services increased 30 and 27 percent, respectively. In contrast, the median growth rate of prices paid for both types of services among the fee schedule states was about 1 percent in that year (see Tables B.1 and B.2). In 2015, the prices paid for office visits and physical medicine in California continued to increase, but with more moderate magnitudes as compared with those in 2014—4 percent for office visits and 2 percent for physical medicine (Figure C.3). On the other hand, prices paid for major surgery, major radiology, pain management injections, and emergency visits in California had decreases in 2014, ranging from 4 to 21 percent (Figure C.3). For comparison, the fee schedule state median growth rate of prices paid for all these types of services ranged from positive 1 percent to negative 2 percent in that year (see Tables B.3, B.4, B.5, and B.8). In 2015, the prices paid for most of these service types continued to decrease, but with more moderate magnitudes than in 2014 (Figure C.3). In addition, prices paid for minor radiology services in California increased 14 percent in 2014 after the beginning of the fee schedule transition. In 2015, minor radiology prices decreased 7 percent in the state, mainly reflecting the decreases in Medicare's RBRVS fee schedule rates for many minor radiology procedures. The prices paid for neurological/neuromuscular testing services in California decreased 43 percent in 2014, mainly related to the fundamental change in the coding for nerve conduction studies that was

[16] This fee schedule change is a part of the comprehensive workers' compensation reform legislation in California, Senate Bill (SB) 863. This legislation requires the adoption of Medicare's RBRVS schedule for professional services to be phased in over four years, beginning in 2014, and to remain in effect until the Division of Workers' Compensation adopts an RBRVS schedule that allows no more than 120 percent of the aggregate fees allowed by Medicare. During the four-year transition period, the conversion factors for primary care services increase and the conversion factors for specialty services (such as surgery and radiology) decrease. The latest update in the conversion factors covered in the study period of this report was in March 2015.

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implemented by CMS.[17]

After this fee schedule transition, the interstate comparison results for different types of services in California changed differently. For example, for office visits, California moved up in the interstate ranking after the increases in office visit prices (see Figure 7). The average price paid in California changed from being the second lowest of the study states in 2013 (33 percent lower than the 28-state median) to being closer to the median state in 2014 and 2015 (12 percent below the 28-state median in 2014 and 9 percent below the median state in 2015).[18] For major surgery, California moved down in the interstate ranking following the price decreases (see Figure 8). The average price paid for major surgery in California changed from close to the median state in 2013 (9 percent below the 28-state median) to among the lowest of the study states in 2014 and 2015 (28 percent lower than the median state in 2014 and 30 percent below the median state in 2015). Table 15 summarizes the changes in California's interstate ranking for other service groups.

The overall prices paid for professional services in California increased 9 percent from 2013 to 2015 (see Figure B.4). However, after this increase, California remained among the lowest of the study states on overall prices paid in 2014 and 2015 (see Table 15). Note that the network participation rate in California increased from 85 percent in 2013 to 89 percent in 2015 (Table 7).

Besides California, many other study states experienced substantial price changes at the service-type level. Table 16 summarizes all the annual substantial price changes of 10 percent or more in each service type across all study states. In states with fee schedules, these changes are often related to changes in the fee schedule rates. In states with no fee schedules, some price changes are likely influenced by changes in network participation. In addition, we observed substantial decreases in prices paid for neurological/neuromuscular testing services in most study states starting in 2013. This general trend is related to a fundamental change implemented by CMS in the coding system (i.e., the coding list and billing rules) for nerve conduction studies, the most commonly billed procedures in the neurological/neuromuscular testing service group. During this 2013 change, the previous procedure codes for nerve conduction studies were deleted. The new coding list no longer differentiates between the types of nerve conduction studies; instead, an individual Current Procedural Terminology (CPT®) code captures the number of nerve conduction studies. The new billing rules require that each type of nerve conduction study is counted only once when multiple sites on the same nerve are stimulated or recorded, and the numbers of these separate tests should be added to determine which code to use.[19] Note that this change was made in an effort to address the duplication of time (and therefore payments) when billing for multiple units under the retired codes.[20] Table 16 shows that prices paid for neurological/neuromuscular testing services decreased substantially in 26 out of 31 study states following this coding change.

[17] For more details on this coding change, see the description later in this subsection.

[18] The ranking comparisons for California are based on 28 study states because Mississippi, Nebraska, and Oregon were excluded for 2015 due to insufficient sample sizes in the half-year data.

[19] For more details on this coding change and the computation method, please refer to the "Technical Appendix."

[20] This change was part of the "Misguided Code Initiative" by CMS. Under this initiative, the American Medical Association (AMA) and the Relative Value Scale Update Committee (RUC) were given the task of bundling the codes that CMS identified as being performed together more than 75 percent of the time. The new codes for nerve conduction studies were added in the 2013 CPT code list published by the AMA, and the previous codes were retired.

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Figure 1 Interstate Comparison of Prices Paid for Professional Services, WCRI MPI-WC in 31 States, 2014

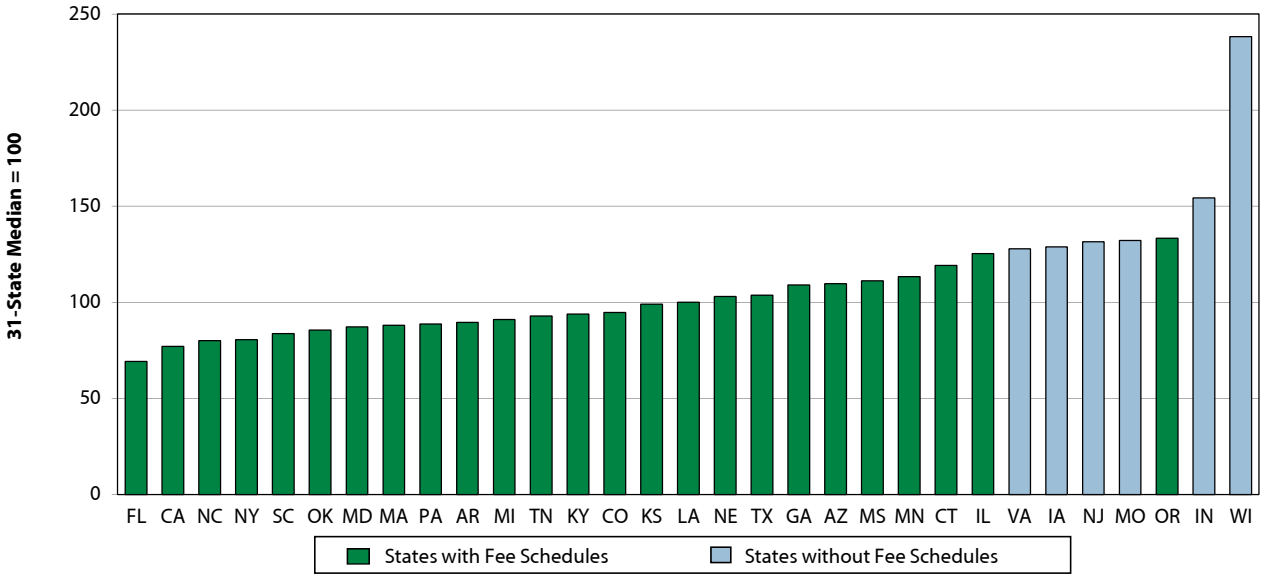
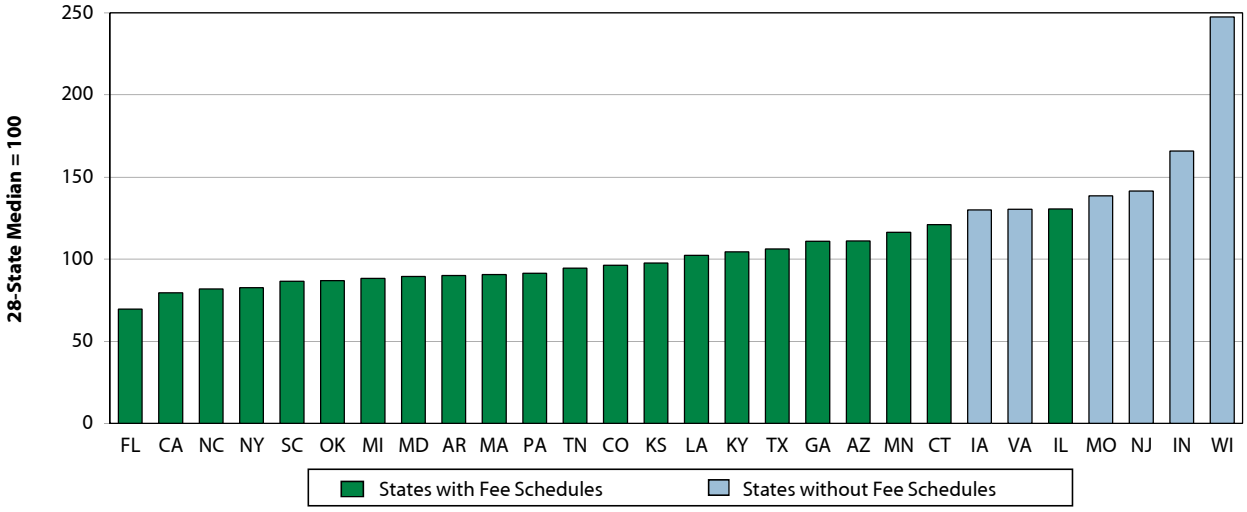


Figure 2 Interstate Comparison of Prices Paid for Professional Services, WCRI MPI-WC in 28 States, 2015^{p}



Special notation: ^{p} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the half-year data likely provide a reasonable approximation for interstate ranking across states in 2015, based on results for earlier years from the prior editions of this study (see Figure TA.1).

Notes:

This study focuses on prices paid for professional services that are billed by physicians, physical therapists/occupational therapists, and chiropractors. Services billed by hospitals or ambulatory surgery centers and services billed for durable medical equipment as well as pharmaceuticals are excluded.

The indices for 2015 are based on a 28-state median. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year).

AZ, CO, MO, NY, OK, OR: The data for each of these states are not necessarily representative because each state is missing data from a larger data source that is significant in that state. The results in AZ, CO, NY, OK, and OR are unlikely to be significantly under- or overestimated, given that these states use fee schedules to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in each state were materially different from other data sources included in this study from the same state. For MO, to the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to possible under- or overestimations in the results.

IA, IN, MO, NJ, VA, WI: These states had no workers' compensation fee schedule in 2014 or 2015.

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Table 1 Summary of Fee Regulation Types and Medical Price Indices for Professional Services across 31 Study States, 2014

Fee Regulation Type	State	Medical Price Index	31-State Ranking (1 = highest)
Fee schedule states	FL	69	31
	CA	77	30
	NC	80	29
	NY	81	28
	SC	84	27
	OK	86	26
	MD	87	25
	MA	88	24
	PA	89	23
	AR	90	22
	MI	91	21
	TN	93	20
	KY	94	19
	CO	95	18
	KS	99	17
	LA	100	16
	NE	103	15
	TX	104	14
	GA	109	13
	AZ	110	12
	MS	111	11
	MN	113	10
	CT	119	9
	IL	125	8
	OR	133	3
Non-fee schedule states	VA	128	7
	IA	129	6
	NJ	131	5
	MO	132	4
	IN	154	2
	WI	238	1

Notes: AZ, CO, MO, NY, OK, OR: The data for each of these states are not necessarily representative because each state is missing data from a larger data source that is significant in that state. The results in AZ, CO, NY, OK, and OR are unlikely to be significantly under- or overestimated, given that these states use fee schedules to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in each state were materially different from other data sources included in this study from the same state. For MO, to the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to possible under- or overestimations in the results.

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Table 2 Summary of Fee Regulation Types and Medical Price Indices for Professional Services across 28 Study States, 2015[p]

Fee Regulation Type	State	Medical Price Index	28-State Ranking (1 = highest)
Fee schedule states	FL	70	28
	CA	80	27
	NC	82	26
	NY	83	25
	SC	86	24
	OK	87	23
	MI	88	22
	MD	89	21
	AR	90	20
	MA	91	19
	PA	91	18
	TN	95	17
	CO	96	16
	KS	98	15
	LA	102	14
	KY	104	13
	TX	106	12
	GA	111	11
	AZ	111	10
	MN	116	9
	CT	121	8
	IL	131	5
Non-fee schedule states	IA	130	7
	VA	130	6
	MO	139	4
	NJ	141	3
	IN	166	2
	WI	247	1

Special notation: [p] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the half-year data likely provide a reasonable approximation for interstate ranking across states in 2015, based on results for earlier years from the prior editions of this study (see Figure TA.1).

Notes:

The indices for 2015 are based on a 28-state median. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year).

AZ, CO, MO, NY, OK: The data for each of these states are not necessarily representative because each state is missing data from a larger data source that is significant in that state. The results in AZ, CO, NY, and OK are unlikely to be significantly under- or overestimated, given that these states use fee schedules to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in each state were materially different from other data sources included in this study from the same state. For MO, to the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to possible under- or overestimations in the results.

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Table 3 Regression Coefficients for the Association between Overall Professional Prices and Fee Regulation Type

Policy Variables	Percentage Difference[a]	Standard Error[b]
No fee schedule	55.092***	(13.973)
Network participation rate	-66.228***	(16.467)
Observations	186	
Adjusted R-squared	51%	

Notes: The fee schedule regulation type is the reference category, and the percentage difference for no fee schedule states is estimated relative to it.

*** Statistically significant at the 1% level; ** Statistically significant at the 5% level; * Statistically significant at the 10% level.

[a] The percentage difference is a transformed estimated coefficient: (exp(β)-1)*100%.

[b] Standard errors are computed for the transformed coefficients, using the delta method.

The coefficients are estimated in a linear regression model (i.e., ordinary least squares model) that specifies a linear relationship between log-transformed aggregate price for overall professional services in a year and professional fee regulation type as well as network participation rate, while controlling for year fixed effects. Then, the transformed estimated coefficient of the non-fee schedule regulation type can be interpreted as a percentage difference in the aggregate price between the non-fee schedule states and the fixed-amount fee schedule regulation (base category), while controlling for differences in network penetration rates. In particular, the transformed coefficient of the non-fee schedule regulation type is equal to 55 percent, indicating that the aggregate prices in states without professional fee schedules are, on average, 55 percent higher than in fee schedule states. Also, the transformed coefficient on the network participation variable shows that a 10 percentage point higher network participation rate is, on average, associated with 6.6 percent lower overall professional prices. This association was estimated on 31 study states for the years between 2008 and 2013. These results were originally reported in the seventh edition of this study series.

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Table 4 Workers' Compensation Premium over Medicare, March 2016

State	Overall	Emergency Services	Evaluation and Management	Major Radiology	Minor Radiology	Neurological/ Neuromuscular Testing	Physical Medicine	Pain Management Injections	Major Surgery
Alabama	71	28	0	302	310	2	59	43	256
Alaska	189	123	123	618	618	123	124	473	473
Arizona	79	122	54	148	115	63	62	95	186
Arkansas	49	31	35	107	107	37	34	117	121
California	21	19	19	33	33	18	19	35	35
Colorado	38	35	34	157	163	86	16	87	88
Connecticut	73	57	56	101	118	92	26	164	261
Delaware[a]	47	123	6	35	59	102	32	107	181
District of Columbia	13	13	13	13	13	13	14	14	14
Florida[a]	-2	2	-10	5	1	-30	-8	50	37
Georgia	76	50	51	145	152	69	50	68	220
Hawaii	23	50	21	31	57	23	21	19	30
Idaho	108	106	110	159	160	111	46	178	310
Illinois[a]	74	134	3	232	256	118	39	177	296
Kansas	58	56	60	64	67	69	37	95	127
Kentucky	64	60	49	40	55	43	63	81	112
Louisiana[b]	42	62	5	90	111	13	44	44	110
Maine	75	73	74	72	72	74	73	77	81
Maryland	29	23	24	23	23	24	24	35	63
Massachusetts	-2	-4	-13	-1	-5	-34	-30	17	133
Michigan	34	33	34	35	39	32	34	18	36
Minnesota	67	84	89	83	84	83	43	92	89
Mississippi	83	32	20	89	93	173	86	192	209
Montana	71	69	70	69	74	72	72	70	68
Nebraska	62	78	40	142	145	51	36	104	190
Nevada	112	139	29	441	320	50	77	122	385
New Mexico	73	95	44	407	161	61	57	85	143
New York[a]	8	73	-23	109	176	-7	-11	2	115
North Carolina	52	69	40	95	95	53	44	62	95
North Dakota	91	93	91	91	91	89	90	90	96
Ohio	53	42	42	41	49	42	42	46	120
Oklahoma	35	45	45	106	74	4	6	58	103
Oregon	88	97	94	108	114	81	67	158	133
Pennsylvania[a]	37	37	5	128	124	13	31	43	117
Rhode Island[c]	n/c	21	24	89	93	30	n/c	199	200
South Carolina	40	40	40	39	42	40	41	42	39
South Dakota	27	86	0	158	100	-5	12	2	131
Tennessee	46	90	52	90	90	52	25	90	90
Texas[a]	65	59	59	59	59	60	60	60	100
Utah	50	40	44	64	68	47	45	80	76
Vermont[b]	38	41	1	165	148	11	37	111	103
Washington	67	67	67	67	69	68	68	49	67
West Virginia	35	35	35	35	35	35	36	35	35
Wyoming	34	88	4	195	129	16	10	22	160

Source: Fomenko and Liu. 2016. *Designing Workers' Compensation Medical Fee Schedules, 2016.*

Note: Positive numbers in this table reflect a percentage above the Medicare fee schedule levels for a state, and negative numbers in this table reflect a percentage below the Medicare fee schedule levels for a state.

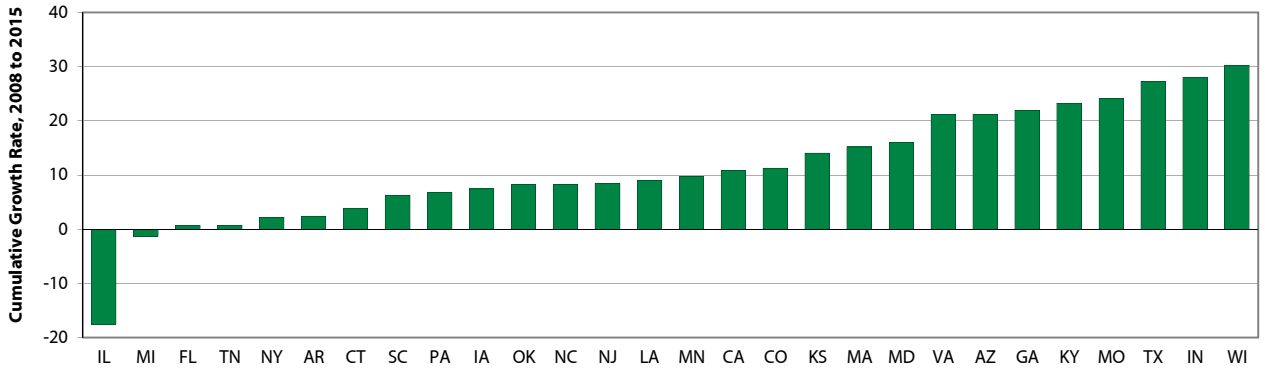
[a] Delaware, Florida, Illinois, New York, Pennsylvania, and Texas have distinct fee schedules for different parts of the state. For each of these states, a single statewide rate was created by averaging the different sub-state fee schedules using the percentage of employed persons in each sub-state region as weights. Medicare establishes distinct sub-state fee schedules in 14 states. For each, a single statewide rate was created using the same procedure.

[b] In Louisiana and Vermont, 86 and 82 percent of payments for pain management injections, respectively, were paid for services without established workers' compensation fee schedule rates, allowing *by report* reimbursement. Hence, these services were excluded from the computation of the workers' compensation premiums over Medicare for these two states.

[c] Rhode Island has different billing codes for physical medicine and does not establish rates for the majority of the codes. An overall rate is not established for Rhode Island as physical medicine is the largest component of the marketbasket and excluding it significantly biases the results. For more details, see the technical appendix in Fomenko and Liu (2016).

Key: n/c: not comparable; RVU: relative value unit.

Figure 3 Comparison of Cumulative Growth Rate in Prices Paid for Professional Services across 28 Study States, 2008 to 2015[p]



	IL	MI	FL	TN	NY	AR	CT	SC	PA	IA	OK	NC	NJ	LA	MN	CA	CO	KS	MA	MD	VA	AZ	GA	KY	MO	TX	IN	WI
Growth rate in prices paid for professional services	-18	-1	1	1	2	2	4	6	7	7	8	8	8	9	10	11	11	14	15	16	21	21	22	23	24	27	28	30

Special notation: [p] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes:

This comparison reflects the cumulative growth rate in prices paid across 28 study states between 2008 and 2015. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

AZ, CO, MO, NY, OK: The data for each of these states are not necessarily representative because each state is missing data from a larger data source that is significant in that state. The results in AZ, CO, NY, and OK are unlikely to be significantly under- or overestimated, given that these states use fee schedules to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in each state were materially different from other data sources included in this study from the same state. For MO, to the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to possible under- or overestimations in the results.

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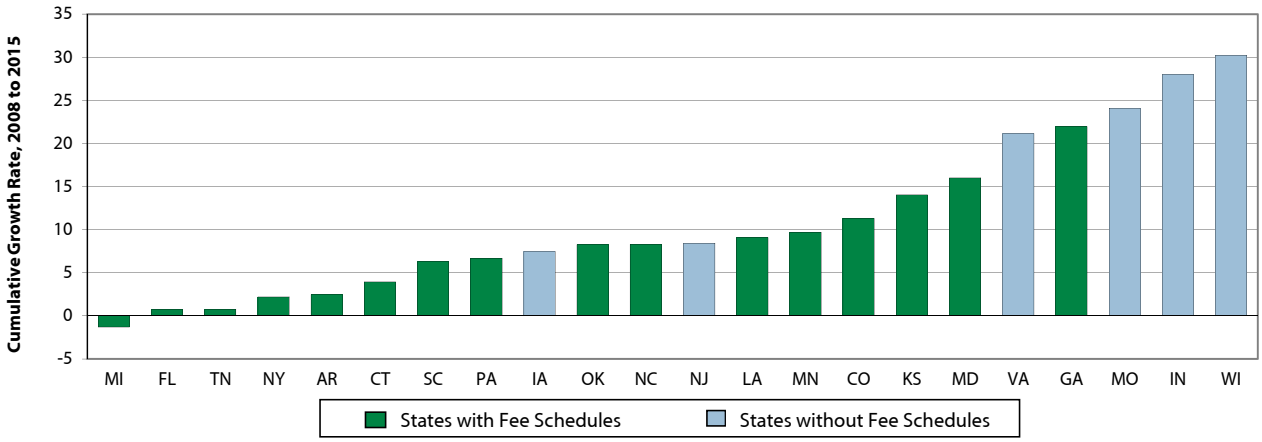
Figure 4 Comparison of Cumulative Growth Rate in Prices Paid for Professional Services across 22 Study States, 2008 to 2015[P]



	MI	FL	TN	NY	AR	CT	SC	PA	IA	OK	NC	NJ	LA	MN	CO	KS	MD	VA	GA	MO	IN	WI
Growth rate in prices paid for professional services	-1	1	1	2	2	4	6	7	7	8	8	8	9	10	11	14	16	21	22	24	28	30

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes:

This comparison reflects the cumulative growth rate in prices paid across 22 study states with no substantial changes in their professional fee schedules from 2008 through 2015. The six states with substantial fee schedule changes are AZ, CA, IL, KY, MA, and TX. Please see the discussion in the section "Discussion of Substantial Price Changes" for each of these states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

CO, MO, NY, OK: The data for each of these states are not necessarily representative because each state is missing data from a larger data source that is significant in that state. The results in CO, NY, and OK are unlikely to be significantly under- or overestimated, given that these states use fee schedules to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in each state were materially different from other data sources included in this study from the same state. For MO, to the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to possible under- or overestimations in the results.

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Table 5 Summary of Cumulative Growth Rate in Prices Paid and Network Use for Professional Services across 22 Study States, by Fee Regulation Type, 2008 to 2015^{p}

Fee Regulation Type	State	Cumulative Growth Rate	Growth in Network Participation Rate (% of payments)	Growth in Network Participation Rate (% point change)
Fee schedule states	MI	-1%	1%	1
	FL	1%	7%	6
	TN	1%	0%	0
	NY	2%	18%	6
	AR	2%	12%	9
	CT	4%	5%	4
	SC	6%	2%	2
	PA	7%	19%	11
	OK	8%	7%	6
	NC	8%	2%	2
	LA	9%	9%	5
	MN	10%	23%	11
	CO	11%	12%	10
	KS	14%	5%	4
	MD	16%	-9%	-6
	GA	22%	4%	4
Non-fee schedule states	IA	7%	16%	11
	NJ	8%	26%	19
	VA	21%	19%	11
	MO	24%	9%	7
	IN	28%	13%	9
	WI	30%	11%	7

Special notation: ^{p} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes:

This comparison reflects the cumulative growth rate in prices paid across 22 study states with no substantial changes in their professional fee schedules from 2008 through 2015. The six states with substantial fee schedule changes are AZ, CA, IL, KY, MA, and TX. Please see the discussion in the section "Discussion of Substantial Price Changes" for each of these states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

CO, MO, NY, OK: The data for each of these states are not necessarily representative because each state is missing data from a larger data source that is significant in that state. The results in CO, NY, and OK are unlikely to be significantly under- or overestimated, given that these states use fee schedules to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in each state were materially different from other data sources included in this study from the same state. For MO, to the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to possible under- or overestimations in the results.

The network participation rate is measured as the percentage of payments for professional services rendered within networks; identification of network care is based on information provided by the data sources.

Table 6 Regression Coefficients of Annual Growth Rate in Overall Professional Prices by Fee Regulation Type between 2008 and 2014[p]

Policy Variables	Percentage Growth[a]	Standard Error[b]
Fee schedule states	2.032***	(0.253)
Non-fee schedule states	3.693***	(0.420)
Change in network participation rate	-25.183**	(11.153)
Additional estimates:		
Difference in growth rates between non-fee schedule and fee schedule states	1.662***	(0.483)
Observations	138	
Adjusted R-squared	31%	

Special notation: [p] We use the notation *p* to indicate that the 2014 numbers are preliminary results based on half-year price data through June 30, 2014.

Note: *** Statistically significant at the 1% level; ** Statistically significant at the 5% level; * Statistically significant at the 10% level.

[a] The percentage difference is a transformed estimated coefficient: (exp(β)-1)*100%.

[b] Standard errors are computed for the transformed coefficients, using the delta method.

The relationship between growth in professional prices paid and fee regulation type was formulated as a linear regression model with the annual growth rate in prices computed as a time difference in log-transformed aggregate prices. The policy variables are indicators for professional fee regulation type and change in network participation rate. The transformed coefficients of regulation types can be interpreted as average percentage growth rates in overall professional prices for each regulation type, controlling for changes in network participation rate. The transformed coefficient on the network participation variable shows that a 10 percentage point increase in network participation rate is associated with a 2.5 percent decrease in the annual growth rate in professional prices. This relationship was estimated on the state-level measures for 23 states that did not experience substantial changes in their professional fee schedules for the years between 2008 and 2014. These results were originally reported in the seventh edition of this study series. States with major fee schedule changes are discussed separately in the section "Discussion of Substantial Price Changes."

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Table 7 Comparison of Network Participation Rates across States, 2008 to 2015[p]

State	2008	2009	2010	2011	2012	2013	2014	2015
AR	78%	75%	76%	75%	78%	81%	81%	87%
AZ	81%	84%	86%	85%	78%	80%	85%	84%
CA	81%	80%	81%	81%	81%	85%	89%	89%
CO	80%	85%	85%	84%	80%	81%	87%	90%
CT	85%	85%	84%	85%	84%	84%	89%	89%
FL	83%	82%	84%	83%	82%	84%	85%	89%
GA	87%	90%	90%	87%	86%	88%	89%	91%
IA	69%	69%	70%	73%	74%	75%	78%	80%
IL	46%	49%	50%	52%	56%	62%	70%	71%
IN	70%	70%	69%	73%	73%	77%	78%	80%
KS	74%	79%	74%	80%	82%	81%	81%	78%
KY	67%	77%	82%	82%	81%	82%	83%	83%
LA	50%	47%	44%	42%	36%	42%	51%	55%
MA	37%	32%	31%	35%	41%	39%	41%	41%
MD	65%	61%	59%	60%	63%	62%	59%	59%
MI	71%	70%	67%	68%	70%	70%	68%	71%
MN	46%	44%	43%	43%	46%	53%	63%	57%
MO	80%	81%	78%	82%	81%	86%	87%	87%
MS	40%	40%	38%	47%	46%	48%	55%	n/a
NC	76%	75%	75%	75%	71%	74%	78%	78%
NE	55%	62%	69%	67%	68%	71%	76%	n/a
NJ	73%	72%	76%	78%	79%	88%	89%	92%
NY	35%	35%	36%	41%	41%	40%	41%	41%
OK	88%	92%	92%	91%	91%	91%	93%	94%
OR	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PA	59%	63%	62%	62%	60%	60%	66%	70%
SC	84%	86%	84%	82%	82%	83%	83%	86%
TN	83%	86%	81%	82%	83%	82%	82%	83%
TX	69%	71%	74%	23%	28%	31%	36%	38%
VA	58%	62%	62%	61%	65%	69%	70%	69%
WI	68%	70%	73%	75%	73%	74%	74%	75%

Special notation: [p] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes:

The network participation rate is measured as the percentage of payments for professional services rendered within networks; identification of network care is based on information provided by the data sources.

AZ, CO, MO, NY, OK: The data for each of these states are not necessarily representative because each state is missing data from a larger data source that is significant in that state. The results in AZ, CO, NY, and OK are unlikely to be significantly under- or overestimated, given that these states use fee schedules to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in each state were materially different from other data sources included in this study from the same state. For MO, to the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to possible under- or overestimations in the results.

MS, NE: These states were excluded because of insufficient cell sizes in 2015 (half-year).

OR: The state is excluded from this table because missing data from a larger data source that is significant in the state may potentially lead to underestimation in this measure.

Key: n/a: not applicable.

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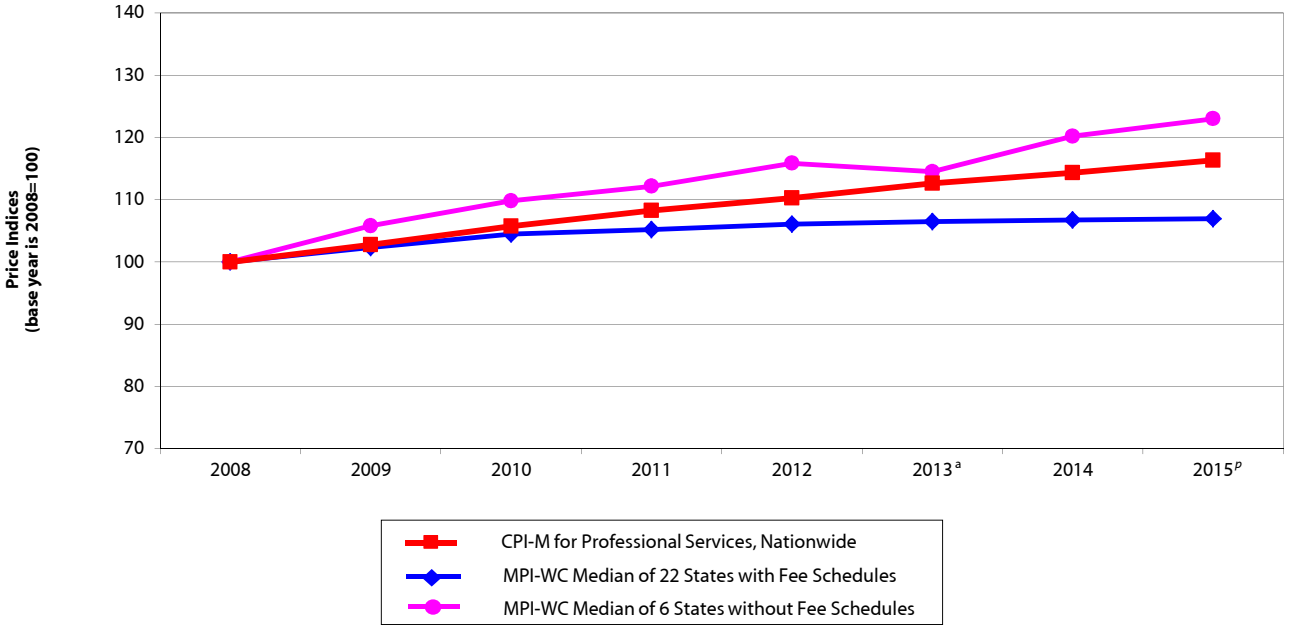
Figure 5 Comparing Trends of Price Index for Professional Services between MPI-WC and CPI-M, 2008 to 2015[p]

Calendar Year 2008 Is the Base Year for Index



Calendar Year 2008 Is the Base Year for Index

continued

Figure 5 Comparing Trends of Price Index for Professional Services between MPI-WC and CPI-M, 2008 to 2015^{p} (continued)

Trends of Price Index in MPI-WC, CPI-M for Professional Services, and PPI for Physician Care

	Annual Growth Rate (percentage change)							Average Annual Percentage Change
	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015^{p}	
CPI-M for professional services, nationwide	2.8%	2.9%	2.4%	1.9%	2.1%	1.5%	1.8%	2.2%
PPI - commodity for physician care, nationwide	n/a	2.9%	1.9%	1.1%	0.2%	0.6%	-0.6%	1.0%
MPI-WC median of 22 states with fee schedules	2.3%	2.1%	0.7%	0.8%	0.4%	0.3%	0.2%	1.0%
MPI-WC median of 6 states without fee schedules	5.8%	3.8%	2.1%	3.3%	-1.2%	5.0%	2.3%	3.0%

Special notation: ^{P} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes: For more information on Bureau of Labor Statistics' CPI-M by region, see Figure D.1. For additional information on Bureau of Labor Statistics' PPI - commodity for physician care, see Series ID WPU511101 located at http://www.bls.gov/ppi.

The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

[a] In 2013, most study states without fee schedules experienced slower growth in prices relative to earlier years. This change in trend was mainly due to the fundamental coding change affecting the prices paid for neurological/neuromuscular testing services (for more details, refer to "Discussion of Substantial Price Changes") as well as increases in network participation in some states, especially in New Jersey (for more details, refer to "Discussion of Key Lessons").

Key: CPI-M: Consumer Price Index for medical care; MPI-WC: Medical Price Index for Workers' Compensation; PPI: Producer Price Index - commodity for physican care.

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Table 8 Characteristics of Workers' Compensation Fee Schedules for Professional Medical Services, March 2016

State	Relative Value Scale Used	Conversion Factors (single or multiple)[a]	Most Recent Update of Fee Schedules	Relative Value Scale Edition	CPT Edition
Alabama	n/a	n/a	January 1, 2016	n/a	n/a
Alaska	RBRVS	Multiple	March 11, 2016	2016 RBRVS	2016
Arizona	n/a	n/a	October 1, 2015	n/a	2014
Arkansas	RBRVS	Multiple	January 1, 2016	2016 RBRVS	2016
California	RBRVS	Multiple	January 1, 2016	2016 RBRVS	2016
Colorado	RBRVS	Multiple	January 1, 2016	2015 RBRVS	2015
Connecticut	RBRVS	Multiple	July 15, 2015	2015 RBRVS	2015
Delaware	RBRVS	Multiple	January 31, 2016	2016 RBRVS	2016
District of Columbia	RBRVS	Single	January 1, 2016	2016 RBRVS	2016
Florida	RBRVS	Multiple	February 18, 2016	2008 RBRVS[b]	2015
Georgia	RBRVS	Multiple	April 1, 2015	2015 RBRVS	2015
Hawaii	RBRVS/HI RVU	Multiple	January 1, 2016	2016 RBRVS/2014 HI RVU	2016
Idaho	RBRVS	Multiple	January 1, 2016	2016 RBRVS	2016
Illinois	n/a	n/a	January 1, 2016	n/a	2016
Kansas[c]	RBRVS	Multiple	October 1, 2015	2014 RBRVS	2014
Kentucky[d]	KY RVU	Single	June 6, 2014	2013 KY RVU	2013
Louisiana	n/a	n/a	July 20, 2013	n/a	2012
Maine	RBRVS	Single	January 1, 2016	2016 RBRVS	2016
Maryland	RBRVS	Multiple	January 1, 2016	2016 RBRVS	2016
Massachusetts	n/a	n/a	January 1, 2016	n/a	2008 and any update
Michigan	RBRVS	Single	December 26, 2014	2014 RBRVS	2014
Minnesota	RBRVS	Multiple	October 1, 2015	2013 RBRVS	2013
Mississippi[c]	RBRVS	Multiple	March 3, 2016	2015 RBRVS	2013, 2014, 2015
Montana	RBRVS	Single	July 1, 2015	2015 RBRVS	2015
Nebraska	RBRVS	Multiple	January 1, 2016	2016 RBRVS	2016
Nevada	RVP	Multiple	February 1, 2016	2016 RVP	2016
New Mexico	n/a	n/a	January 1, 2016	n/a	2015
New York	NY RVU	Multiple	August 1, 2015	2015 NY RVU	2012
North Carolina	RBRVS	Multiple	January 1, 2016	2016 RBRVS	2016
North Dakota	RBRVS	Single	January 1, 2016	2016 RBRVS	2016
Ohio	RBRVS	Multiple	January 1, 2016	2016 RBRVS	2016
Oklahoma	RBRVS	Multiple	January 1, 2012	2011 RBRVS	2011 and 2015
Oregon	RBRVS	Multiple	January 1, 2016	2016 RBRVS	2016
Pennsylvania[e]	RBRVS	n/a	January 1, 2016	1994 RBRVS	2016
Rhode Island	n/a	n/a	May 1, 2014	n/a	2014
South Carolina[c]	RBRVS	Single	September 1, 2015	2015 RBRVS	2015
South Dakota	RVP	Multiple	June 26, 2013	2013 RVP	2013
Tennessee	RBRVS	Multiple	January 1, 2016	2016 RBRVS	2016
Texas	RBRVS	Multiple	January 1, 2016	2016 RBRVS	2016
Utah[c]	RBRVS	Multiple	December 1, 2015	2015 RBRVS	2015
Vermont	n/a	n/a	January 1, 2016	n/a	2006 and any update
Washington	RBRVS	Single	January 1, 2016	2016 RBRVS	2016
West Virginia	RBRVS	Single	January 1, 2016	2016 RBRVS	2016
Wyoming	RVP	Multiple	January 1, 2016	2016 RVP	2016

Source: Fomenko and Liu. 2016. *Designing Workers' Compensation Medical Fee Schedules, 2016.*

[a] The column for single or multiple conversion factors does not refer to anesthesia, laboratory, or pathology services.

[b] The Florida Workers' Compensation Health Care Provider Reimbursement Manual, 2015 Edition, became effective on July 1, 2016. This 2015 edition incorporates the 2014 Medicare conversion factor and RVUs.

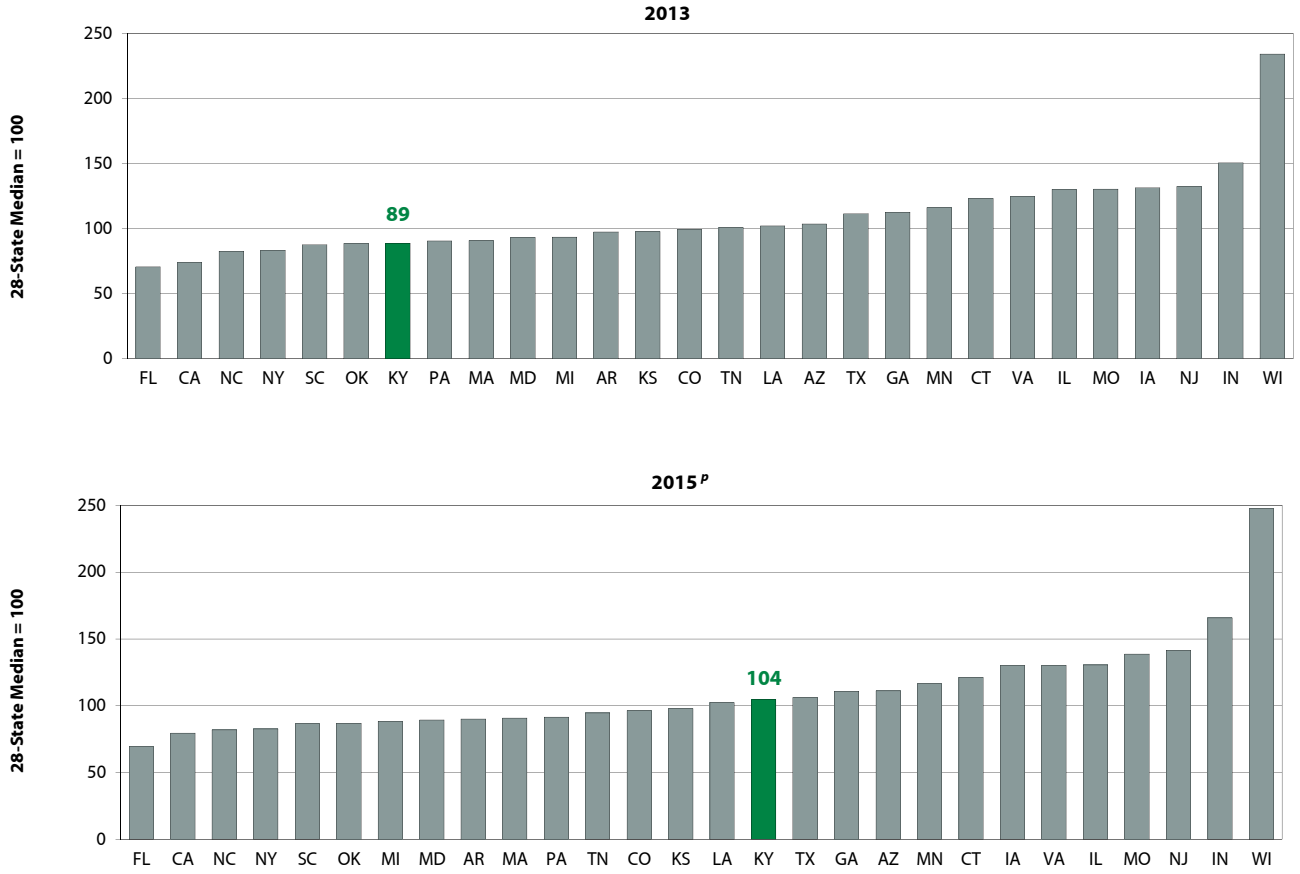
[c] Kansas, Mississippi, South Carolina, and Utah adopted Optum360®'s the Essential RBRVS to establish their workers' compensation fee schedules. The Essential RBRVS provides relative values for all the codes valued by CMS (RBRVS), as well relative values for many gap codes—codes without assigned values by Medicare.

[d] Kentucky relative values are based on historic data from FAIR Health commercial database values.

[e] In Pennsylvania, prior to January 1, 1995, the medical fees were capped at 113 percent of Medicare. Medical fee updates on and after January 1, 1995, are calculated based on the percentage changes in the statewide average weekly wage annually. These updates are effective on January 1 of each year, and they are cumulative. For any new CPT codes representing an entirely new service, the fee schedule rate is established based upon the Medicare fee with the 113 percent adjustment.

Key: CMS: Centers for Medicare & Medicaid Services; CPT: Current Procedural Terminology; n/a: not applicable; RBRVS: resource-based relative value scale (Medicare); RVP: Relative Values for Physicians; RVU: relative value unit.

Figure 6 Changes in Interstate Ranking for Kentucky on Medical Price Index for Overall Professional Services, 2013 and 2015^{p}



Special notation: ^{p} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the half-year data likely provide a reasonable approximation for interstate ranking across states in 2015, based on results for earlier years from the prior editions of this study (see Figure TA.1).

Notes:

The interstate comparisons for 2013 and 2015 contain 28 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year).

Effective June 6, 2014, Kentucky discontinued the use of relative values from Medicare's resource-based relative value scale (RBRVS) for its professional fee schedule and transitioned to using state-specific relative values based on historic data from Fair Health Commercial Database Values.

AZ, CO, MO, NY, OK: The data for each of these states are not necessarily representative because each state is missing data from a larger data source that is significant in that state. The results in AZ, CO, NY, and OK are unlikely to be significantly under- or overestimated, given that these states use fee schedules to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in each state were materially different from other data sources included in this study from the same state. For MO, to the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to possible under- or overestimations in the results.

IA, IN, MO, NJ, VA, WI: These states did not have a workers' compensation fee schedule in 2013 or 2015.

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Table 9 Interstate Ranking for Kentucky on Medical Price Index for Professional Services in 2013 and 2015[P]

Professional Service Group	Year	Medical Price Index	% Difference Compared with 28-State Median	28-State Ranking (1 = highest)	22-Fee-Schedule-State Ranking (1 = highest)
Overall	2013	89	-11%	22	16
	2015	104	4%	13	7
Evaluation and management	2013	83	-17%	21	15
	2015	101	1%	13	8
Physical medicine	2013	90	-10%	21	15
	2015	117	17%	8	2
Major surgery	2013	89	-11%	20	14
	2015	94	-6%	17	11
Pain management injections	2013	95	-5%	16	10
	2015	110	10%	11	5
Major radiology	2013	94	-6%	16	11
	2015	101	1%	13	8
Minor radiology	2013	78	-22%	23	17
	2015	81	-19%	22	16
Neurological/ neuromuscular testing	2013	86	-14%	21	15
	2015	70	-30%	24	18
Emergency	2013	77	-23%	26	20
	2015	100	0%	15	9

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the half-year data likely provide a reasonable approximation for interstate ranking across states in 2015, based on results for earlier years from the prior editions of this study (see Figure TA.1).

Notes:

This ranking comparison for Kentucky in 2013 and 2015 is based on 28 study states comprising the 22 states that use fee schedules to regulate the payment for professional services and the 6 states with no fee schedules as of June 30, 2015. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year).

Effective June 6, 2014, Kentucky discontinued the use of relative values from Medicare's resource-based relative value scale (RBRVS) for its professional fee schedule and transitioned to using state-specific relative values based on historic data from Fair Health Commercial Database Values.

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Table 10 Percentage Change in Prices Paid in Kentucky for Selected Service Groups and Procedures from 2013 to 2015[P]

Professional Service Group	CPT	Short Description	% Change in Prices Paid from 2013 to 2015[P]
Evaluation and management	99213	Established patient office visit, low-moderate severity, 15 minutes	23.4%
	99214	Established patient office visit, moderate-high severity, 25 minutes	20.4%
	99203	New patient office visit, moderate severity, 30 minutes	24.8%
	99204	New patient office visit, moderate-high severity, 45 minutes	21.9%
Physical medicine	97110	Therapeutic procedure, one or more areas, each 15 minutes, therapeutic exercises	31.1%
	97140	Manual therapy techniques, one or more regions, each 15 minutes	50.3%
	97530	Therapeutic activities, direct patient contact, each 15 minutes	31.3%
	97014	Electrical stimulation (unattended), one or more areas	33.9%
Major surgery	Shoulder arthroscopies	Arthroscopic shoulder surgery (i.e., CPT codes 29823, 29824, 29826, and 29827)	3.0%
	29881	Arthroscopy, knee surgery, with meniscectomy, medial or lateral	14.6%
	64721	Neuroplasty and/or transposition, median nerve at carpal tunnel	9.6%
	63030	Laminotomy with decompression of nerve root, one interspace, lumbar	4.0%
Major radiology	73221_PC	MRI, any joint of upper extremity, without contrast material, professional component	-7.8%
	73221_WP	MRI, any joint of upper extremity, without contrast material, whole procedure	1.1%
	73721_PC	MRI, any joint of lower extremity, without contrast material, professional component	-6.1%
	73721_WP	MRI, any joint of lower extremity, without contrast material, whole procedure	-0.5%
	72148_PC	MRI, spinal canal and contents, lumbar, without contrast components, professional component	-23.9%
	72148_WP	MRI, spinal canal and contents, lumbar, without contrast components, whole procedure	-1.1%
	70450_PC	Computed tomography, head or brain, without contrast material, professional component	-18.1%
	70450_WP	Computed tomography, head or brain, without contrast material, whole procedure	-0.5%

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes:

This table illustrates the change in prices paid in Kentucky between 2013 and 2015 for the most common procedures in each of the selected service groups.

In the major surgery service group, we used two sets of codes to represent arthroscopy shoulder surgeries, depending on the billing rules followed in the state. One set included code 29826, while the other did not. CPT 29826 is used for reporting shoulder arthroscopy; decompression of subacromial space with partial acromioplasty, with or without coracoacromial release. The *CPT 2012* book changed it from a standalone code to an add-on code. However, not every state followed this change. Fifteen study states followed this coding change and reimbursed CPT 29826 only as a non-primary or add-on procedure. For these states, the marketbasket consisting of primary surgical procedures did not include CPT 29826. On the contrary, 16 study states, including Kentucky, still reimbursed CPT 29826 as a primary surgical procedure, and CPT 29826 was included in the marketbasket in these states. See Table TA.3 for the list of arthroscopic shoulder surgery codes with and without 29826.

Radiology procedure codes often have modifiers to distinguish the technical component (e.g., using the radiology machine/devices) versus the professional component (e.g., reviewing the results) of the whole procedure. For the same procedure, these components are paid at different levels—usually 20 to 30 percent of the price for the whole procedure is paid for the professional component, and 70 to 80 percent of the price for the whole procedure is paid for the technical component. However, the modifier codes are missing for many services in the data. In this study, we developed an algorithm to identify radiology services that are billed and paid as the professional component separately from those billed and paid as the whole procedure. For details on the methods used in this algorithm, refer to the technical appendix, section "Identifying Modified Services for Radiology."

Key: CPT: Current Procedural Terminology; PC: professional component; WP: whole procedure.

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Table 11 Interstate Ranking for Arizona on Medical Price Index for Professional Services in 2013 and 2014

Professional Service Group	Year	Medical Price Index	% Difference Compared with 31-State Median	31-State Ranking (1 = highest)	25-Fee-Schedule-State Ranking (1 = highest)
Overall	2013	101	1%	15	9
	2014	110	10%	12	6
Evaluation and management	2013	85	-15%	22	16
	2014	100	0%	16	11
Physical medicine	2013	100	0%	17	11
	2014	112	12%	11	6
Major surgery	2013	123	23%	11	5
	2014	130	30%	10	5
Pain management injections	2013	92	-8%	20	14
	2014	100	0%	17	11
Major radiology	2013	87	-13%	24	19
	2014	94	-6%	21	16
Minor radiology	2013	97	-3%	17	11
	2014	99	-1%	17	11
Neurological/ neuromuscular testing	2013	142	42%	3	2
	2014	128	28%	7	3
Emergency	2013	114	14%	11	5
	2014	121	21%	10	4

Notes:

This ranking comparison for Arizona in 2013 and 2014 is based on 31 study states comprising the 25 states that use fee schedules to regulate the payment for professional services and the 6 states with no fee schedules.

Arizona publishes its fee schedule annually with effective dates of October 1 through September 30 of the following year. The Commission reviews the fee schedule values annually with a focus each year on one of four specific groups of codes and rotates through these specific groups of codes every four years. To calculate the fee schedule values for the codes under review, the Commission surveys the workers' compensation fee schedules from the states of Colorado, Nevada, New Mexico, North Carolina, Oregon, Utah, and Washington and uses the following methodology: (a) current Arizona values between the 75th and 100th percentile of the states surveyed will not be adjusted; (b) current Arizona values over the 100th percentile of the states surveyed will be reduced to the 100th percentile; and (c) current Arizona values below the 75th percentile will be increased to the 75th percentile subject to the following: Increases shall be capped at 25 percent, unless and except as necessary to bring a current value up to the 50th percentile. In October 2013, Arizona reviewed and adjusted the fee schedule rates for evaluation and management, physical medicine, and surgery codes from 25000 to 39599. This update increased the fee schedule rates for evaluation and management and physical medicine services; the fee schedule rates for many common surgeries remained unchanged or had only small increases. The most recent update covered in the study period in this report was effective October 1, 2014.

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Table 12 Interstate Ranking for Illinois on Medical Price Index for Professional Services in 2010 and 2012

Professional Service Group	Year	Medical Price Index	% Difference Compared with 31-State Median	31-State Ranking (1 = highest)	25-Fee-Schedule-State Ranking (1 = highest)
Overall	2010	189	89%	2	1
	2012	128	28%	6	2
Evaluation and management	2010	114	14%	6	4
	2012	80	-20%	25	19
Physical medicine	2010	167	67%	3	2
	2012	118	18%	6	3
Major surgery	2010	263	163%	1	1
	2012	182	82%	4	1
Pain management injections	2010	222	122%	3	1
	2012	163	63%	5	1
Major radiology	2010	166	66%	2	1
	2012	128	28%	5	2
Minor radiology	2010	214	114%	2	1
	2012	151	51%	5	1
Neurological/ neuromuscular testing	2010	200	100%	2	1
	2012	118	18%	8	3
Emergency	2010	190	90%	4	1
	2012	145	45%	7	1

Notes:

This ranking comparison for Illinois in 2010 and 2012 is based on 31 study states comprising the 25 states that use fee schedules to regulate the payment for professional services and the 6 states with no fee schedules.

Illinois passed legislation introducing a 30 percent reduction in the fee schedule rates effective September 2011. On January 1, 2012, Illinois discontinued its use of 29 geozip areas for physicians and other providers in favor of four county-based regions.

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Table 13 Interstate Ranking for Texas on Medical Price Index for Professional Services in 2010 and 2011

Professional Service Group	Year	Medical Price Index	% Difference Compared with 31-State Median	31-State Ranking (1 = highest)	25-Fee-Schedule-State Ranking (1 = highest)
Overall	2010	93	-7%	19	13
	2011	100	0%	15	9
Evaluation and management	2010	106	6%	11	6
	2011	119	19%	5	4
Physical medicine	2010	107	7%	12	7
	2011	122	22%	6	3
Major surgery	2010	67	-33%	27	21
	2011	81	-19%	24	18
Pain management injections	2010	71	-29%	27	21
	2011	83	-17%	24	18
Major radiology	2010	80	-20%	28	22
	2011	78	-22%	29	23
Minor radiology	2010	75	-25%	26	20
	2011	78	-22%	24	18
Neurological/ neuromuscular testing	2010	93	-7%	21	15
	2011	101	1%	15	9
Emergency	2010	98	-2%	17	11
	2011	100	0%	17	11

Notes:

This ranking comparison for Texas in 2010 and 2011 is based on 31 study states comprising the 25 states that use fee schedules to regulate the payment for professional services and the 6 states with no fee schedules.

In March 2008, Texas increased fee schedule rates for professional services, especially for surgeries, and allowed annual increases based on changes in the Medicare Economic Index. In 2011, the fee schedule rates in Texas increased for most professional services following the Medicare updates.

Table 14 Interstate Ranking for Massachusetts on Medical Price Index for Professional Services in 2008 and 2010

Professional Service Group	Year	Medical Price Index	% Difference Compared with 31-State Median	31-State Ranking (1 = highest)	25-Fee-Schedule-State Ranking (1 = highest)
Overall	2008	85	-15%	28	22
	2010	96	-4%	18	12
Evaluation and management	2008	83	-17%	26	20
	2010	83	-17%	24	18
Physical medicine	2008	69	-31%	31	25
	2010	73	-27%	30	24
Major surgery	2008	116	16%	11	5
	2010	144	44%	7	3
Pain management injections	2008	89	-11%	21	15
	2010	91	-9%	18	12
Major radiology	2008	79	-21%	29	23
	2010	86	-14%	22	17
Minor radiology	2008	65	-35%	30	24
	2010	67	-33%	28	22
Neurological/ neuromuscular testing	2008	68	-32%	31	25
	2010	65	-35%	31	25
Emergency	2008	66	-34%	31	25
	2010	68	-32%	31	25

Notes:

This ranking comparison for Massachusetts in 2008 and 2010 is based on 31 study states comprising the 25 states that use fee schedules to regulate the payment for professional services and the 6 states with no fee schedules.

Massachusetts increased the fee schedule rates for many professional services, effective April 2009. The fee schedule increases for major surgeries were especially significant; the rates for some surgeries increased to two to three times the previous rates to be more in line with the median prices paid. Prior to that, the fee schedule for professional services had not been updated since September 2004. A WCRI study showed that major surgeries were often paid above the fee schedule rates (Eccleston, 2006). This study found that for many of these surgeries, it was not uncommon for the median prices paid to be two or three times the fee schedule amount. Typically, 50–60 percent of these surgical procedures were paid above the fee schedule rate. System participants indicated that payors in the state were willing to negotiate with surgeons because injured workers had better outcomes and return to work was faster (Radeva, 2014b).

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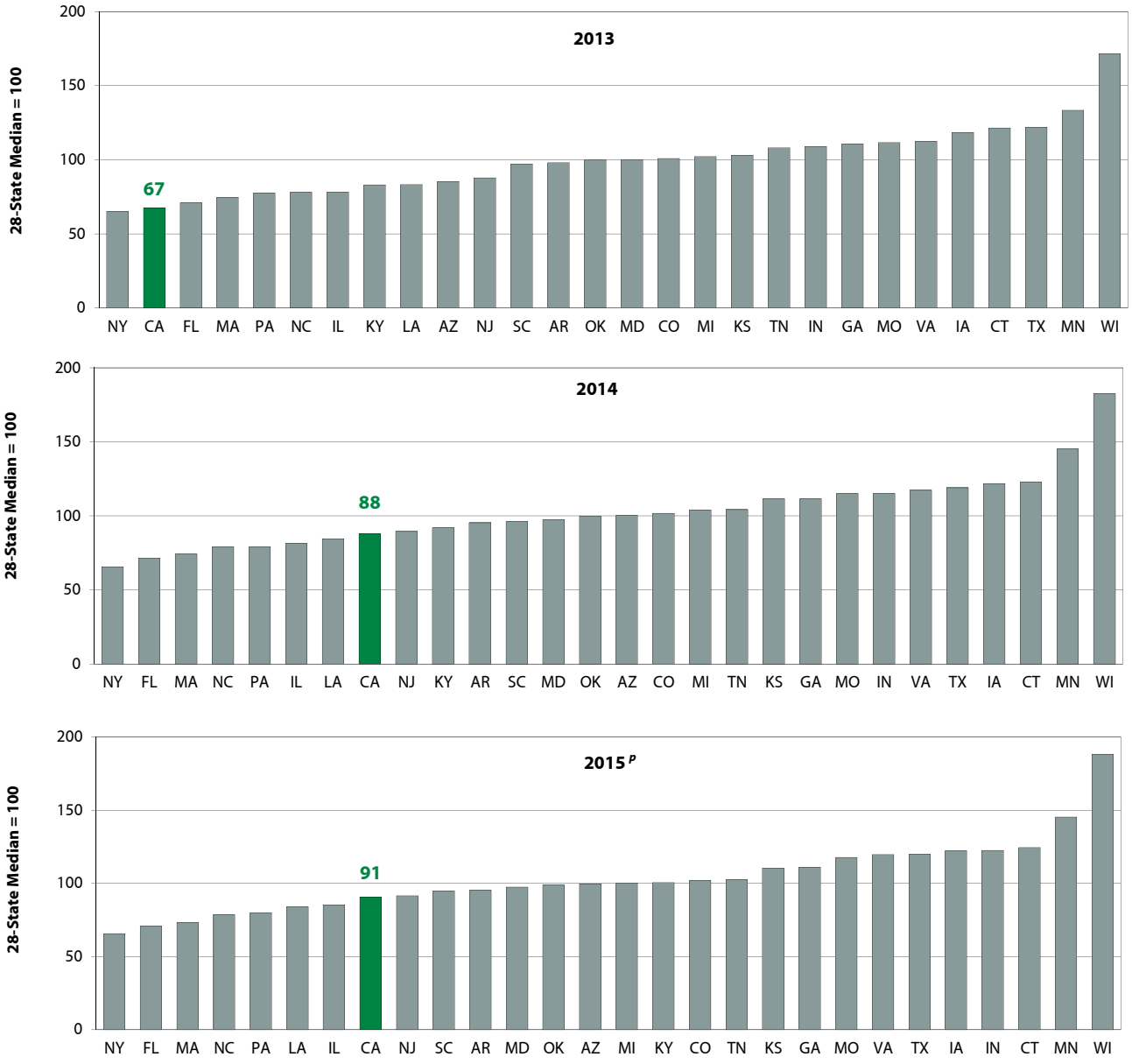
Figure 7 Changes in Interstate Ranking for California on Medical Price Index for Professional Evaluation and Management Services, 2013 to 2015[p]



Special notation: [p] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the half-year data likely provide a reasonable approximation for interstate ranking across states in 2015, based on results for earlier years from the prior editions of this study (see Figure TA.1).

Notes:

The interstate comparisons for 2013 through 2015 contain 28 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year).

Effective January 2014, California transitioned to an RBRVS-based fee schedule. This fee schedule change is a part of the workers' compensation reform legislation outlined in Senate Bill 863. This legislation requires the adoption of Medicare's RBRVS schedule for professional services to be phased in over four years, beginning in 2014, and to remain in effect until the Division of Workers' Compensation adopts an RBRVS schedule that allows no more than 120 percent of the aggregate fees allowed by Medicare. During the four-year transition period, the conversion factors for primary care services increase and the conversion factors for specialty services decrease. The latest update in the conversion factors covered in the study period of this report was in March 2015. Before this change, California used the Official Medical Fee Schedule (OMFS) to regulate the payment of professional services, and the maximum reimbursement rates in the OMFS remained unchanged since 2007.

AZ, CO, MO, NY, OK: The data for each of these states are not necessarily representative because each state is missing data from a larger data source that is significant in that state. The results in AZ, CO, NY, and OK are unlikely to be significantly under- or overestimated, given that these states use fee schedules to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in each state were materially different from other data sources included in this study from the same state. For MO, to the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to possible under- or overestimations in the results.

IA, IN, MO, NJ, VA, WI: These states did not have a workers' compensation fee schedule in 2013, 2014, or 2015.

Key: RBRVS: resource-based relative value scale (Medicare).

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Figure 8 Changes in Interstate Ranking for California on Medical Price Index for Professional Major Surgery Services, 2013 to 2015[P]

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the half-year data likely provide a reasonable approximation for interstate ranking across states in 2015, based on results for earlier years from the prior editions of this study (see Figure TA.1).

Notes:

The interstate comparisons for 2013 through 2015 contain 28 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year).

Effective January 2014, California transitioned to an RBRVS-based fee schedule. This fee schedule change is a part of the workers' compensation reform legislation outlined in Senate Bill 863. This legislation requires the adoption of Medicare's RBRVS schedule for professional services to be phased in over four years, beginning in 2014, and to remain in effect until the Division of Workers' Compensation adopts an RBRVS schedule that allows no more than 120 percent of the aggregate fees allowed by Medicare. During the four-year transition period, the conversion factors for primary care services increase and the conversion factors for specialty services decrease. The latest update in the conversion factors covered in the study period of this report was in March 2015. Before this change, California used the Official Medical Fee Schedule (OMFS) to regulate the payment of professional services, and the maximum reimbursement rates in the OMFS remained unchanged since 2007.

AZ, CO, MO, NY, OK: The data for each of these states are not necessarily representative because each state is missing data from a larger data source that is significant in that state. The results in AZ, CO, NY, and OK are unlikely to be significantly under- or overestimated, given that these states use fee schedules to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in each state were materially different from other data sources included in this study from the same state. For MO, to the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to possible under- or overestimations in the results.

IA, IN, MO, NJ, VA, WI: These states did not have a workers' compensation fee schedule in 2013, 2014, or 2015.

Key: RBRVS: resource-based relative value scale (Medicare).

Table 15 Interstate Ranking for California on Medical Price Index for Professional Services in 2013, 2014, and 2015[p]

Professional Service Group	Year	Medical Price Index	% Difference Compared with 28-State Median	28-State Ranking (1 = highest)	22-Fee-Schedule-State Ranking (1 = highest)
Overall	2013	74	-26%	27	21
	2014	80	-20%	27	21
	2015	80	-20%	27	21
Evaluation and management	2013	67	-33%	27	21
	2014	88	-12%	21	15
	2015	91	-9%	21	15
Physical medicine	2013	62	-38%	28	22
	2014	77	-23%	23	17
	2015	79	-21%	23	17
Major surgery	2013	91	-9%	18	12
	2014	72	-28%	26	20
	2015	70	-30%	26	20
Pain management injections	2013	59	-41%	28	22
	2014	61	-39%	28	22
	2015	61	-39%	28	22
Major radiology	2013	84	-16%	24	18
	2014	72	-28%	26	20
	2015	69	-31%	25	19
Minor radiology	2013	76	-24%	24	18
	2014	88	-12%	19	13
	2015	84	-16%	20	14
Neurological/ neuromuscular testing	2013	123	23%	8	7
	2014	71	-29%	24	18
	2015	79	-21%	22	16
Emergency	2013	80	-20%	24	18
	2014	71	-29%	26	20
	2015	73	-27%	26	20

Special notation: [p] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the half-year data likely provide a reasonable approximation for interstate ranking across states in 2015, based on results for earlier years from the prior editions of this study (see Figure TA.1).

Notes:

This ranking comparison for California in 2013 through 2015 is based on 28 study states comprising the 22 states that use fee schedules to regulate the payment for professional services and the 6 states with no fee schedules as of June 30, 2015. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year).

Effective January 2014, California transitioned to an RBRVS-based fee schedule. This fee schedule change is a part of the workers' compensation reform legislation outlined in Senate Bill 863. This legislation requires the adoption of Medicare's RBRVS schedule for professional services to be phased in over four years, beginning in 2014, and to remain in effect until the Division of Workers' Compensation adopts an RBRVS schedule that allows no more than 120 percent of the aggregate fees allowed by Medicare. During the four-year transition period, the conversion factors for primary care services increase and the conversion factors for specialty services decrease. The latest update in the conversion factors covered in the study period of this report was in March 2015. Before this change, California used the Official Medical Fee Schedule (OMFS) to regulate the payment of professional services, and the maximum reimbursement rates in the OMFS remained unchanged since 2007.

Key: RBRVS: resource-based relative value scale (Medicare).

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Table 16 States with Significant Annual Change in Prices Paid by Service Group from 2008 to 2015[p]

2008 to 2009

Evaluation & Management	Physical Medicine	Major Surgery	Pain Management Injections	Major Radiology	Minor Radiology	Neurological/ Neuromuscular Testing	Emergency Services
	OR (10.5%)	MA (26.5%)	IA* (14.5%)			MO* (13.3%)	MO* (11.7%)
		MO* (19.9%)	WI* (14.1%)				TX (11.2%)
		IN* (13.5%)	IL (12.5%)				NJ* (10.8%)
			CO (-10.4%)				IN* (10.7%)
			OR (-12.8%)				MN (10.2%)
			MD (-13.0%)				

2009 to 2010

Evaluation & Management	Physical Medicine	Major Surgery	Pain Management Injections	Major Radiology	Minor Radiology	Neurological/ Neuromuscular Testing	Emergency Services
KS (14.4%)	OR (11.0%)	TN (12.2%)	CO (22.7%)	SC (-11.6%)		AR (18.6%)	OR (32.5%)
NE (11.0%)			IN* (16.2%)	AR (-26.2%)		VA* (13.8%)	NE (21.1%)
AZ (10.8%)			WI* (14.9%)			MO* (11.9%)	SC (21.1%)
OR (10.4%)			TN (10.2%)			SC (11.2%)	AZ (19.3%)
						TN (11.1%)	KS (18.8%)
						WI* (10.7%)	TN (10.1%)
						AZ (10.1%)	

2010 to 2011

Evaluation & Management	Physical Medicine	Major Surgery	Pain Management Injections	Major Radiology	Minor Radiology	Neurological/ Neuromuscular Testing	Emergency Services
NY (19.4%)	TX (17.1%)	TX (21.0%)	TX (15.5%)	IL (-10.1%)	MD (11.4%)	TX (20.2%)	NY (17.4%)
TX (17.3%)	MD (12.4%)	GA (11.5%)	IL (-10.7%)	SC (-15.2%)	KY (10.9%)	GA (15.9%)	NE (11.8%)
MN (14.4%)	IL (-10.1%)	MN (-20.9%)	MN (-23.0%)		NJ* (10.6%)	SC (14.0%)	
OR (10.7%)					IL (-11.7%)	TN (13.2%)	
MD (10.1%)					AZ (-12.8%)		

2011 to 2012

Evaluation & Management	Physical Medicine	Major Surgery	Pain Management Injections	Major Radiology	Minor Radiology	Neurological/ Neuromuscular Testing	Emergency Services
OK (37.9%)	IL (-17.4%)	OK (-11.3%)	NJ* (10.2%)	KS (-11.5%)	TX (11.5%)	KS (16.8%)	OK (13.1%)
IL (-19.1%)		IL (-21.9%)	IL (-19.3%)	IL (-14.7%)	IL (-20.5%)	MA (14.5%)	IN* (11.1%)
						CO (14.3%)	IL (-12.5%)
						MN (12.8%)	
						NC (12.0%)	
						OR (11.5%)	
						IL (-24.2%)	

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Table 16 States with Significant Annual Change in Prices Paid by Service Group from 2008 to 2015[p] (continued)

2012 to 2013

Evaluation & Management	Physical Medicine	Major Surgery	Pain Management Injections	Major Radiology	Minor Radiology	Neurological/ Neuromuscular Testing	Emergency Services
NC (22.2%)		TN (-11.1%)	TN (-12.4%)	TN (-10.8%)	NJ* (-16.1%)	MA (14.5%)	
		NJ* (-18.3%)	NJ* (-15.7%)			KS (-10.1%)	
						NE (-11.5%)	
						CT (-17.7%)	
						MS (-17.7%)	
						MD (-20.4%)	
						MO* (-28.2%)	
						WI* (-28.7%)	
						TX (-29.7%)	
						VA* (-31.2%)	
						GA (-32.5%)	
						OR (-34.3%)	
						PA (-34.8%)	
						AR (-38.0%)	
						IA* (-38.4%)	
						TN (-38.9%)	
						IN* (-40.6%)	
						NJ* (-41.8%)	

2013 to 2014

Evaluation & Management	Physical Medicine	Major Surgery	Pain Management Injections	Major Radiology	Minor Radiology	Neurological/ Neuromuscular Testing	Emergency Services
CA (30.5%)	CA (27.4%)	CA (-21.2%)	MO* (11.4%)	CT (-12.3%)	MS (14.9%)	MS (30.4%)	KY (16.8%)
AZ (17.7%)	KY (16.8%)		NE (-10.5%)	AR (-17.4%)	CA (13.8%)	MO* (22.4%)	MO* (16.0%)
KY (10.7%)	MS (16.5%)		MD (-11.1%)	TN (-18.3%)	TX (-10.1%)	IN* (21.4%)	VA* (12.1%)
	AZ (15.5%)		GA (-12.4%)	MS (-19.1%)		NJ* (21.2%)	IN* (10.1%)
	KS (12.3%)		NJ* (-12.9%)	NE (-19.6%)		IA* (18.7%)	CA (-11.4%)
	IN* (11.8%)		TN (-13.6%)	TX (-19.7%)		VA* (12.7%)	NJ* (-12.5%)
	NJ* (11.0%)		TX (-14.5%)	MD (-19.9%)		NE (-10.1%)	
			AR (-19.1%)	CA (-20.1%)		OR (-10.8%)	
			CO (-38.2%)	KS (-23.2%)		AZ (-13.8%)	
				MN (-24.5%)		CT (-15.6%)	
						KY (-16.4%)	
						MN (-22.8%)	
						KS (-27.7%)	
						IL (-31.3%)	
						CA (-42.6%)	
						CO (-51.7%)	

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Table 16 States with Significant Annual Change in Prices Paid by Service Group from 2008 to 2015^{p} (continued)

2014 to 2015^{p}

Evaluation & Management	Physical Medicine	Major Surgery	Pain Management Injections	Major Radiology	Minor Radiology	Neurological/ Neuromuscular Testing	Emergency Services
KY (10.1%)	KY (14.3%)		TN (32.2%)	AR (-11.4%)		MI (-26.0%)	MO* (16.4%)
			TX (14.0%)	KS (-13.6%)		AZ (-31.6%)	IN* (14.2%)
			LA (13.1%)	MI (-38.9%)			KY (12.2%)
			AR (11.9%)				
			MI (-12.5%)				
			KS (-17.1%)				

Special notation: ^{p} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes:

Prices paid for neurological/neuromuscular testing services in most study states decreased starting in 2013. This general trend is related to a fundamental change implemented by the Centers for Medicare & Medicaid Services in the coding system for nerve conduction studies, which are the most commonly billed procedures in the neurological/neuromuscular testing service group. For more details, see "Discussion of Substantial Changes in Prices at Service-Type Level" and "Technical Appendix."

AZ, CO, MO, NY, OK, OR: The data for each of these states are not necessarily representative because each state is missing data from a larger data source that is significant in that state. The results in AZ, CO, NY, OK, and OR are unlikely to be significantly under- or overestimated, given that these states use fee schedules to regulate the reimbursement for professional services, and it is unlikely that the prices paid for the missing data source in each state were materially different from other data sources included in this study from the same state. For MO, to the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to possible under- or overestimations in the results.

MS, NE, OR: These states were excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

* These states do not have a workers' compensation fee schedule.

DATA AND METHODS

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The price index measures prices for professional services, holding the utilization of those services constant across study states and over time. It is based on a collection of the most common medical services provided to injured workers; this collection is called a marketbasket. To isolate the effect of price changes and interstate differences in prices, we held the marketbasket of services constant and used fixed weights to compute the average prices. The following sections describe the data used, the construction of the marketbasket, and the computation of the price index. The "Technical Appendix" provides further details on method.

THE DATA

The WCRI MPI-WC is based on the detailed medical bill data in the WCRI Detailed Benchmark/Evaluation (DBE) database, which comprises approximately 37 to 79 percent of the claims across most of the 31 study states.[1] The data in most of the study states are reasonably representative of the state systems, with the caveats described in the "Limitations and Caveats" section and the "Technical Appendix." The information to construct the marketbasket and to compute the price index comes from the medical bills associated with the claims in the DBE database. The basic unit of measurement is the price—the amount paid for each medical service.

THE MARKETBASKET

To represent the utilization of medical services, we selected a set of medical services most commonly used to treat injured workers—a marketbasket. The marketbasket of services was held constant across states and over time. Holding utilization constant allows us to isolate the effect of price changes and interstate differences in prices from the changes and interstate differences in patterns of medical care delivered. The professional services provided to injured workers generally fall into eight major service groups. Each of these groups represents a price index component. We reviewed the top procedure codes ranked by frequency for each of these groups. In general, we selected the most frequent codes so that the majority of expenditures in each service group was represented by selected codes. Codes in the marketbasket captured at least 90 percent of total expenditures for emergency services, evaluation and management, major radiology, and physical medicine (see "Technical Appendix," Table TA.4). For minor radiology, neurological/neuromuscular testing, and pain management injections, codes in the marketbasket represented 76 to 79 percent of total expenditures. The only exception is major surgery, where the codes in the marketbasket captured 44 percent of total expenditures. Service groups with lower representation in the marketbasket have a broader list of codes in each group, and adding additional codes added only a small percentage of payments each time. Also, the analysis of additional procedures would not be supported by the observed number of services in smaller states. We also tested the marketbasket to ensure that it was robust and represented the majority of workers' compensation expenditures on professional services in each of the study states (see "Technical Appendix," Tables TA.5).

[1] In Colorado, New York, and Oregon, the data represented a lower percentage of the population claims in each state, because our sample is missing data from a larger data source that is significant in each state.

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CREATING THE INDICES

We computed an average price paid for each of the individual services in the marketbasket for each state and for each year.[2] We computed the average price level of each service group as the weighted average of the individual service prices for the services in each group, relying on procedure-level frequency weights. The procedure-level weights are the relative frequency of each procedure in the marketbasket—that is, the total number of services for each procedure provided as a share of the total number of all services provided within the respective service group. The service group price levels were aggregated to a state-level price for *overall professional services* using the service group frequency weights. Here the service group frequency weights are the share of the number of services within each service group as a percentage of the total number of all professional services in the eight service groups, not limited to services captured by the marketbasket. Hence, the computed state-level indices reflect the relative importance of each service group as observed in the data and not distorted by differences in the proportion of services captured in the marketbasket for each service group. In particular, the marketbasket services for major surgery represented a substantially smaller fraction of all major surgery services than the marketbasket services for other service groups. If price growth for surgical services was higher than for other services in a state, the state-level price index would have underestimated the actual price growth if the frequency of the surgical services was based on services selected in the marketbasket.[3]

The index for the interstate comparisons uses the median state as a base, so an index of 120 simply means that the prices paid in that state were, on average, 20 percent higher than those in the median state.

The intrastate trend indices use calendar year 2008 as the base, so an index of 120 for calendar year 2015 means that the average price paid in 2015 was 20 percent higher than in 2008.

[2] Several data cleaning steps were necessary prior to creating the average unit price, including checking for outlier values, multiple units of services (or bundled services), and missing procedure code modifiers and applying a visit-level approach to nerve conduction studies. The methods for cleaning the data are described in more detail in the "Technical Appendix."

[3] This approach implicitly relies on an assumption that the price trends of services captured in the marketbasket for each service group are representative of all services observed in the data for a respective service group.

LIMITATIONS AND CAVEATS

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Here, we remind readers of several caveats to interpreting the price index.

First, to provide more recent information, we report prices in 2015 based on data from January 1, 2015, through June 30, 2015. The interstate rankings based on data from the first half of 2015 should provide a reasonable approximation for a state's ranking relative to other states based on a full year of 2015 data—especially for states that adjusted their fee schedules early in 2015 (see Figure TA.1). For states that adjusted their fee schedules after June 30, the index may understate or overstate their comparable price index for 2015. Among the 31 study states, Arizona, Connecticut, Minnesota, North Carolina, and South Carolina had fee schedule changes or updates within 2015 but after June 30, 2015. The same concern is also true to a lesser extent for states that adjusted their fee schedules in the second quarter of 2015. For states without fee schedules, it would not be surprising if the price index based on six months of data understates the value of the price index based on a full year of data. For the same reasons, the price changes from 2014 to 2015 in the report (based on half-year 2015 data) may understate or overstate the trends based on a full year of 2015 data in the study states. In addition, Colorado had a major fee schedule change effective January 2016—the state adopted the RBRVS-based relative values in the computation of the fee schedule rates. The next edition of this Medical Price Index study series will report prices paid for 2015 using full year data, and monitor the price changes after the fee schedule changes in the second half of 2015 and first half of 2016.

Second, this study is based on data from a group of large insurers, self-insurers, state funds, and third-party administrators in 31 states. The data for most study states are reasonably representative of the state systems; however, in a few states our data are not necessarily representative because they are missing data from a larger data source that is significant in the state. To the extent that prices paid may differ for the missing payors compared with those for other payors in the state, this may lead to under- or overestimations in the results. These states include Arizona, Colorado, Missouri, New York, Oklahoma, and Oregon, as noted throughout the tables and figures in this report. However, the results for Arizona, Colorado, New York, Oklahoma, and Oregon are unlikely to be significantly under- or overestimated, given that these states use fee schedules to regulate the payment for professional services; therefore, it is unlikely that the prices for the missing data source were materially different from other data sources included in this study from the same state.

Third, we use a single marketbasket of procedure codes across all states to hold utilization constant in order to isolate the effects of prices. In a few states, there are a limited number of unique state-specific procedure codes. Often these codes are mapped to the standard codes in the marketbasket. In a few states, such a mapping was not possible. In these cases, we omitted the state-specific codes (for a more detailed discussion, please refer to the section entitled "Selecting the Marketbasket" in the "Technical Appendix"). This omission might produce minor distortions in the interstate comparability but should not affect the individual state trends.

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PART 1: INTERSTATE COMPARISONS AND TRENDS FIGURES AND TABLES
PART 2: STATE TREND FIGURES

Part 1: Interstate Comparisons and Trends Figures and Tables

Service Group	Interstate Comparisons of Price Index		Price Trends from 2008 to 2015	
	2014	2015	In All States	In Each State
Overall	Table A.1 Figure A.1	Table A.2 Figure A.2	Figure B.1	Figures B.2–B.32
Evaluation and management	Table A.1 Figure A.3	Table A.2 Figure A.4	Table B.1	Figures C.1–C.31
Physical medicine	Table A.1 Figure A.5	Table A.2 Figure A.6	Table B.2	Figures C.1–C.31
Major surgery	Table A.1 Figure A.7	Table A.2 Figure A.8	Table B.3	Figures C.1–C.31
Pain management injections	Table A.1 Figure A.9	Table A.2 Figure A.10	Table B.4	Figures C.1–C.31
Major radiology	Table A.1 Figure A.11	Table A.2 Figure A.12	Table B.5	Figures C.1–C.31
Minor radiology	Table A.1 Figure A.13	Table A.2 Figure A.14	Table B.6	Figures C.1–C.31
Neurological/ neuromuscular testing	Table A.1 Figure A.15	Table A.2 Figure A.16	Table B.7	Figures C.1–C.31
Emergency	Table A.1 Figure A.17	Table A.2 Figure A.18	Table B.8	Figures C.1–C.31

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Part 2: State Trend Figures

State	Trends in Medical Prices for Professional Services	
Arizona	Overall	By Service Group
Arkansas	Overall	By Service Group
California	Overall	By Service Group
Colorado	Overall	By Service Group
Connecticut	Overall	By Service Group
Florida	Overall	By Service Group
Georgia	Overall	By Service Group
Illinois	Overall	By Service Group
Indiana	Overall	By Service Group
Iowa	Overall	By Service Group
Kansas	Overall	By Service Group
Kentucky	Overall	By Service Group
Louisiana	Overall	By Service Group
Maryland	Overall	By Service Group
Massachusetts	Overall	By Service Group
Michigan	Overall	By Service Group
Minnesota	Overall	By Service Group
Mississippi	Overall	By Service Group
Missouri	Overall	By Service Group
Nebraska	Overall	By Service Group
New Jersey	Overall	By Service Group
New York	Overall	By Service Group
North Carolina	Overall	By Service Group
Oklahoma	Overall	By Service Group
Oregon	Overall	By Service Group
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Texas	Overall	By Service Group
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Wisconsin	Overall	By Service Group

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Table A.1 WCRI MPI-WC—2014 Interstate Comparisons

Professional Services	Overall	Emergency	Evaluation & Management	Major Radiology	Minor Radiology	Neurological/ Neuromuscular Testing	Physical Medicine	Major Surgery	Pain Management Injections
AR	90	78	95	89	100	61	94	81	100
AZ[a]	110	121	100	94	99	128	112	130	100
CA	77	71	88	71	87	72	77	69	60
CO[a]	95	145	102	113	82	62	89	98	65
CT	119	98	123	109	125	108	96	170	126
FL	69	68	71	74	60	81	67	72	78
GA	109	93	111	93	133	85	100	136	96
IA[b]	129	153	122	198	157	113	121	125	206
IL	125	147	81	142	158	114	113	200	174
IN[b]	154	229	115	158	207	135	155	197	222
KS	99	94	111	81	92	80	100	94	130
KY	94	90	92	100	79	74	102	88	104
LA	100	105	84	125	102	117	109	94	159
MA	88	63	74	95	64	104	64	158	109
MD	87	81	97	59	72	71	100	73	63
MI	91	85	104	98	79	90	100	64	72
MN	113	117	145	102	111	100	113	85	98
MO[a,b]	132	222	115	134	180	138	123	160	175
MS	111	82	88	99	107	147	124	123	172
NC	80	78	79	122	87	84	71	86	94
NE	103	107	105	119	123	89	95	112	112
NJ[b]	131	219	89	93	118	130	109	242	204
NY[a]	81	110	66	97	121	150	67	107	76
OK[a]	86	90	100	114	72	103	76	78	78
OR[a]	133	122	156	133	116	97	139	107	137
PA	89	83	79	107	98	58	95	93	68
SC	84	88	96	72	72	104	90	65	73
TN	93	114	104	78	93	77	88	100	74
TX	104	100	119	65	85	90	119	83	73
VA[b]	128	207	117	138	172	110	121	143	176
WI[b]	238	272	182	370	334	252	195	327	411

Note: For definitions of the service groups, please see Table TA.1.

[a] The data for each of these states are not necessarily representative because each state is missing data from a larger data source that is significant in that state. The results in AZ, CO, NY, OK, and OR are unlikely to be significantly under- or overestimated, given that these states use fee schedules to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in each state were materially different from other data sources included in this study from the same state. For MO, to the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to possible under- or overestimations in the results.

[b] This state had no workers' compensation fee schedule in 2014.

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Table A.2 WCRI MPI-WC—2015^{p} Interstate Comparisons

Professional Services	Overall	Emergency	Evaluation & Management	Major Radiology	Minor Radiology	Neurological/ Neuromuscular Testing	Physical Medicine	Major Surgery	Pain Management Injections
AR	90	78	95	80	97	69	91	83	114
AZ[a,b]	111	122	100	100	107	91	111	133	101
CA	80	73	91	69	84	79	79	70	61
CO[a]	96	146	102	115	84	68	87	100	64
CT[b]	121	99	124	100	123	109	96	175	127
FL	70	67	71	74	61	85	66	71	79
GA	111	95	111	93	131	90	101	138	97
IA[c]	130	158	122	201	155	121	120	122	203
IL	131	145	85	143	165	129	114	210	183
IN[c]	166	259	123	157	215	142	163	213	243
KS	98	93	111	71	88	85	97	93	110
KY	104	100	101	101	81	70	117	94	110
LA	102	103	84	126	104	120	107	100	184
MA	91	62	73	96	65	117	65	165	108
MD	89	80	97	56	69	75	100	76	70
MI	88	82	100	61	75	69	100	65	64
MN[b]	116	117	145	103	113	104	112	91	98
MO[a,c]	139	255	118	129	188	154	126	171	167
NC[b]	82	77	78	124	90	87	69	92	96
NJ[c]	141	203	92	91	121	147	118	269	194
NY[a]	83	108	66	99	124	157	69	110	77
OK[a]	87	89	99	117	74	109	74	82	81
PA	91	83	80	107	103	60	95	98	70
SC[b]	86	88	95	72	73	110	91	69	80
TN	95	115	103	74	89	80	85	109	99
TX	106	100	120	62	82	96	118	86	85
VA[c]	130	216	120	135	173	122	120	144	180
WI[c]	247	276	188	349	347	266	206	336	436

Special notation: ^{p} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the half-year data likely provide a reasonable approximation for interstate ranking across states in 2015, based on results for earlier years from the prior editions of this study (see Figure TA.1).

Notes:

For definitions of the service groups, please see Table TA.1.

MS, NE, OR: These states were excluded because of insufficient cell sizes in 2015 (half-year).

[a] The data for each of these states are not necessarily representative because each state is missing data from a larger data source that is significant in that state. The results in AZ, CO, NY, and OK are unlikely to be significantly under- or overestimated, given that these states use fee schedules to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in each state were materially different from other data sources included in this study from the same state. For MO, to the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to possible under- or overestimations in the results.

[b] This state had fee schedule changes or updates within 2015 but after June 30, 2015, that are not reflected in the results.

[c] This state had no workers' compensation fee schedule in 2015.

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Figure A.1 Interstate Comparison of Prices Paid for Professional Services, WCRI MPI-WC in 31 States, 2014

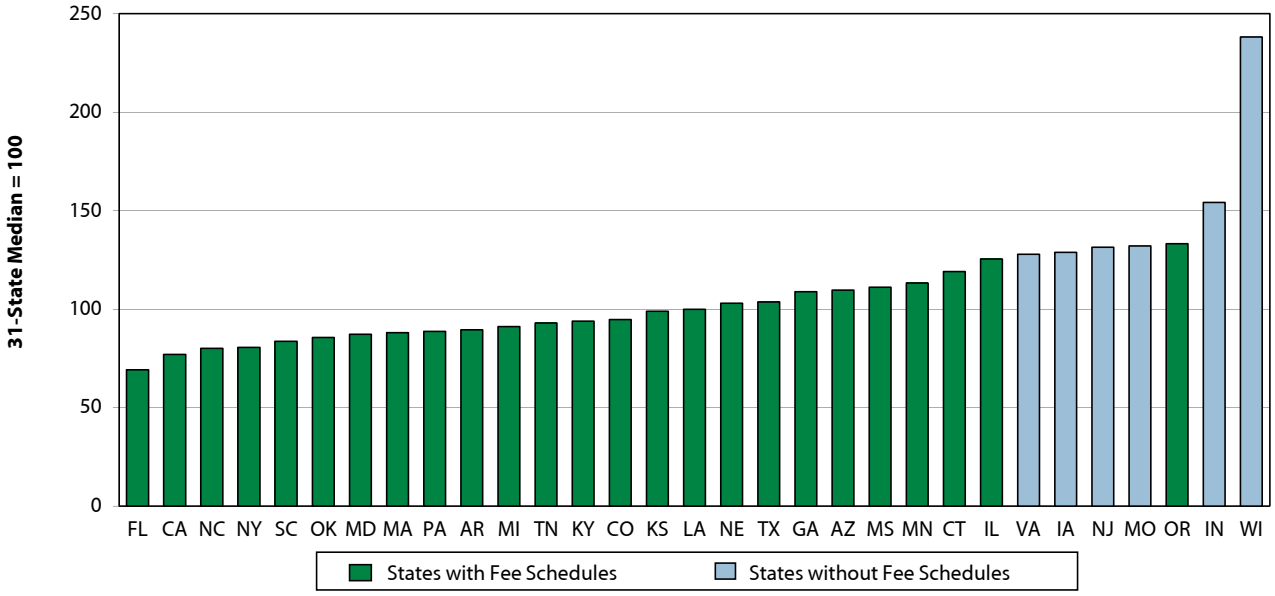
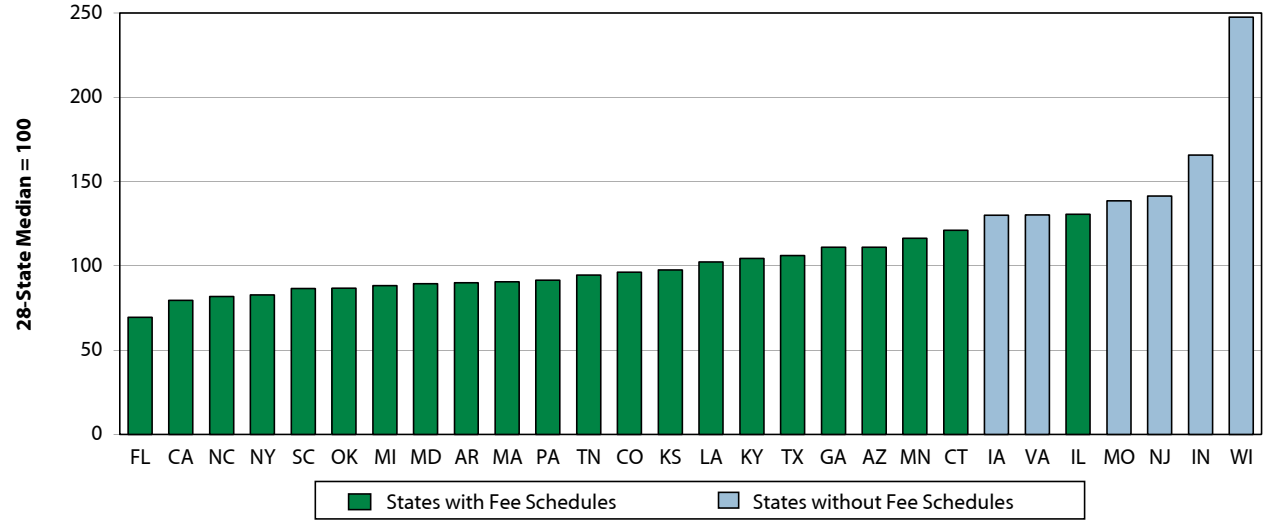


Figure A.2 Interstate Comparison of Prices Paid for Professional Services, WCRI MPI-WC in 28 States, 2015^{p}



Special notation: ^{p} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the half-year data likely provide a reasonable approximation for interstate ranking across states in 2015, based on results for earlier years from the prior editions of this study (see Figure TA.1).

Notes:

This study focuses on prices paid for professional services that are billed by physicians, physical therapists/occupational therapists, and chiropractors. Services billed by hospitals or ambulatory surgery centers and services billed for durable medical equipment as well as pharmaceuticals are excluded.

The indices for 2015 are based on a 28-state median. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year).

AZ, CO, MO, NY, OK, OR: The data for each of these states are not necessarily representative because each state is missing data from a larger data source that is significant in that state. The results in AZ, CO, NY, OK, and OR are unlikely to be significantly under- or overestimated, given that these states use fee schedules to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in each state were materially different from other data sources included in this study from the same state. For MO, to the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to possible under- or overestimations in the results.

IA, IN, MO, NJ, VA, WI: These states had no workers' compensation fee schedule in 2014 or 2015.

AZ, CT, MN, NC, SC: These states had fee schedule changes or updates within 2015 but after June 30, 2015, that are not reflected in the results.

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Figure A.3 Interstate Comparison of Prices Paid for Professional Evaluation and Management Services, WCRI MPI-WC in 31 States, 2014

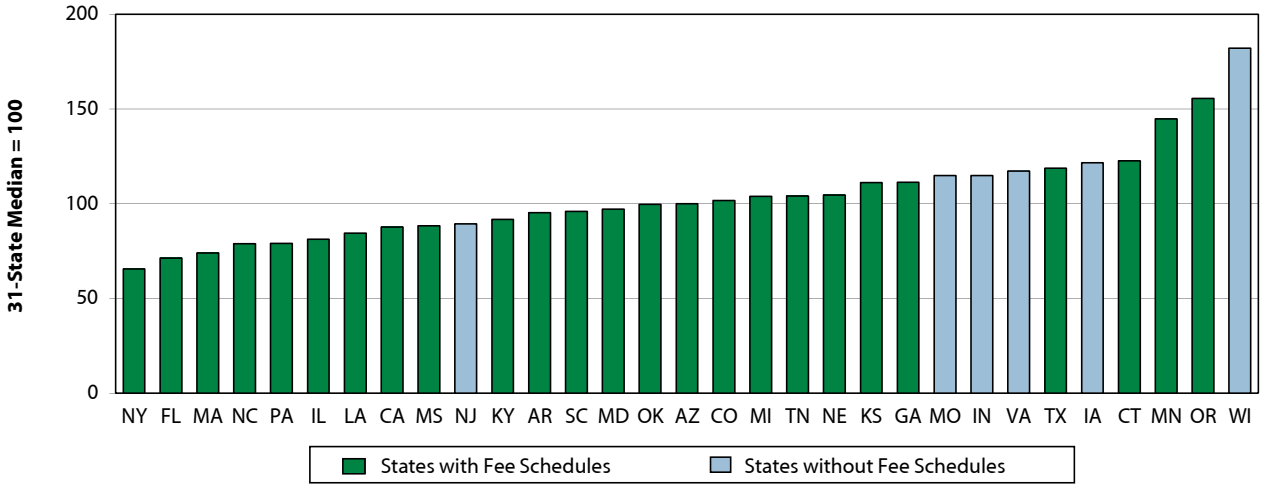
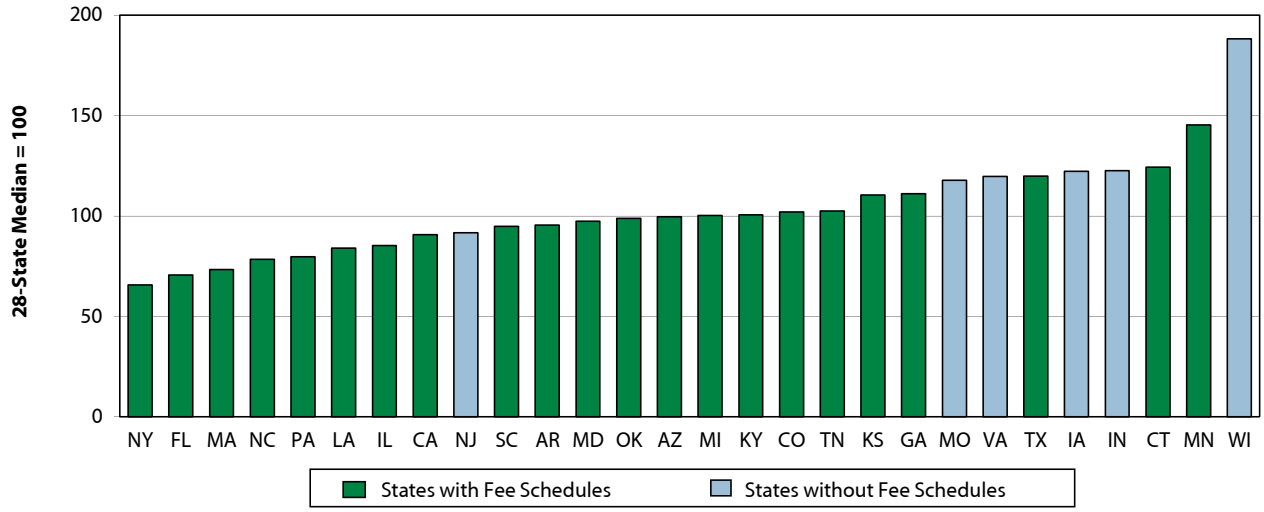


Figure A.4 Interstate Comparison of Prices Paid for Professional Evaluation and Management Services, WCRI MPI-WC in 28 States, 2015^{p}



Special notation: ^{P} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the half-year data likely provide a reasonable approximation for interstate ranking across states in 2015, based on results for earlier years from the prior editions of this study (see Figure TA.1).

Notes:

Evaluation and management: The services in this group are new and established patient office visits. These consist of office visits that require at least two of three parts: a problem focused history, a problem focused examination, and/or straightforward medical decision making of various complexities. See Table TA.2 for a detailed description of all service codes included in this group.

The indices for 2015 are based on a 28-state median. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year).

AZ, CO, MO, NY, OK, OR: The data for each of these states are not necessarily representative because each state is missing data from a larger data source that is significant in that state. The results in AZ, CO, NY, OK, and OR are unlikely to be significantly under- or overestimated, given that these states use fee schedules to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in each state were materially different from other data sources included in this study from the same state. For MO, to the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to possible under- or overestimations in the results.

IA, IN, MO, NJ, VA, WI: These states had no workers' compensation fee schedule in 2014 or 2015.

AZ, CT, MN, NC, SC: These states had fee schedule changes or updates within 2015 but after June 30, 2015, that are not reflected in the results.

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Figure A.5 Interstate Comparison of Prices Paid for Professional Physical Medicine Services, WCRI MPI-WC in 31 States, 2014

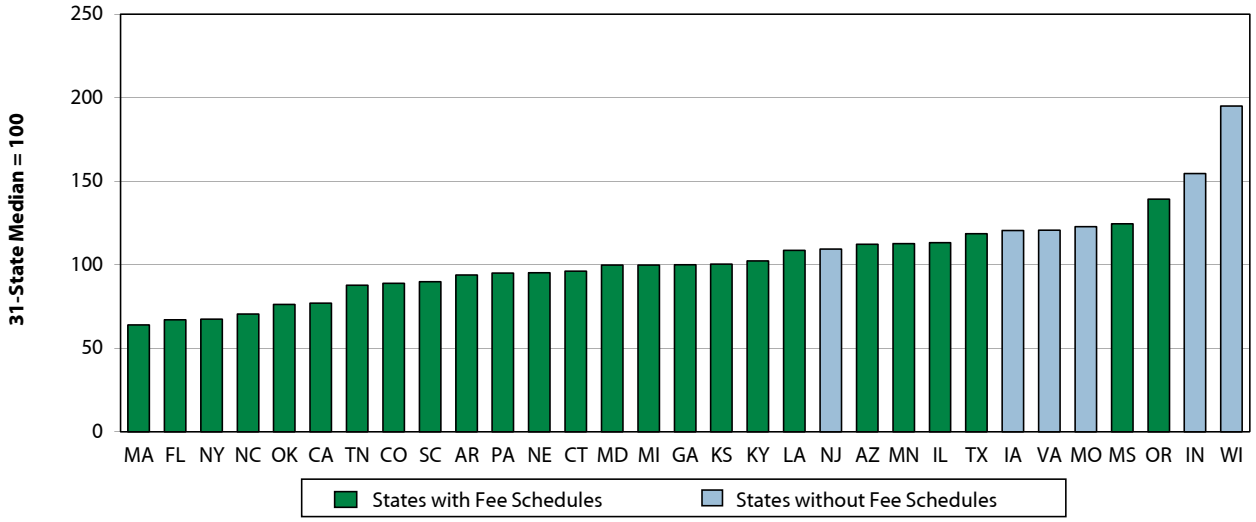
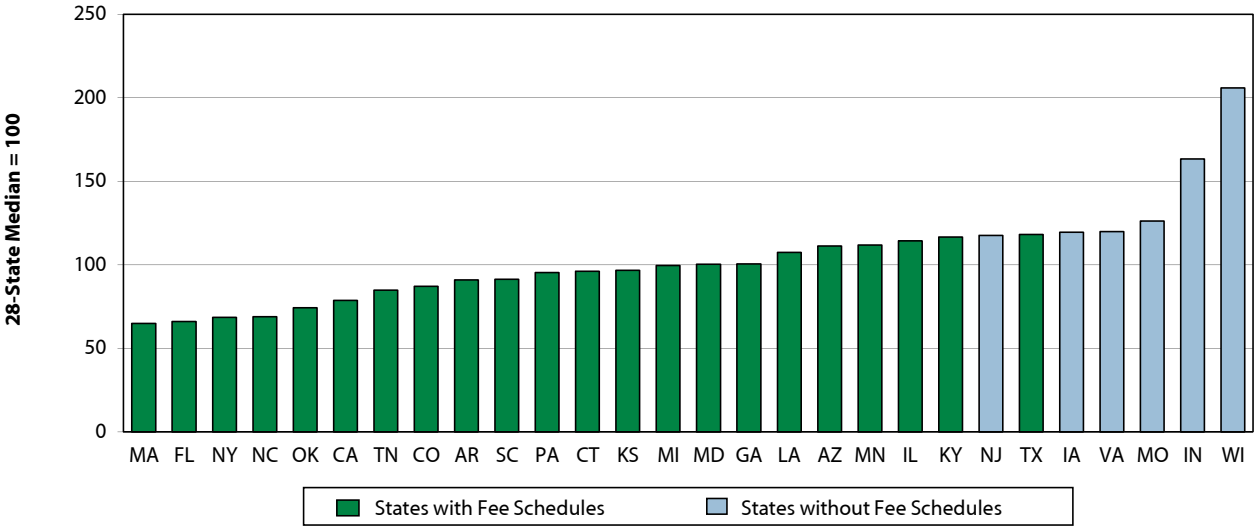


Figure A.6 Interstate Comparison of Prices Paid for Professional Physical Medicine Services, WCRI MPI-WC in 28 States, 2015^{P}



Special notation: ^{P} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the half-year data likely provide a reasonable approximation for interstate ranking across states in 2015, based on results for earlier years from the prior editions of this study (see Figure TA.1).

Notes:

Physical medicine: The services in this group include physical medicine procedures, modalities, therapeutic activities and manual therapy techniques involving one or more areas, electronic stimulation, and work hardening/conditioning, as well as chiropractic care and manipulations. These services may be provided by physical therapists and occupational therapists as well as chiropractors. Physical medicine codes may be billed by physicians, chiropractors, or physical therapists and occupational therapists. See Table TA.2 for a detailed description of all service codes included in this group.

The indices for 2015 are based on a 28-state median. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year).

AZ, CO, MO, NY, OK, OR: The data for each of these states are not necessarily representative because each state is missing data from a larger data source that is significant in that state. The results in AZ, CO, NY, OK, and OR are unlikely to be significantly under- or overestimated, given that these states use fee schedules to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in each state were materially different from other data sources included in this study from the same state. For MO, to the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to possible under- or overestimations in the results.

IA, IN, MO, NJ, VA, WI: These states had no workers' compensation fee schedule in 2014 or 2015.

AZ, CT, MN, NC, SC: These states had fee schedule changes or updates within 2015 but after June 30, 2015, that are not reflected in the results.

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Figure A.7 Interstate Comparison of Prices Paid for Professional Major Surgery Services, WCRI MPI-WC in 31 States, 2014

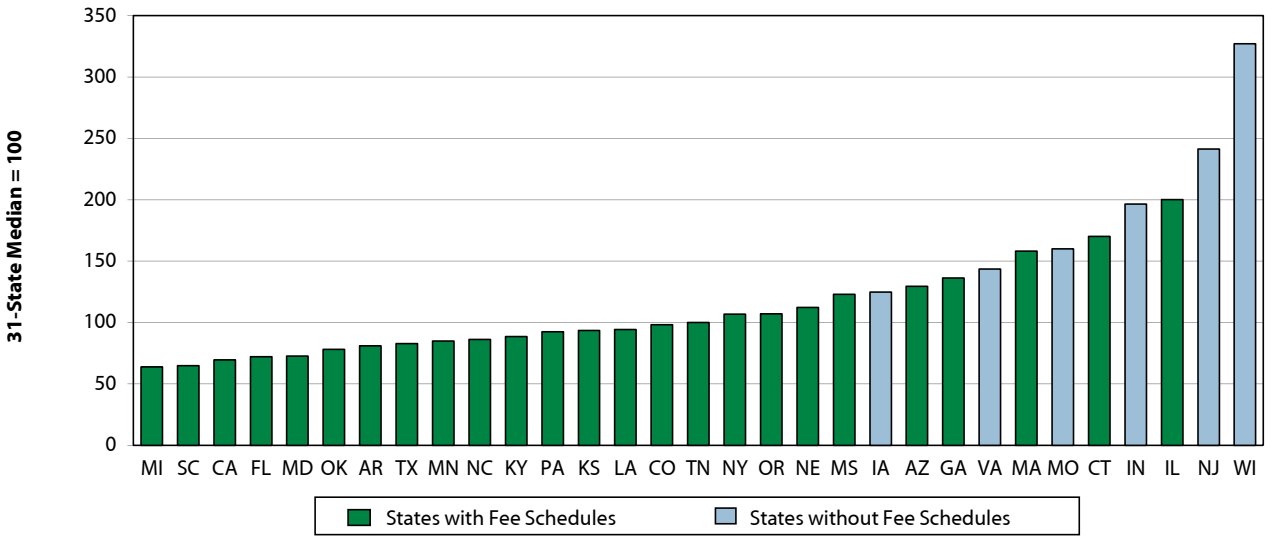
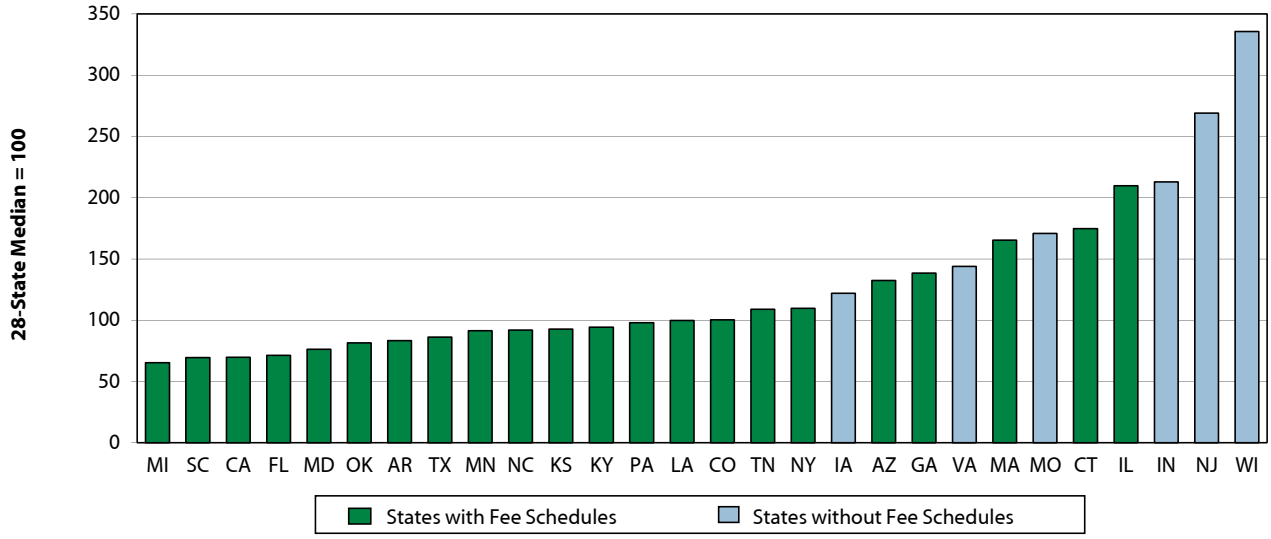


Figure A.8 Interstate Comparison of Prices Paid for Professional Major Surgery Services, WCRI MPI-WC in 28 States, 2015^{p}



Special notation: ^{p} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the half-year data likely provide a reasonable approximation for interstate ranking across states in 2015, based on results for earlier years from the prior editions of this study (see Figure TA.1).

Notes:

Major surgery: The majority of the services in this group include orthopedic surgeries, such as arthroscopy of the shoulder or knee and lumbar laminotomies, neuroplasty and/or transposition of the median nerve at the carpal tunnel, and hernia repair. See Table TA.2 for a detailed description of all service codes included in this group.

The indices for 2015 are based on a 28-state median. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year).

AZ, CO, MO, NY, OK, OR: The data for each of these states are not necessarily representative because each state is missing data from a larger data source that is significant in that state. The results in AZ, CO, NY, OK, and OR are unlikely to be significantly under- or overestimated, given that these states use fee schedules to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in each state were materially different from other data sources included in this study from the same state. For MO, to the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to possible under- or overestimations in the results.

IA, IN, MO, NJ, VA, WI: These states had no workers' compensation fee schedule in 2014 or 2015.

AZ, CT, MN, NC, SC: These states had fee schedule changes or updates within 2015 but after June 30, 2015, that are not reflected in the results.

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Figure A.9 Interstate Comparison of Prices Paid for Professional Pain Management Injection Services, WCRI MPI-WC in 31 States, 2014

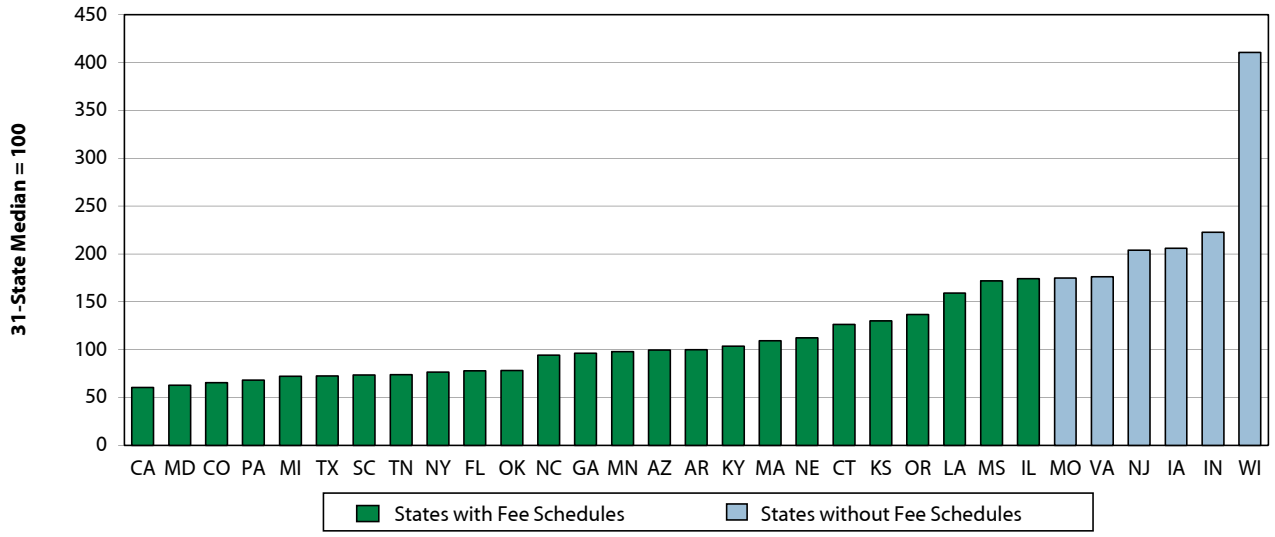
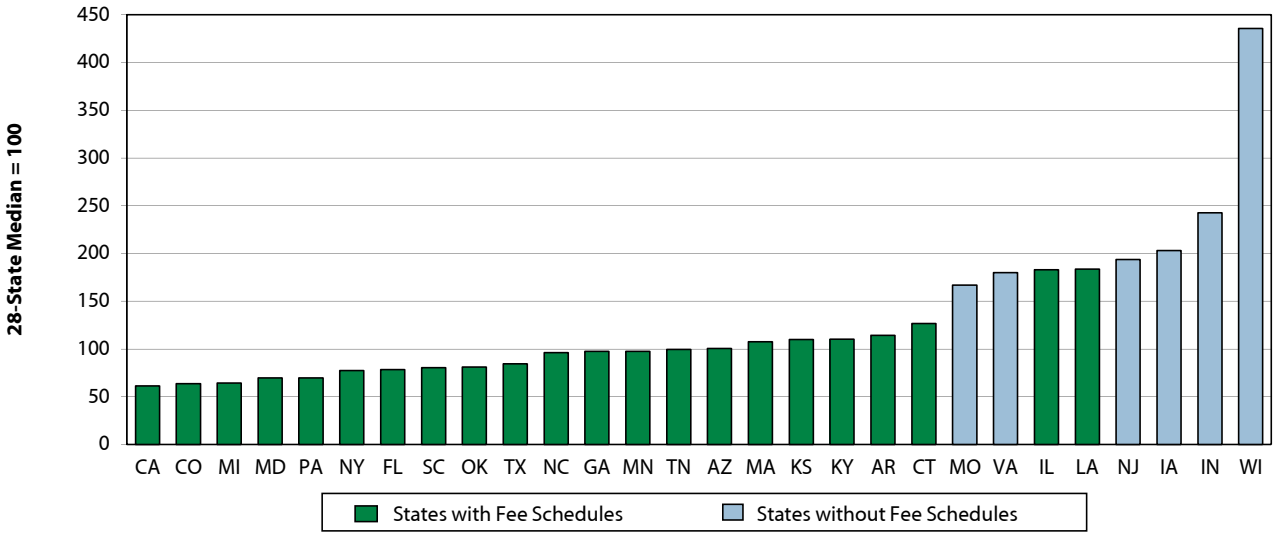


Figure A.10 Interstate Comparison of Prices Paid for Professional Pain Management Injection Services, WCRI MPI-WC in 28 States, 2015^{p}



Special notation: ^{p} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the half-year data likely provide a reasonable approximation for interstate ranking across states in 2015, based on results for earlier years from the prior editions of this study (see Figure TA.1).

Notes:

Pain management injections: The services in this group include injection procedures that are commonly used for pain management, such as epidural or steroid injections on nerve roots and muscles for lumbar, sacral, cervical, or thoracic areas. See Table TA.2 for a detailed description of all service codes included in this group.

The indices for 2015 are based on a 28-state median. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year).

AZ, CO, MO, NY, OK, OR: The data for each of these states are not necessarily representative because each state is missing data from a larger data source that is significant in that state. The results in AZ, CO, NY, OK, and OR are unlikely to be significantly under- or overestimated, given that these states use fee schedules to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in each state were materially different from other data sources included in this study from the same state. For MO, to the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to possible under- or overestimations in the results.

IA, IN, MO, NJ, VA, WI: These states had no workers' compensation fee schedule in 2014 or 2015.

AZ, CT, MN, NC, SC: These states had fee schedule changes or updates within 2015 but after June 30, 2015, that are not reflected in the results.

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Figure A.11 Interstate Comparison of Prices Paid for Professional Major Radiology Services, WCRI MPI-WC in 31 States, 2014

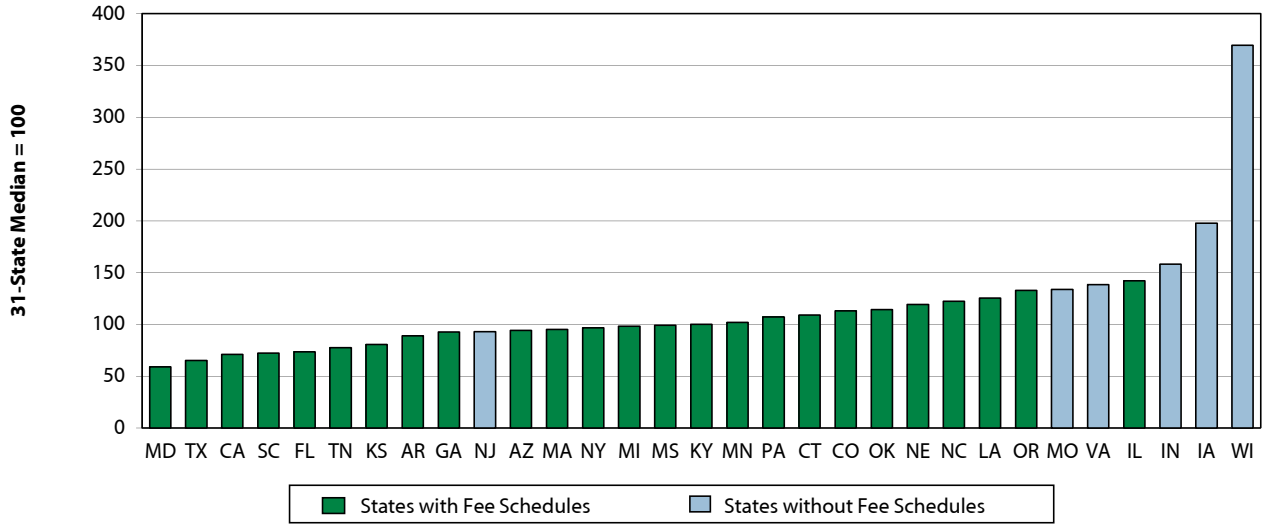
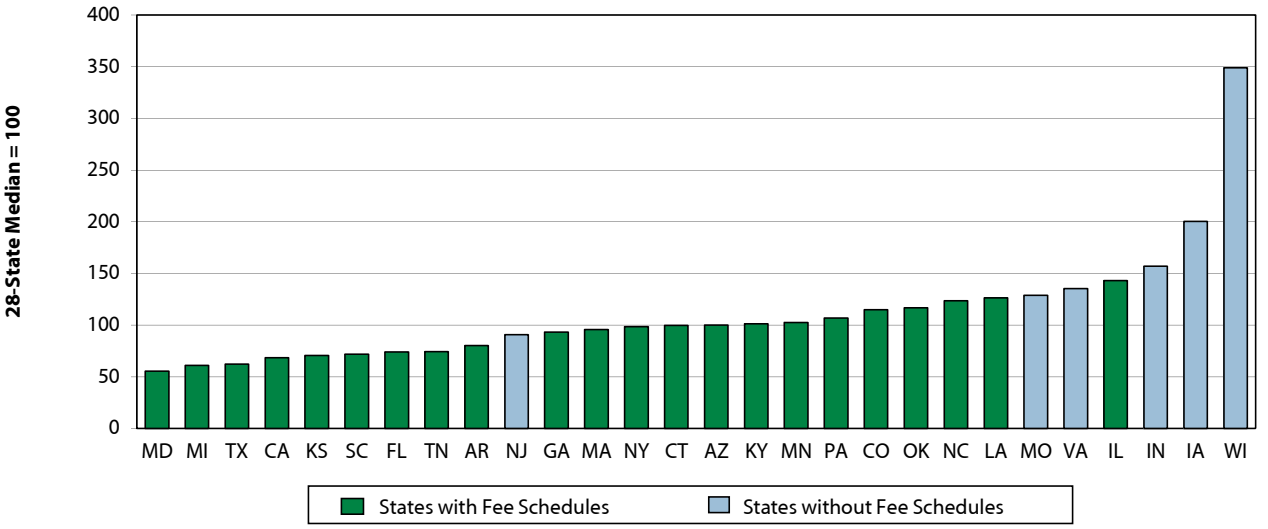


Figure A.12 Interstate Comparison of Prices Paid for Professional Major Radiology Services, WCRI MPI-WC in 28 States, 2015^{p}



Special notation: ^{p} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the half-year data likely provide a reasonable approximation for interstate ranking across states in 2015, based on results for earlier years from the prior editions of this study (see Figure TA.1).

Notes:

Major radiology: The services in this group mostly include magnetic resonance imaging of various areas, including, but not limited to, spinal canal and contents, cervical, lumbar, and any joint of the upper or lower extremity. See Table TA.2 for a detailed description of all service codes included in this group.

The indices for 2015 are based on a 28-state median. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year).

AZ, CO, MO, NY, OK, OR: The data for each of these states are not necessarily representative because each state is missing data from a larger data source that is significant in that state. The results in AZ, CO, NY, OK, and OR are unlikely to be significantly under- or overestimated, given that these states use fee schedules to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in each state were materially different from other data sources included in this study from the same state. For MO, to the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to possible under- or overestimations in the results.

IA, IN, MO, NJ, VA, WI: These states had no workers' compensation fee schedule in 2014 or 2015.

AZ, CT, MN, NC, SC: These states had fee schedule changes or updates within 2015 but after June 30, 2015, that are not reflected in the results.

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Figure A.13 Interstate Comparison of Prices Paid for Professional Minor Radiology Services, WCRI MPI-WC in 31 States, 2014

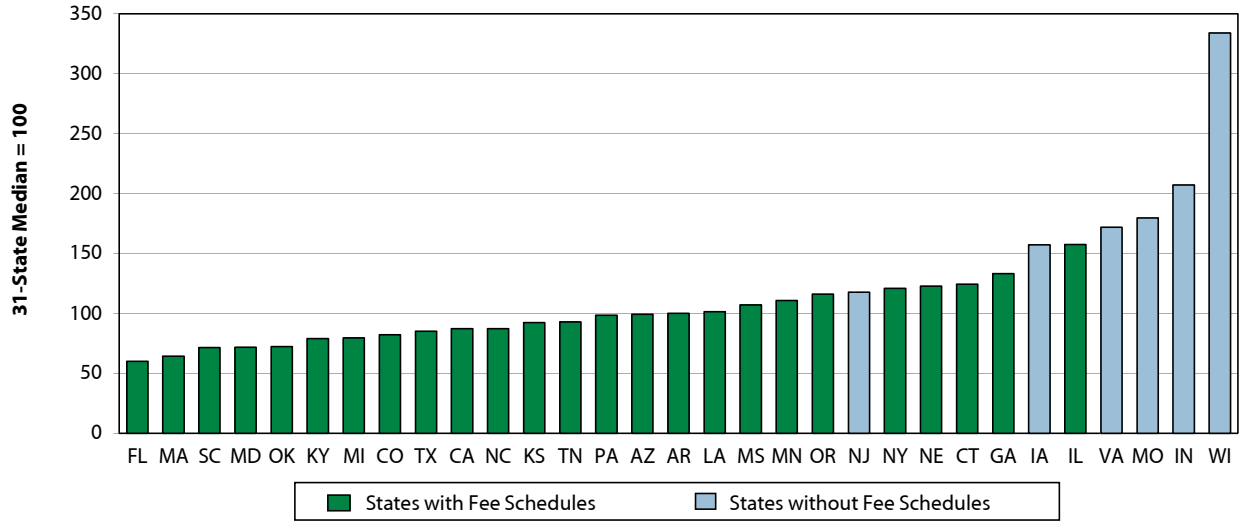
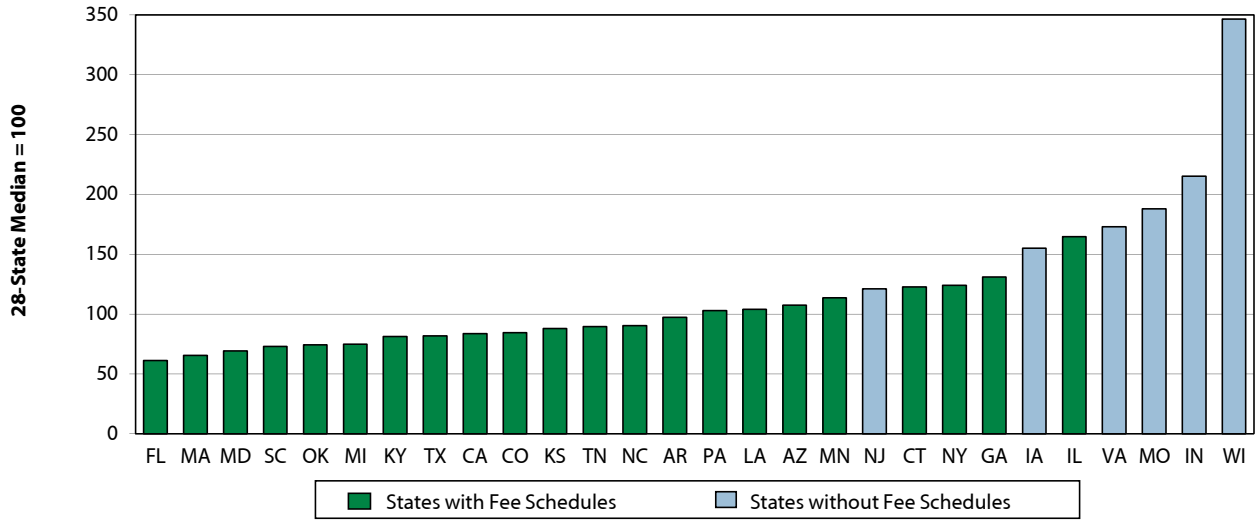


Figure A.14 Interstate Comparison of Prices Paid for Professional Minor Radiology Services, WCRI MPI-WC in 28 States, 2015^{P}



Special notation: ^{P} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the half-year data likely provide a reasonable approximation for interstate ranking across states in 2015, based on results for earlier years from the prior editions of this study (see Figure TA.1).

Notes:

Minor radiology: The services in this group mostly include radiologic exams (X rays or ultrasounds) involving at least two views of various areas of the body, including, but not limited to, the spine, lumbosacral, shoulder, and wrist. See Table TA.2 for a detailed description of all service codes included in this group.

The indices for 2015 are based on a 28-state median. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year).

AZ, CO, MO, NY, OK, OR: The data for each of these states are not necessarily representative because each state is missing data from a larger data source that is significant in that state. The results in AZ, CO, NY, OK, and OR are unlikely to be significantly under- or overestimated, given that these states use fee schedules to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in each state were materially different from other data sources included in this study from the same state. For MO, to the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to possible under- or overestimations in the results.

IA, IN, MO, NJ, VA, WI: These states had no workers' compensation fee schedule in 2014 or 2015.

AZ, CT, MN, NC, SC: These states had fee schedule changes or updates within 2015 but after June 30, 2015, that are not reflected in the results.

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Figure A.15 Interstate Comparison of Prices Paid for Professional Neurological/Neuromuscular Testing Services, WCRI MPI-WC in 31 States, 2014

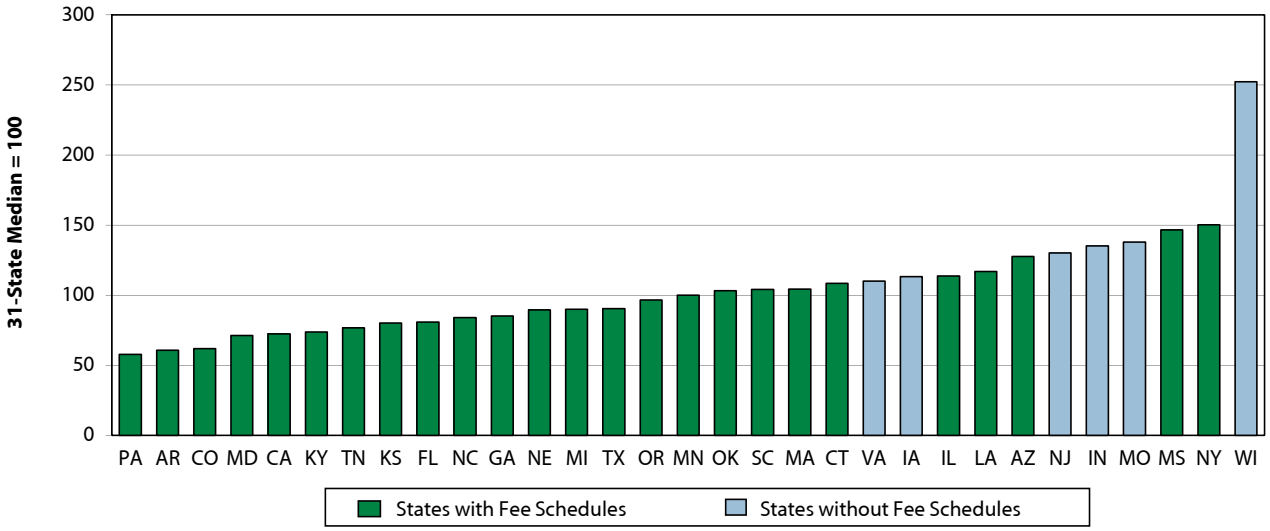
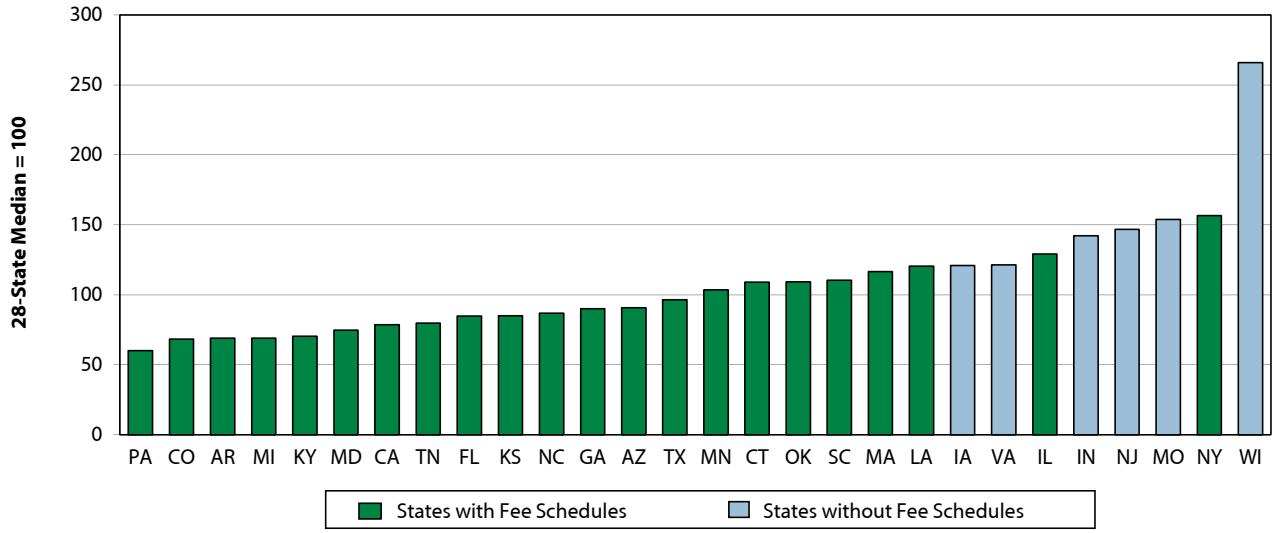


Figure A.16 Interstate Comparison of Prices Paid for Professional Neurological/Neuromuscular Testing Services, WCRI MPI-WC in 28 States, 2015^{p}



Special notation: ^{P} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the half-year data likely provide a reasonable approximation for interstate ranking across states in 2015, based on results for earlier years from the prior editions of this study (see Figure TA.1).

Notes:

Neurological/neuromuscular testing: The services in this group are largely made up of sensory and motor nerve conduction tests but also include range of motion tests and application of neurostimulators; these services may be billed by physicians as well as by chiropractors and physical therapists. See Table TA.2 for a detailed description of all service codes included in this group.

The indices for 2015 are based on a 28-state median. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year).

AZ, CO, MO, NY, OK, OR: The data for each of these states are not necessarily representative because each state is missing data from a larger data source that is significant in that state. The results in AZ, CO, NY, OK, and OR are unlikely to be significantly under- or overestimated, given that these states use fee schedules to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in each state were materially different from other data sources included in this study from the same state. For MO, to the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to possible under- or overestimations in the results.

IA, IN, MO, NJ, VA, WI: These states had no workers' compensation fee schedule in 2014 or 2015.

AZ, CT, MN, NC, SC: These states had fee schedule changes or updates within 2015 but after June 30, 2015, that are not reflected in the results.

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Figure A.17 Interstate Comparison of Prices Paid for Professional Emergency Services, WCRI MPI-WC in 31 States, 2014

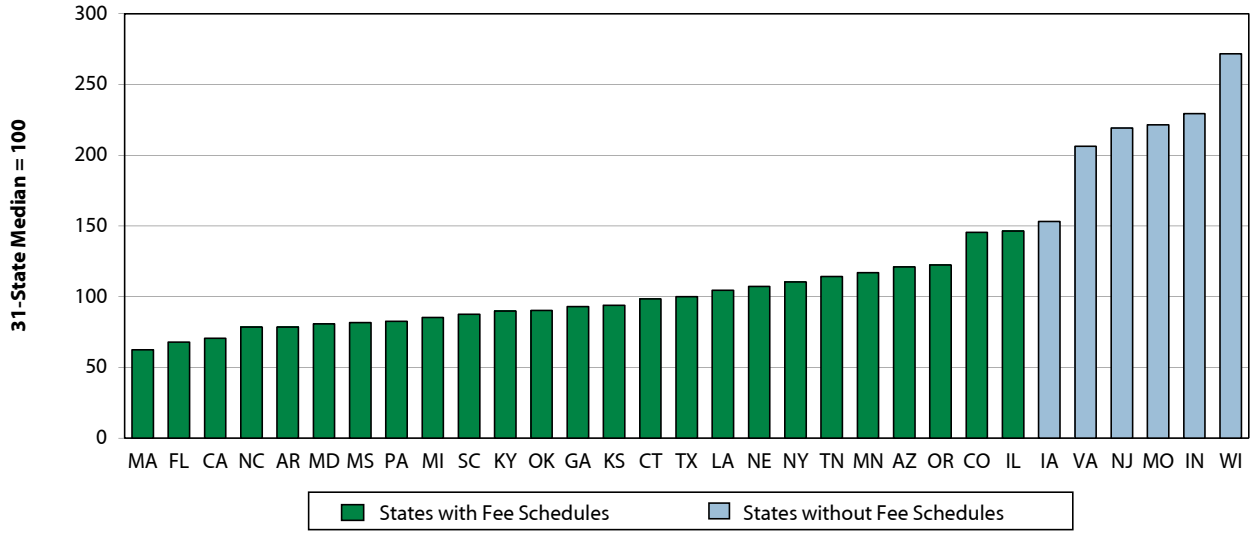
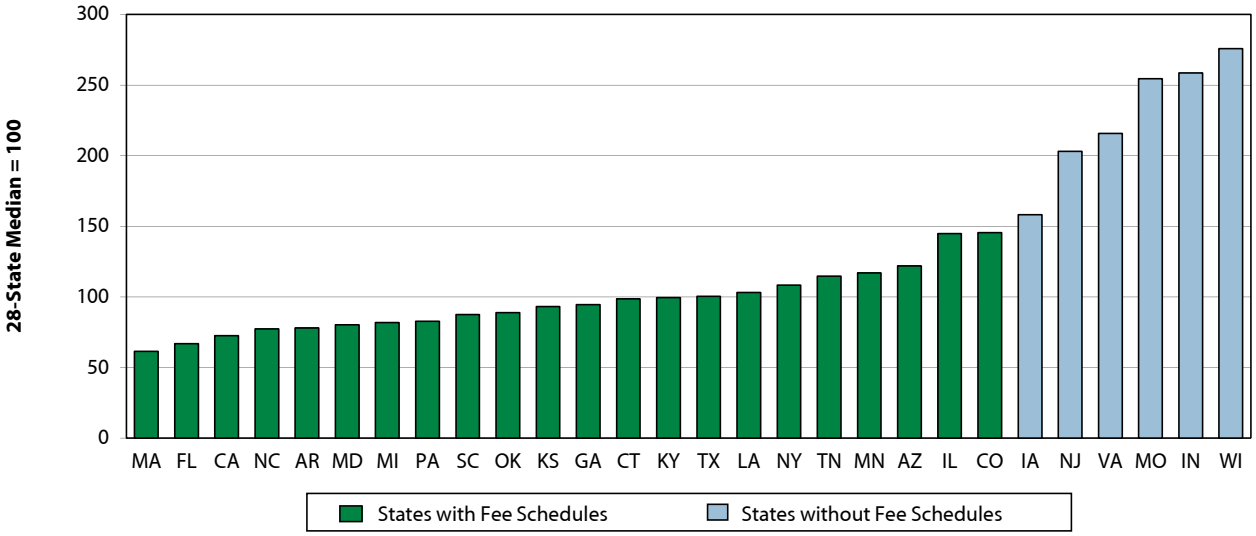


Figure A.18 Interstate Comparison of Prices Paid for Professional Emergency Services, WCRI MPI-WC in 28 States, 2015^{p}



Special notation: ^{p} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the half-year data likely provide a reasonable approximation for interstate ranking across states in 2015, based on results for earlier years from the prior editions of this study (see Figure TA.1).

Notes:

Emergency services: The services in this group include emergency department visits for patients with various levels of severity and office services provided on an emergency basis. See Table TA.2 for a detailed description of all service codes included in this group.

The indices for 2015 are based on a 28-state median. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year).

AZ, CO, MO, NY, OK, OR: The data for each of these states are not necessarily representative because each state is missing data from a larger data source that is significant in that state. The results in AZ, CO, NY, OK, and OR are unlikely to be significantly under- or overestimated, given that these states use fee schedules to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in each state were materially different from other data sources included in this study from the same state. For MO, to the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to possible under- or overestimations in the results.

IA, IN, MO, NJ, VA, WI: These states had no workers' compensation fee schedule in 2014 or 2015.

AZ, CT, MN, NC, SC: These states had fee schedule changes or updates within 2015 but after June 30, 2015, that are not reflected in the results.

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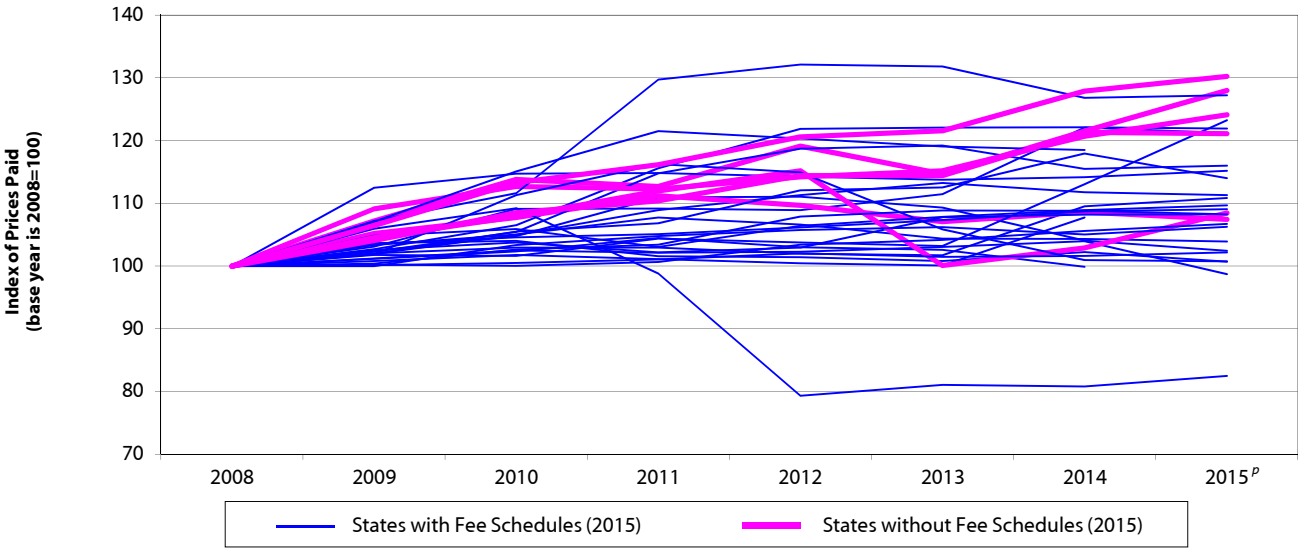
Figure B.1 Trends in Prices Paid for Professional Services, WCRI MPI-WC, 2008 to 2015



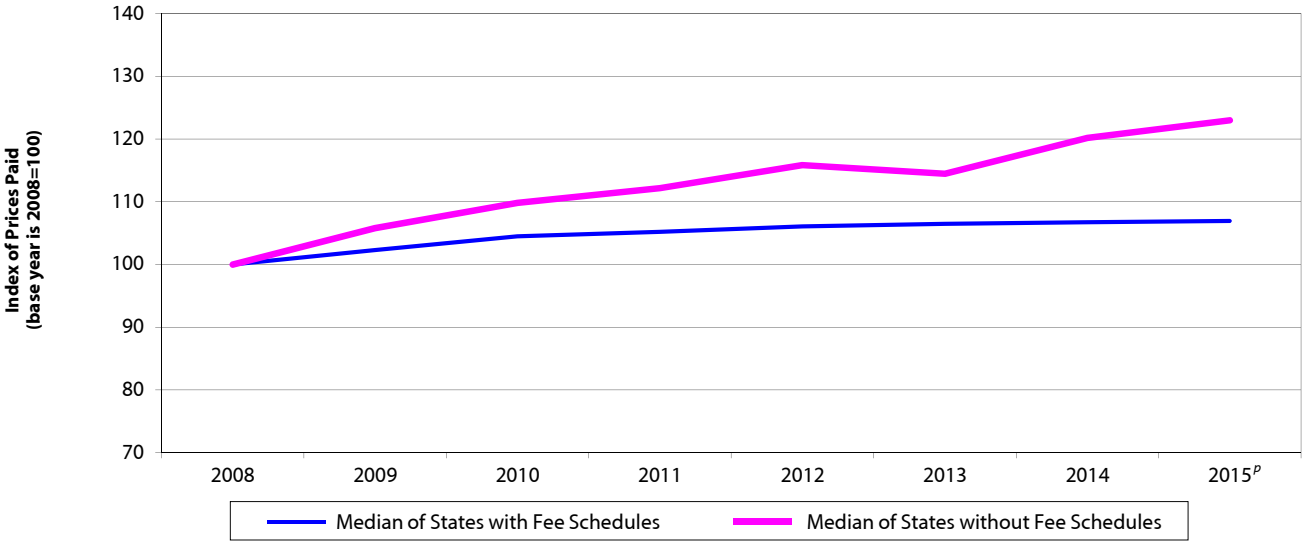


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Figure B.1 Trends in Prices Paid for Professional Services, WCRI MPI-WC, 2008 to 2015 (continued)

State	Fee Regulation Type	2008	2009	2010	2011	2012	2013	2014	2015 [P]
AR	FS	100	102	105	111	111	109	104	102
AZ[a,b]	FS	100	103	109	109	109	111	122	121
CA	FS	100	102	103	103	102	102	110	111
CO[a]	FS	100	102	105	109	111	113	112	111
CT[b]	FS	100	103	105	108	107	104	104	104
FL	FS	100	104	104	102	101	101	102	101
GA	FS	100	103	107	116	122	122	122	122
IA	Non-FS	100	105	108	111	110	107	109	107
IL	FS	100	106	109	99	79	81	81	82
IN	Non-FS	100	107	114	113	119	115	122	128
KS	FS	100	102	106	107	112	113	118	114
KY	FS	100	102	102	104	104	103	113	123
LA	FS	100	104	105	105	106	107	109	109
MA	FS	100	112	115	115	114	114	114	115
MD	FS	100	102	105	115	119	119	116	116
MI	FS	100	101	102	102	102	103	104	99
MN[b]	FS	100	105	106	103	106	108	109	110
MO[a]	Non-FS	100	109	113	112	114	115	121	124
MS[c]	FS	100	101	102	101	100	100	108	n/a
NC[b]	FS	100	103	104	102	103	108	108	108
NE[c]	FS	100	101	102	104	103	103	100	n/a
NJ	Non-FS	100	105	108	112	115	100	103	108
NY[a]	FS	100	100	101	101	102	101	102	102
OK[a]	FS	100	100	103	103	108	109	109	108
OR[a,c]	FS	100	107	115	122	120	119	119	n/a
PA	FS	100	100	100	101	103	104	106	107
SC[b]	FS	100	100	103	105	106	106	105	106
TN	FS	100	102	111	116	115	106	101	101
TX	FS	100	107	112	130	132	132	127	127
VA	Non-FS	100	104	109	110	114	114	121	121
WI	Non-FS	100	106	113	116	121	122	128	130
Median growth rate in FS states[c]		100	102	104	105	106	106	107	107
Median growth rate in non-FS states		100	106	110	112	116	114	120	123

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes:

Calendar year 2008 is the base year, which is equal to 100 in the index.
For definitions of the service groups, please see Table TA.1.

[a] The data for each of these states are not necessarily representative because each state is missing data from a larger data source that is significant in that state. The results in AZ, CO, NY, OK, and OR are unlikely to be significantly under- or overestimated, given that these states use fee schedules to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in each state were materially different from other data sources included in this study from the same state. For MO, to the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to possible under- or overestimations in the results.

[b] This state had fee schedule changes or updates within 2015 but after June 30, 2015, that are not reflected in the results.

[c] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

Key: FS: fee schedule; n/a: not applicable.

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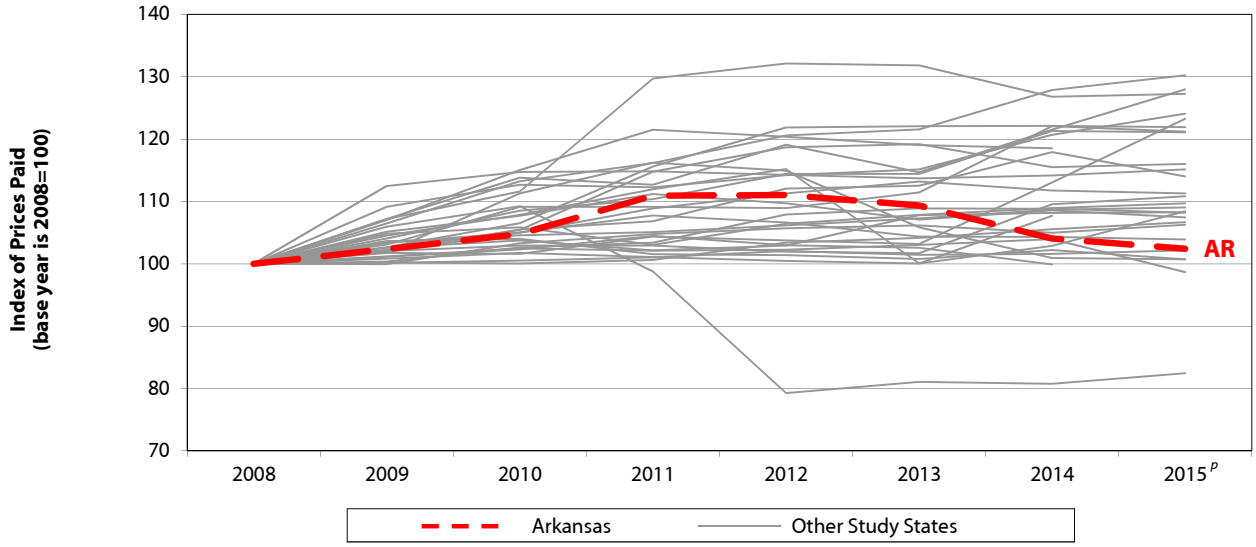
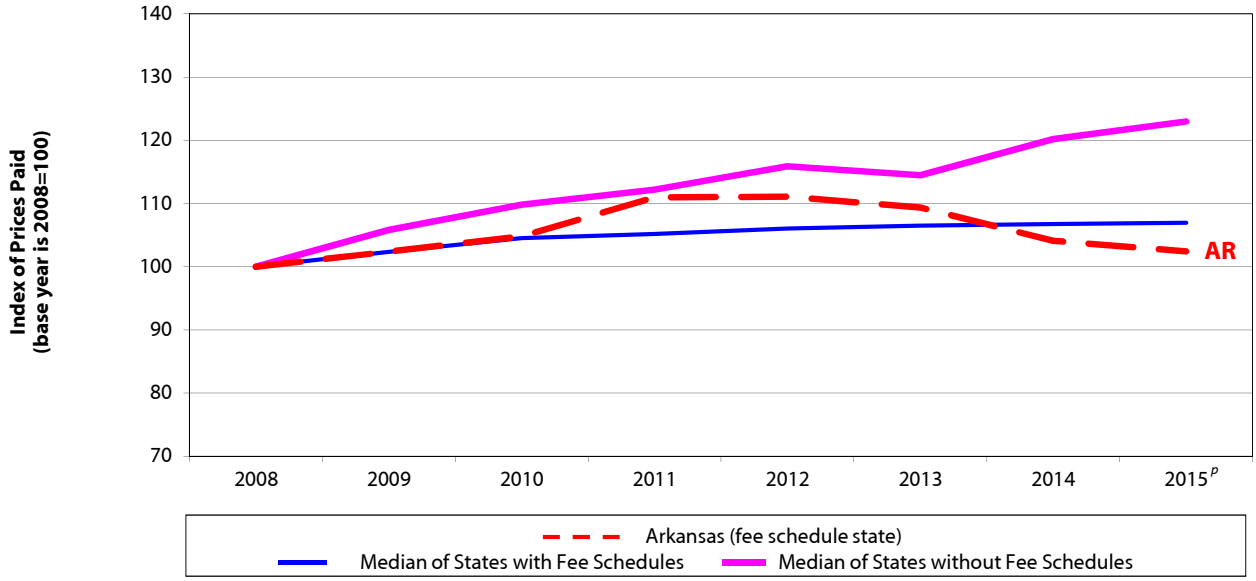
Figure B.2 Arkansas Trends in Prices Paid for Professional Services, WCRI MPI-WC, 2008 to 2015



Calendar Year 2008 Is the Base Year for Index



Calendar Year 2008 Is the Base Year for Index

Arkansas	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015p
State average annual change in prices paid for professional services	2%	2%	6%	0%	-2%	-5%	-1%
Median annual change for fee schedule states[a]	2%	2%	1%	1%	0%	0%	0%
Median annual change for non-fee schedule states	6%	4%	2%	3%	-1%	5%	2%

Special notation: ^{p} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the trend lines for the median of states with fee schedules and the median of states without fee schedules represent the median rates of growth of prices paid among states with and without fee schedules from year to year.

Notes: Arkansas' fee schedule for professional services has regular updates on the relative value units tied to the most recent Medicare resource-based relative value scale, with applied state conversion factors adopted in May 2000 for the services included in this study. The most recent update covered in the study period in this report was effective January 1, 2015.

[a] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

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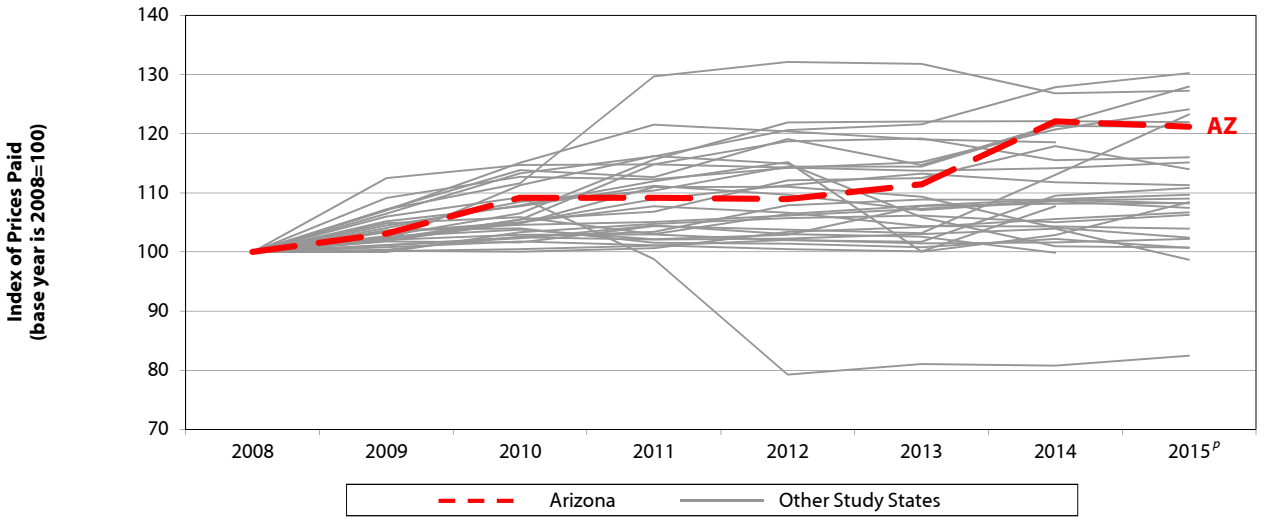
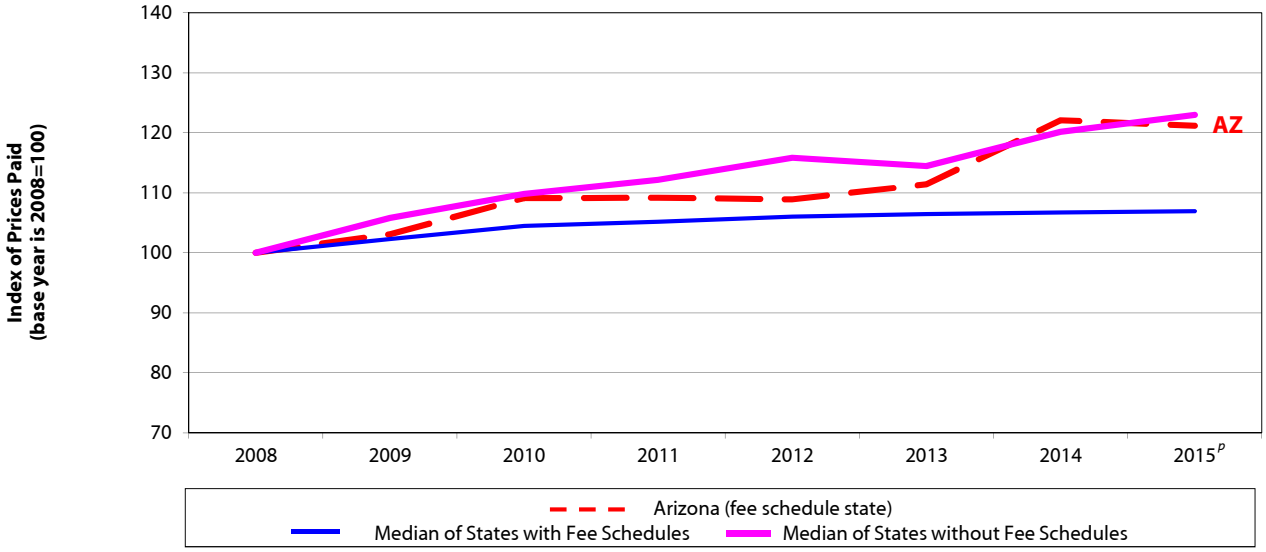
Figure B.3 Arizona Trends in Prices Paid for Professional Services, WCRI MPI-WC, 2008 to 2015



Calendar Year 2008 Is the Base Year for Index



Calendar Year 2008 Is the Base Year for Index

Arizona	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015P
State average annual change in prices paid for professional services	3%	6%	0%	0%	2%	10%	-1%
Median annual change for fee schedule states[a]	2%	2%	1%	1%	0%	0%	0%
Median annual change for non-fee schedule states	6%	4%	2%	3%	-1%	5%	2%

Special notation: ^{P} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the trend lines for the median of states with fee schedules and the median of states without fee schedules represent the median rates of growth of prices paid among states with and without fee schedules from year to year.

Notes:

The data for Arizona are not necessarily representative because it is missing data from a larger data source that is significant in this state. The results in Arizona are unlikely to be significantly under- or overestimated, given that the state uses a fee schedule to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in Arizona were materially different from other data sources included in this study from the same state.

Arizona publishes its fee schedule annually with effective dates of October 1 through September 30 of the following year. The Commission reviews the fee schedule values annually with a focus each year on one of four specific groups of codes and rotates through these specific groups of codes every four years. To calculate the fee schedule values for the codes under review, the Commission surveys the workers' compensation fee schedules from the states of Colorado, Nevada, New Mexico, North Carolina, Oregon, Utah, and Washington and uses the following methodology: (a) current Arizona values between the 75th and 100th percentile of the states surveyed will not be adjusted; (b) current Arizona values over the 100th percentile of the states surveyed will be reduced to the 100th percentile; and (c) current Arizona values below the 75th percentile will be increased to the 75th percentile subject to the following: Increases shall be capped at 25 percent, unless and except as necessary to bring a current value up to the 50th percentile. In October 2013, Arizona reviewed and adjusted the fee schedule rates for evaluation and management, physical medicine, and surgery codes from 25000 to 39599. This update increased the fee schedule rates for evaluation and management and physical medicine services; the fee schedule rates for many common surgeries remained unchanged or had only small increases. The most recent update covered in the study period in this report was effective October 1, 2014.

[a] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

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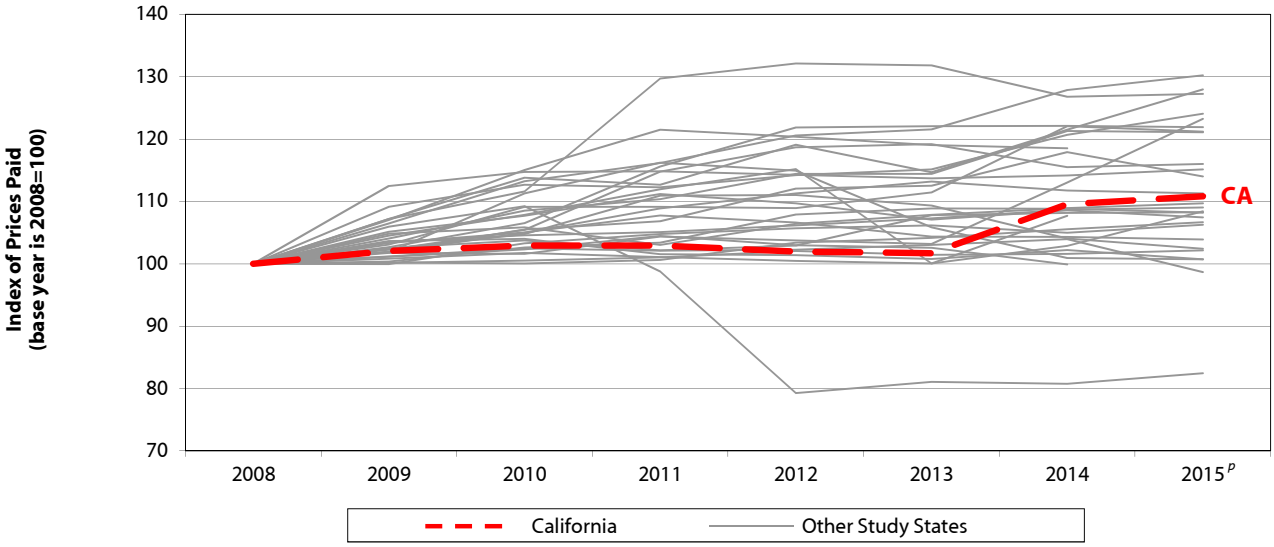
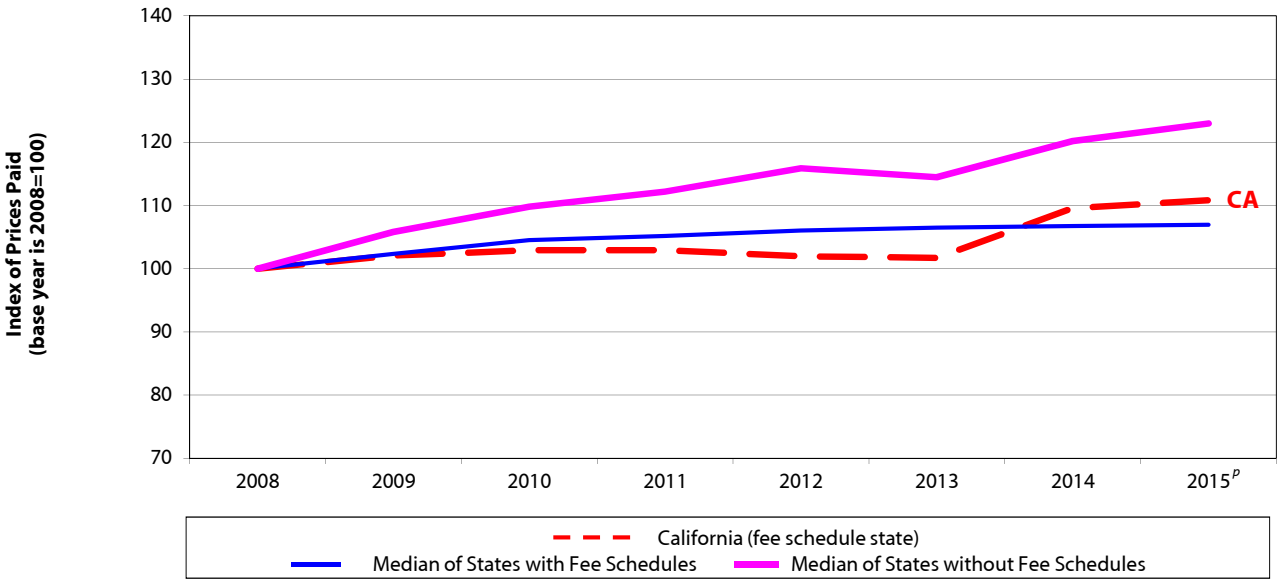
Figure B.4 California Trends in Prices Paid for Professional Services, WCRI MPI-WC, 2008 to 2015



Calendar Year 2008 Is the Base Year for Index



Calendar Year 2008 Is the Base Year for Index

California	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 P
State average annual change in prices paid for professional services	2%	1%	0%	-1%	0%	8%	1%
Median annual change for fee schedule states[a]	2%	2%	1%	1%	0%	0%	0%
Median annual change for non-fee schedule states	6%	4%	2%	3%	-1%	5%	2%

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the trend lines for the median of states with fee schedules and the median of states without fee schedules represent the median rates of growth of prices paid among states with and without fee schedules from year to year.

Notes: Effective January 2014, California transitioned to an RBRVS-based fee schedule. This fee schedule change is a part of the workers' compensation reform legislation outlined in Senate Bill 863. This legislation requires the adoption of Medicare's RBRVS schedule for professional services to be phased in over four years, beginning in 2014, and to remain in effect until the Division of Workers' Compensation adopts an RBRVS schedule that allows no more than 120 percent of the aggregate fees allowed by Medicare. During the four-year transition period, the conversion factors for primary care services increase and the conversion factors for specialty services decrease. The latest update in the conversion factors covered in the study period of this report was in March 2015. Before this change, California used the Official Medical Fee Schedule (OMFS) to regulate the payment of professional services, and the maximum reimbursement rates in the OMFS remained unchanged since 2007.

[a] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

Key: RBRVS: resource-based relative value scale (Medicare).

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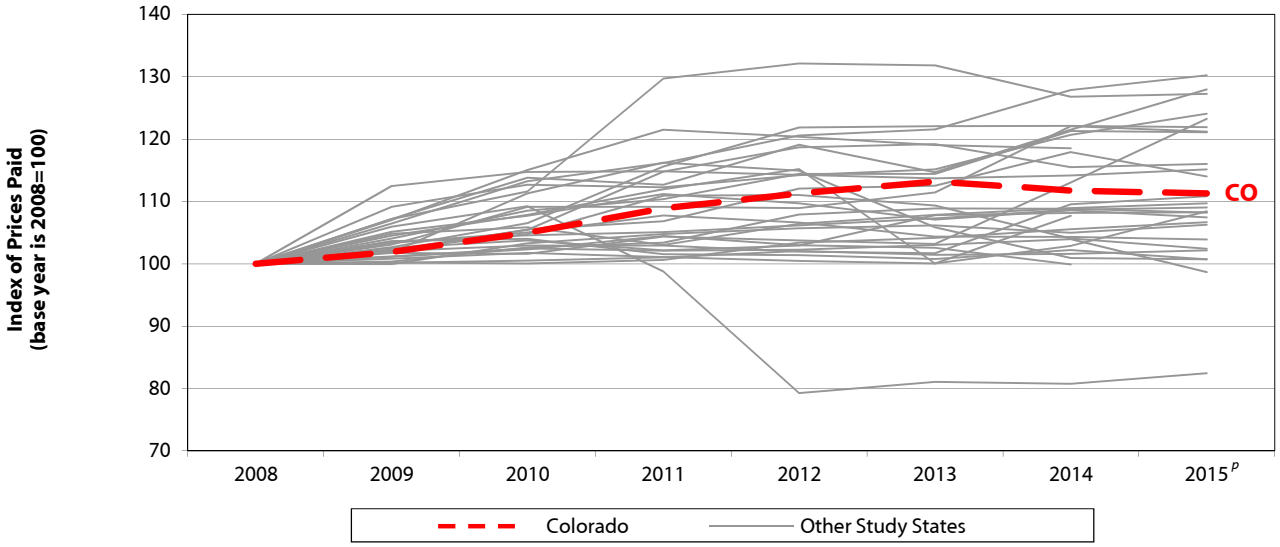
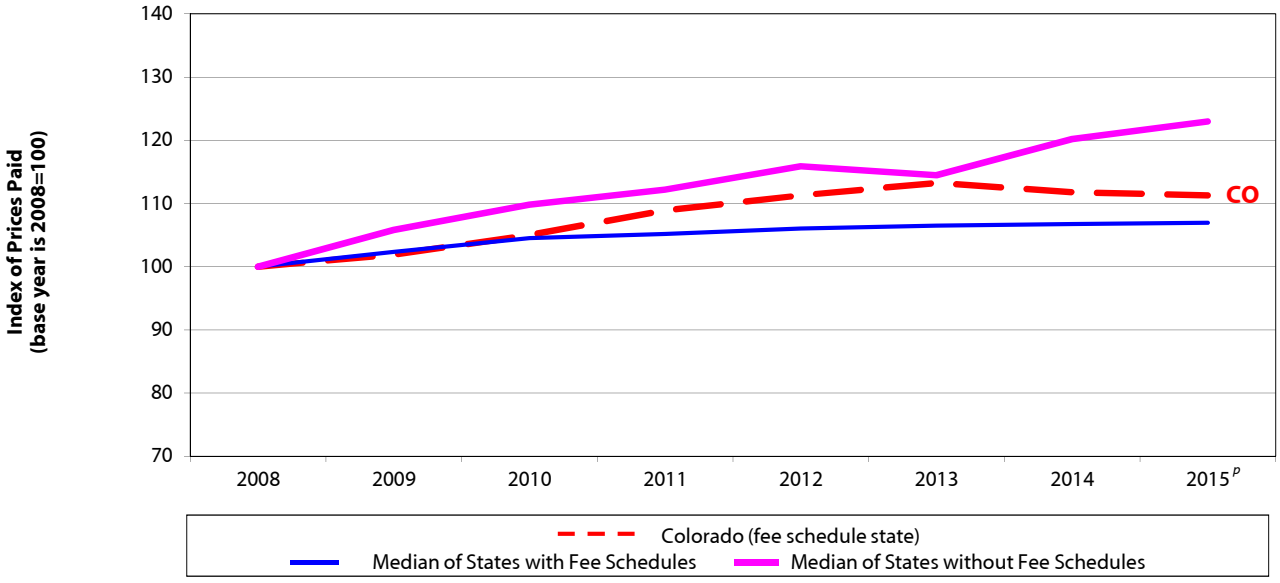
Figure B.5 Colorado Trends in Prices Paid for Professional Services, WCRI MPI-WC, 2008 to 2015



Calendar Year 2008 Is the Base Year for Index



Calendar Year 2008 Is the Base Year for Index

Colorado	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 P
State average annual change in prices paid for professional services	2%	3%	4%	2%	2%	-1%	0%
Median annual change for fee schedule states[a]	2%	2%	1%	1%	0%	0%	0%
Median annual change for non-fee schedule states	6%	4%	2%	3%	-1%	5%	2%

Special notation: ^{P} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the trend lines for the median of states with fee schedules and the median of states without fee schedules represent the median rates of growth of prices paid among states with and without fee schedules from year to year.

Notes:

The data for Colorado are not necessarily representative because it is missing data from a larger data source that is significant in this state. The results in Colorado are unlikely to be significantly under- or overestimated, given that the state uses a fee schedule to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in Colorado were materially different from other data sources included in this study from the same state.

Colorado usually updates its fee schedule for professional services annually in January. The most recent update covered in the study period in this report was effective January 1, 2015. Note that effective January 2016, Colorado revised the workers' compensation medical fee schedule and incorporated the National Physician Fee Schedule Relative Value Scale file (RBRVS) published by Medicare in January 2015. Previously, Colorado based its fee schedule levels on relative value units (RVUs) from the Relative Values for Physicians, currently published by OPTUM360®. The next edition of this Medical Price Index study series will monitor the price changes after the 2016 fee schedule update.

[a] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

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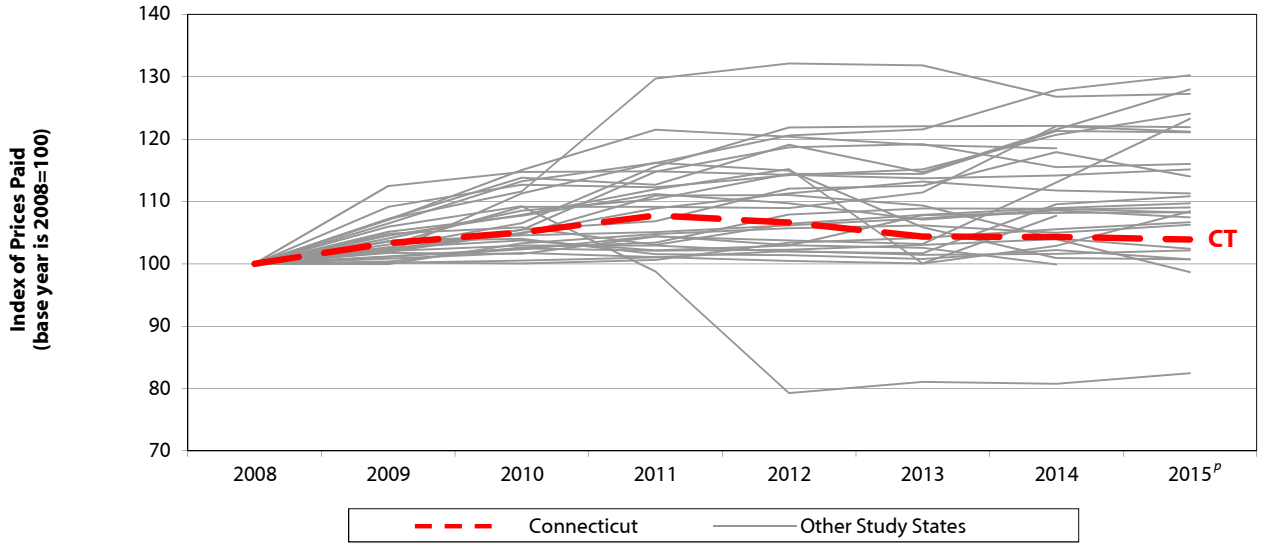
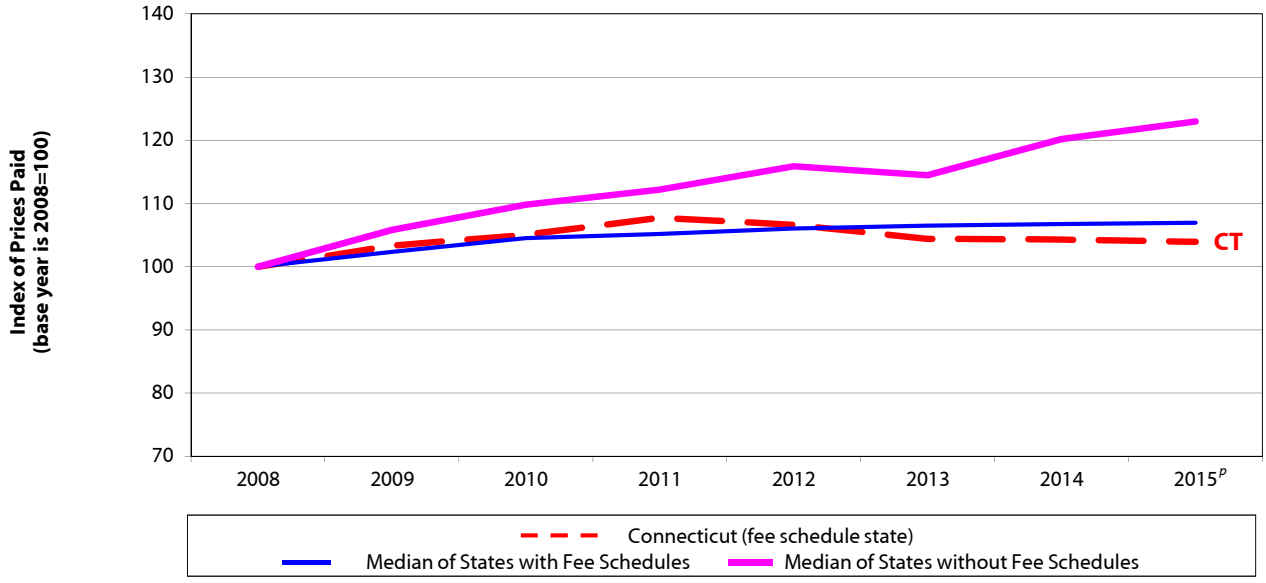
Figure B.6 Connecticut Trends in Prices Paid for Professional Services, WCRI MPI-WC, 2008 to 2015



Calendar Year 2008 Is the Base Year for Index



Calendar Year 2008 Is the Base Year for Index

Connecticut	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 P
State average annual change in prices paid for professional services	3%	2%	3%	-1%	-2%	0%	0%
Median annual change for fee schedule states[a]	2%	2%	1%	1%	0%	0%	0%
Median annual change for non-fee schedule states	6%	4%	2%	3%	-1%	5%	2%

Special notation: ^{P} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the trend lines for the median of states with fee schedules and the median of states without fee schedules represent the median rates of growth of prices paid among states with and without fee schedules from year to year.

Notes: Connecticut has updated its fee schedule for professional services annually in July since 2008. The most recent update covered during the study period in this report was the 2015 Official Connecticut Practitioner Fee Schedule in July 2015, with the caveat that the new 2015 Current Procedural Terminology (CPT) codes and fees were retroactive to January 1, 2015.

[a] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

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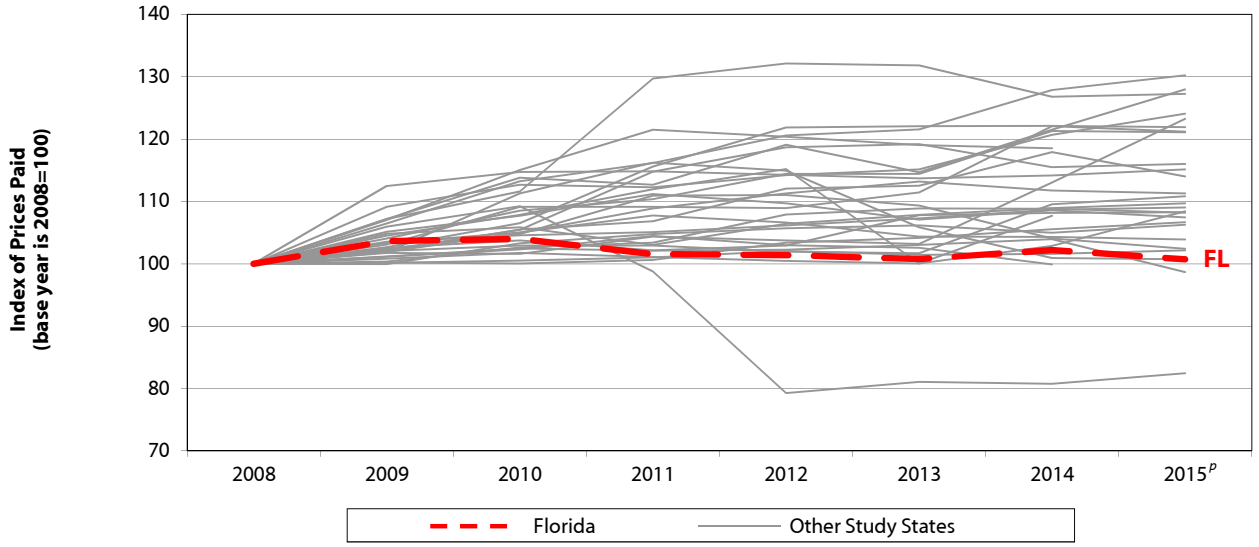
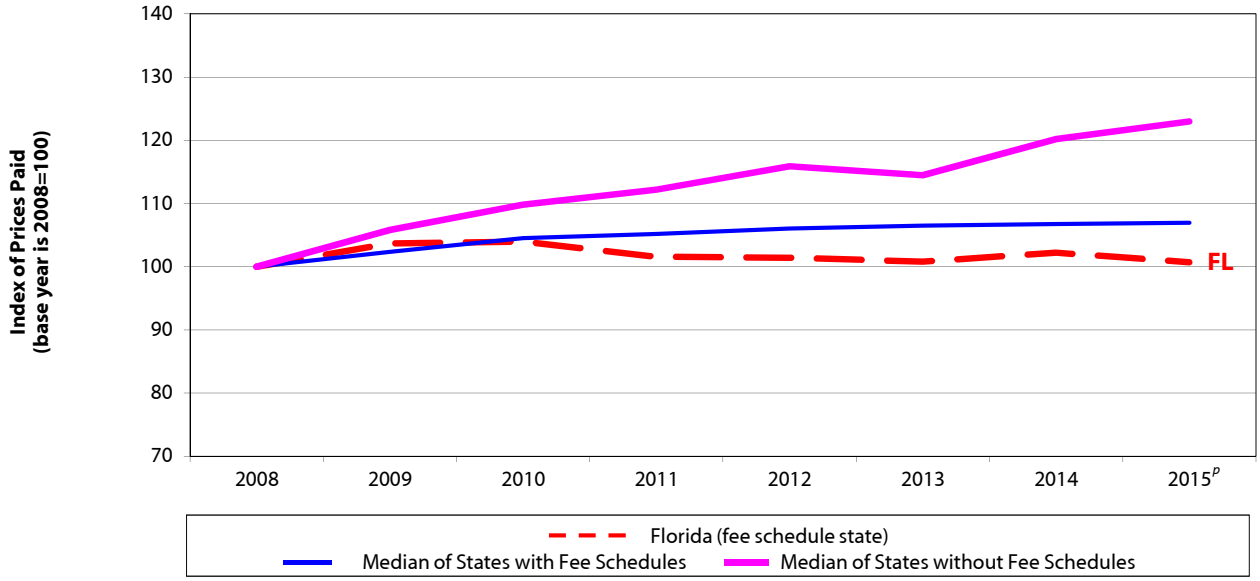
Figure B.7 Florida Trends in Prices Paid for Professional Services, WCRI MPI-WC, 2008 to 2015



Calendar Year 2008 Is the Base Year for Index



Calendar Year 2008 Is the Base Year for Index

Florida	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 P
State average annual change in prices paid for professional services	4%	0%	-2%	0%	-1%	1%	-1%
Median annual change for fee schedule states[a]	2%	2%	1%	1%	0%	0%	0%
Median annual change for non-fee schedule states	6%	4%	2%	3%	-1%	5%	2%

Special notation: ^{P} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the trend lines for the median of states with fee schedules and the median of states without fee schedules represent the median rates of growth of prices paid among states with and without fee schedules from year to year.

Notes: The most recent update to the medical fee schedule for professional services in Florida covered in the study period in this report was effective February 4, 2009. Effective July 2016, Florida updated the fee schedule rates to reflect the 2014 Medicare rates in the maximum allowable reimbursement computation; future editions of this Medical Price Index study series will monitor the price changes after this fee schedule update.

[a] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

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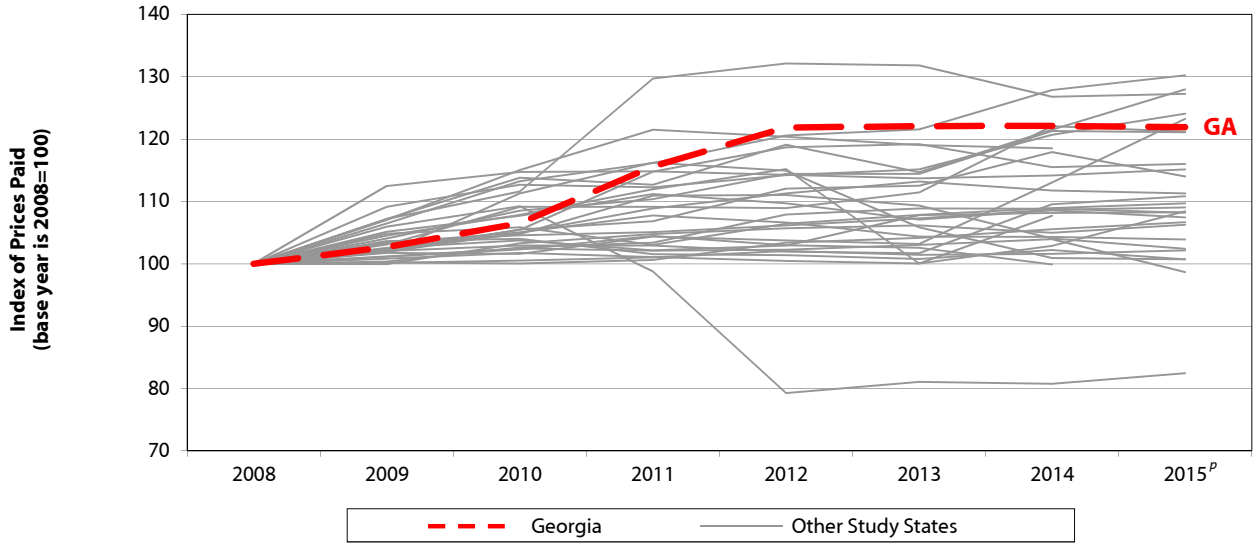
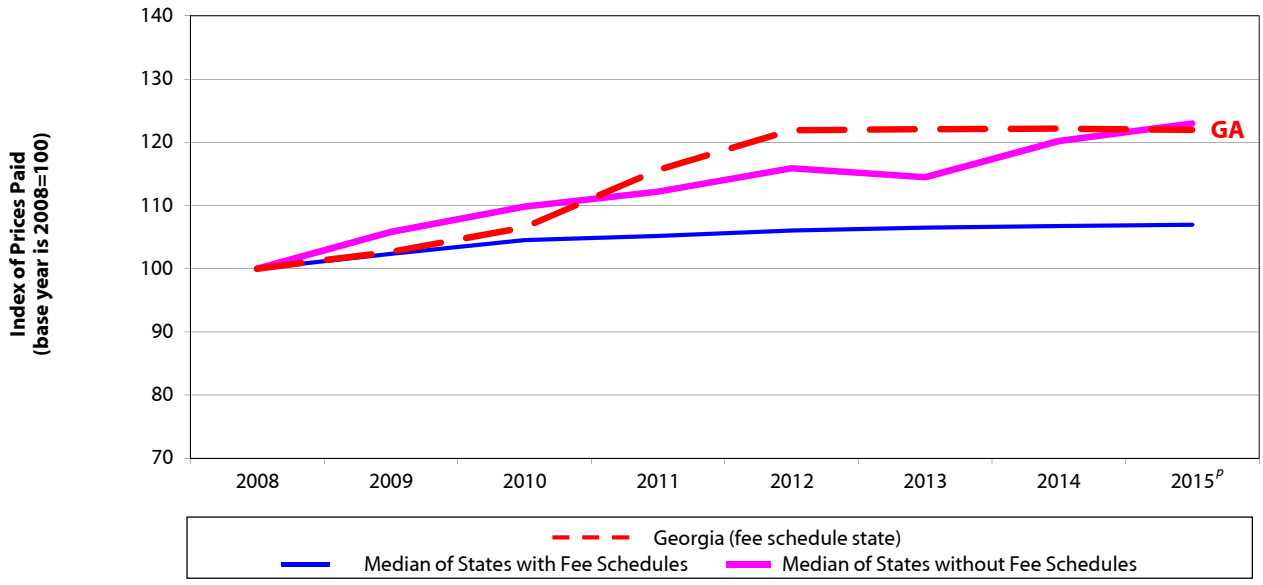
Figure B.8 Georgia Trends in Prices Paid for Professional Services, WCRI MPI-WC, 2008 to 2015



Calendar Year 2008 Is the Base Year for Index



Calendar Year 2008 Is the Base Year for Index

Georgia	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015P
State average annual change in prices paid for professional services	3%	4%	9%	5%	0%	0%	0%
Median annual change for fee schedule states[a]	2%	2%	1%	1%	0%	0%	0%
Median annual change for non-fee schedule states	6%	4%	2%	3%	-1%	5%	2%

Special notation: P We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the trend lines for the median of states with fee schedules and the median of states without fee schedules represent the median rates of growth of prices paid among states with and without fee schedules from year to year.

Notes: Georgia typically updates its fee schedule for professional services annually in April. The most recent update covered in the study period in this report was effective April 1, 2015.

[a] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

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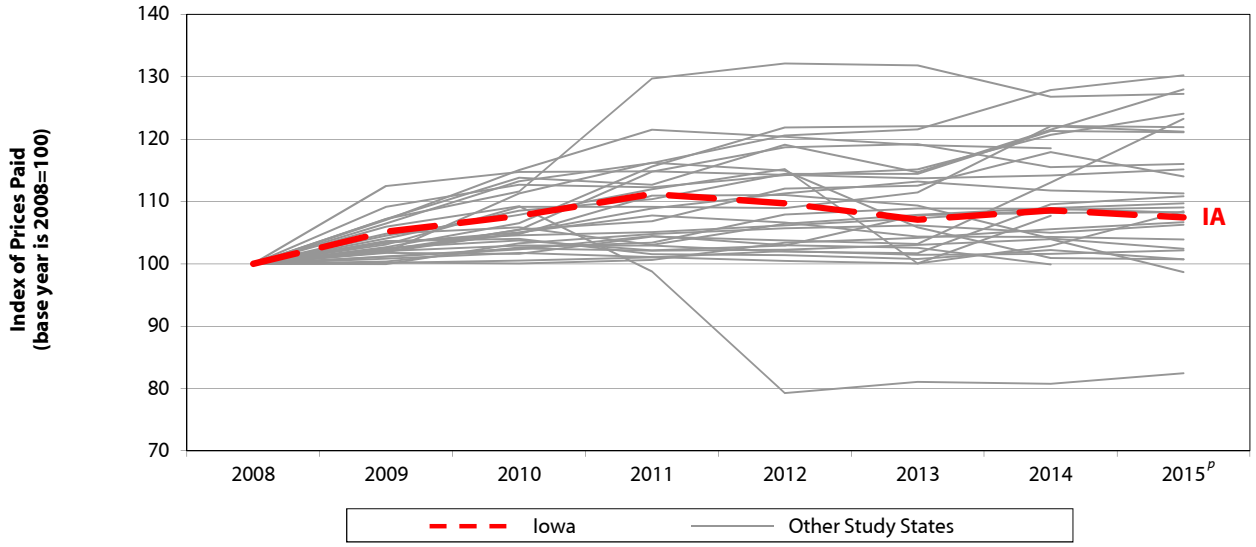
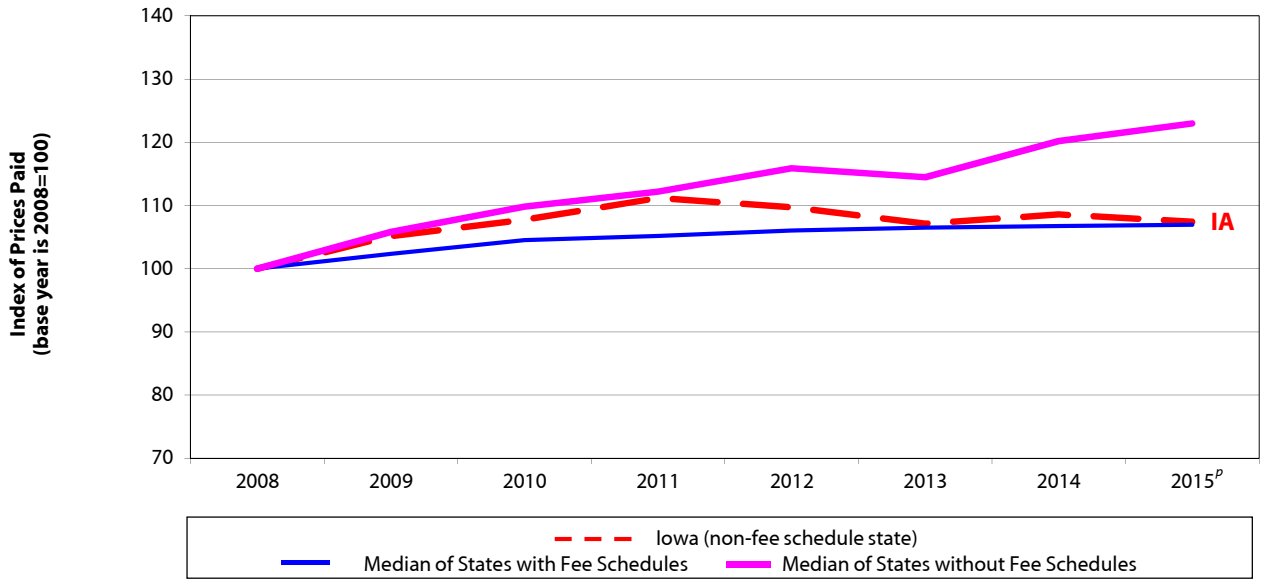
Figure B.9 Iowa Trends in Prices Paid for Professional Services, WCRI MPI-WC, 2008 to 2015



Calendar Year 2008 Is the Base Year for Index



Calendar Year 2008 Is the Base Year for Index

Iowa	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015P
State average annual change in prices paid for professional services	5%	2%	3%	-1%	-2%	1%	-1%
Median annual change for fee schedule states[a]	2%	2%	1%	1%	0%	0%	0%
Median annual change for non-fee schedule states	6%	4%	2%	3%	-1%	5%	2%

Special notation: ^{p} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the trend lines for the median of states with fee schedules and the median of states without fee schedules represent the median rates of growth of prices paid among states with and without fee schedules from year to year.

Note: Iowa did not have a workers' compensation fee schedule as of 2015.

[a] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

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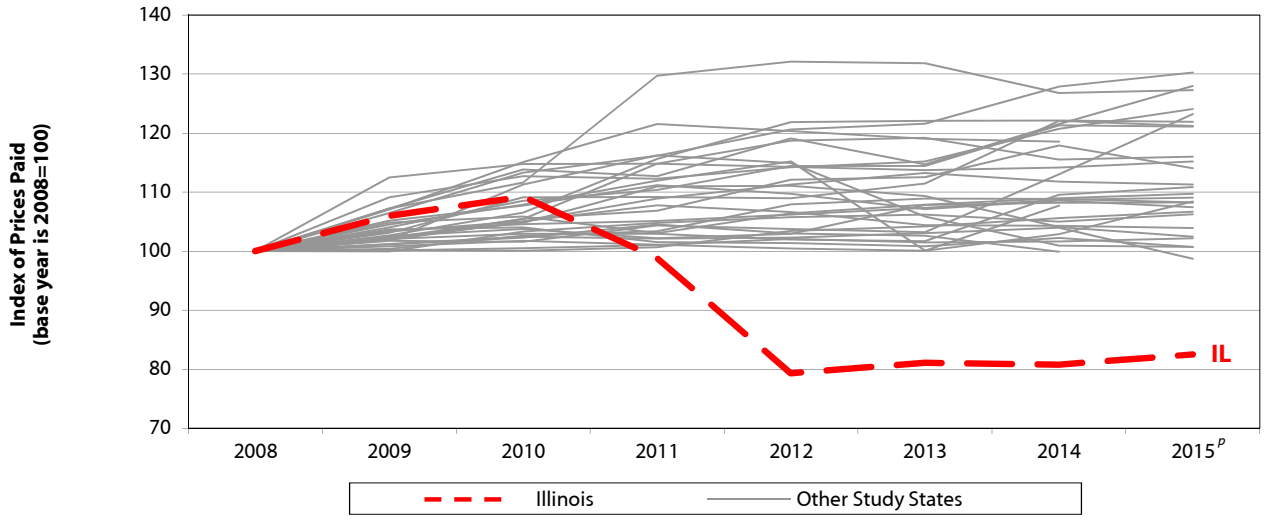
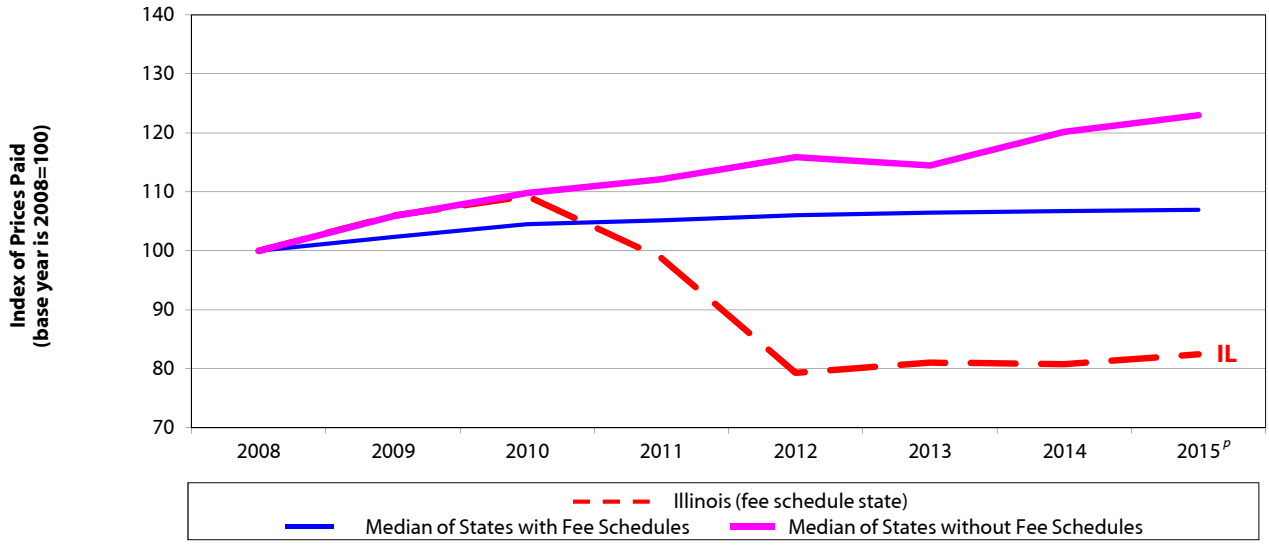
Figure B.10 Illinois Trends in Prices Paid for Professional Services, WCRI MPI-WC, 2008 to 2015



Calendar Year 2008 Is the Base Year for Index



Calendar Year 2008 Is the Base Year for Index

Illinois	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015P
State average annual change in prices paid for professional services	6%	3%	-10%	-20%	2%	0%	2%
Median annual change for fee schedule states[a]	2%	2%	1%	1%	0%	0%	0%
Median annual change for non-fee schedule states	6%	4%	2%	3%	-1%	5%	2%

Special notation: ^{P} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the trend lines for the median of states with fee schedules and the median of states without fee schedules represent the median rates of growth of prices paid among states with and without fee schedules from year to year.

Notes:

Illinois implemented a workers' compensation fee schedule in February 2006. This workers' compensation fee schedule for professional services set different maximum reimbursement rates for the same services for each of 29 different areas of the state based on the first three digits of the zip code where the service was delivered. The 29 fee schedules ranged from a low of 115 percent above Medicare to a high of 219 percent above Medicare—a difference of 104 percentage points. This difference might create unintended incentives for providers to control revenue by moving the site of service. Prices in this study represent the aggregate state-level estimation without drilling down to the 29 geozip areas; therefore, the price trends after 2006 could be influenced by the potential behavior changes of the providers. In September 2011, Illinois enacted new legislation that introduced a 30 percent decrease in the fee schedule rates. On January 1, 2012, Illinois discontinued its use of the 29 geozip areas for physicians and other providers in favor of four county-based regions.

After further review, Illinois determined that the 30 percent decrease implemented across all services in September 2011 caused fee schedule rates for certain evaluation and management services to fall below appropriate fee schedule levels, which resulted in more limited access to medical care for injured workers. Effective July 16, 2014, the state adjusted its fee schedule to increase the fee schedule rates for these evaluation and management codes to a level more comparable to Medicare rates. The most recent update covered in the study period in this report was effective January 1, 2015.

[a] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

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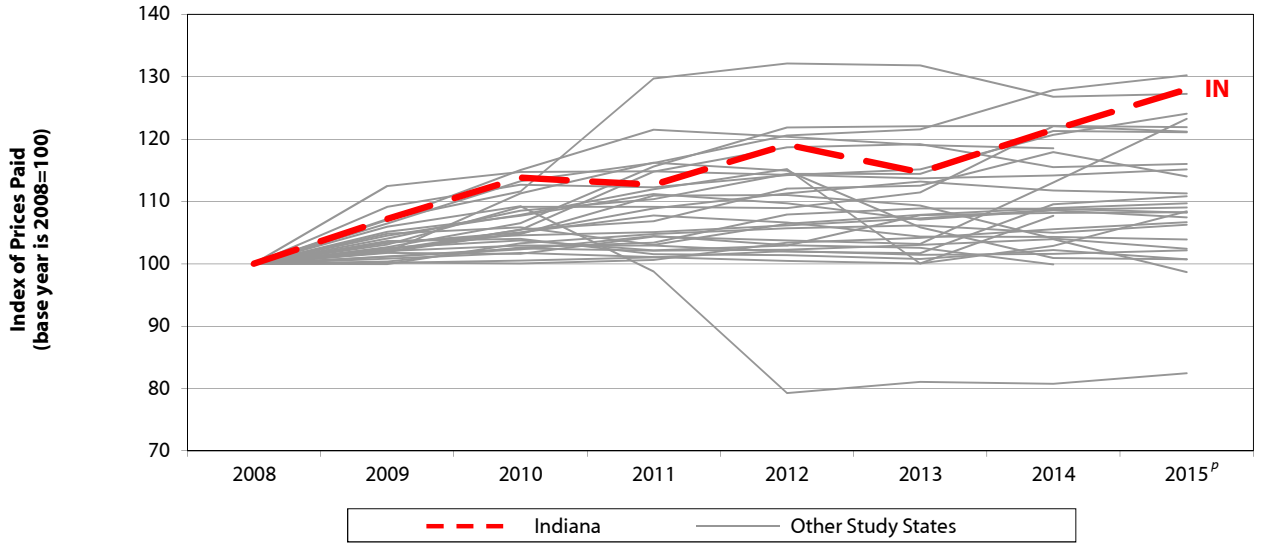
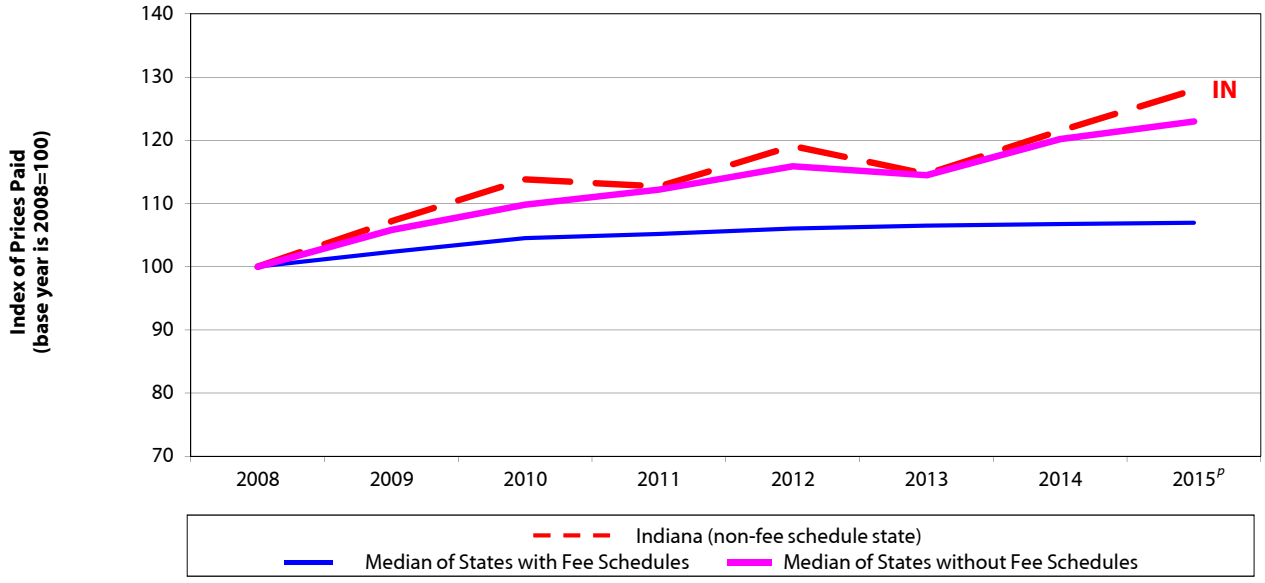
Figure B.11 Indiana Trends in Prices Paid for Professional Services, WCRI MPI-WC, 2008 to 2015



Calendar Year 2008 Is the Base Year for Index



Calendar Year 2008 Is the Base Year for Index

Indiana	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 P
State average annual change in prices paid for professional services	7%	6%	-1%	6%	-4%	6%	5%
Median annual change for fee schedule states[a]	2%	2%	1%	1%	0%	0%	0%
Median annual change for non-fee schedule states	6%	4%	2%	3%	-1%	5%	2%

Special notation: ^{P} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the trend lines for the median of states with fee schedules and the median of states without fee schedules represent the median rates of growth of prices paid among states with and without fee schedules from year to year.

Note: Indiana did not have a workers' compensation fee schedule as of 2015.

[a] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

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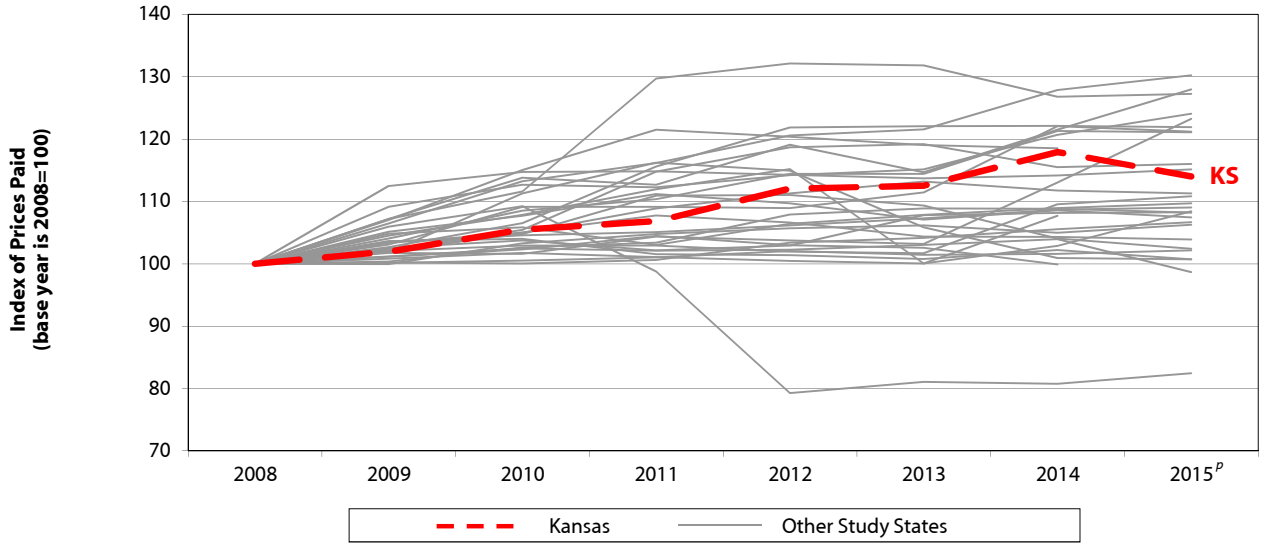
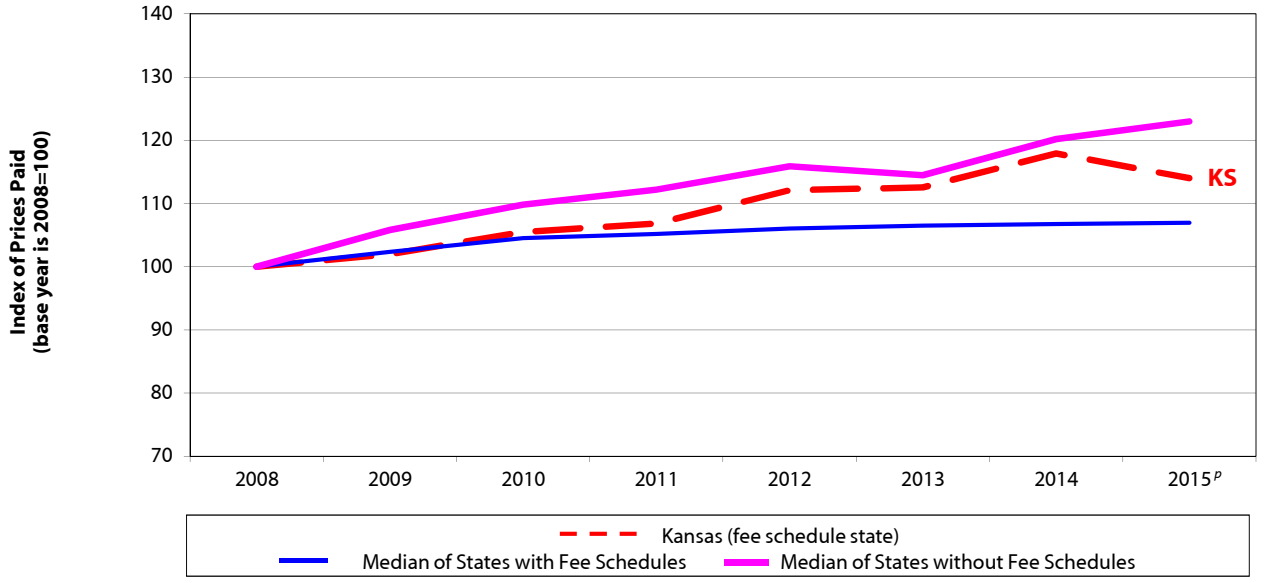
Figure B.12 Kansas Trends in Prices Paid for Professional Services, WCRI MPI-WC, 2008 to 2015



Calendar Year 2008 Is the Base Year for Index



Calendar Year 2008 Is the Base Year for Index

Kansas	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015p
State average annual change in prices paid for professional services	2%	3%	1%	5%	0%	5%	-3%
Median annual change for fee schedule states[a]	2%	2%	1%	1%	0%	0%	0%
Median annual change for non-fee schedule states	6%	4%	2%	3%	-1%	5%	2%

Special notation: ^{p} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the trend lines for the median of states with fee schedules and the median of states without fee schedules represent the median rates of growth of prices paid among states with and without fee schedules from year to year.

Notes: Kansas updates its fee schedule for professional services either annually or biennially in January. The most recent update covered during the study period in this report was made to the January 1, 2015, fee schedule and became effective April 1, 2015.

[a] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

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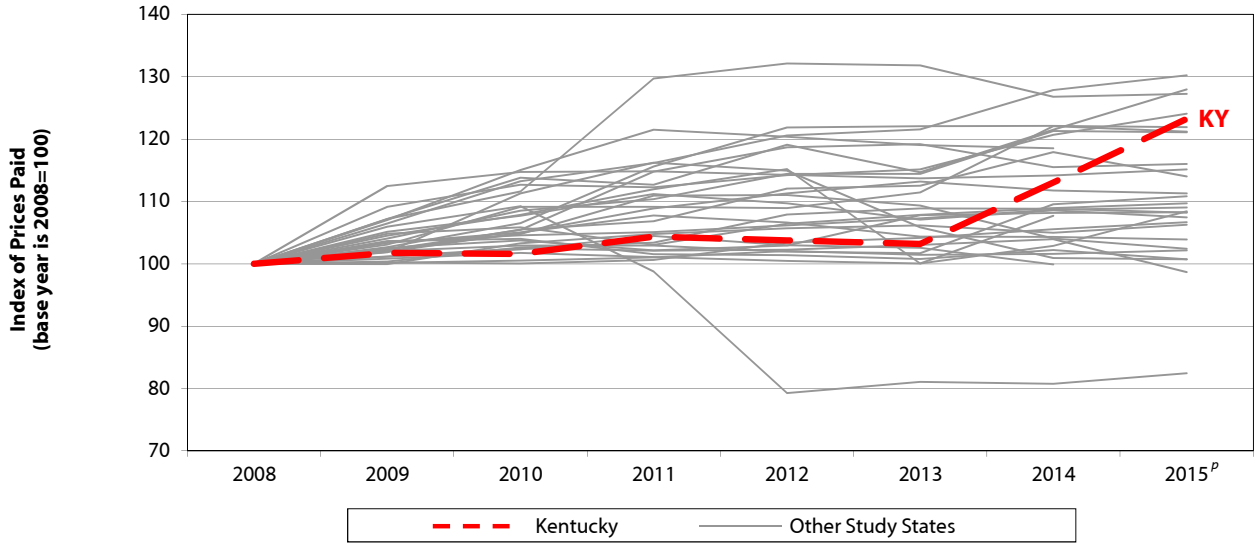
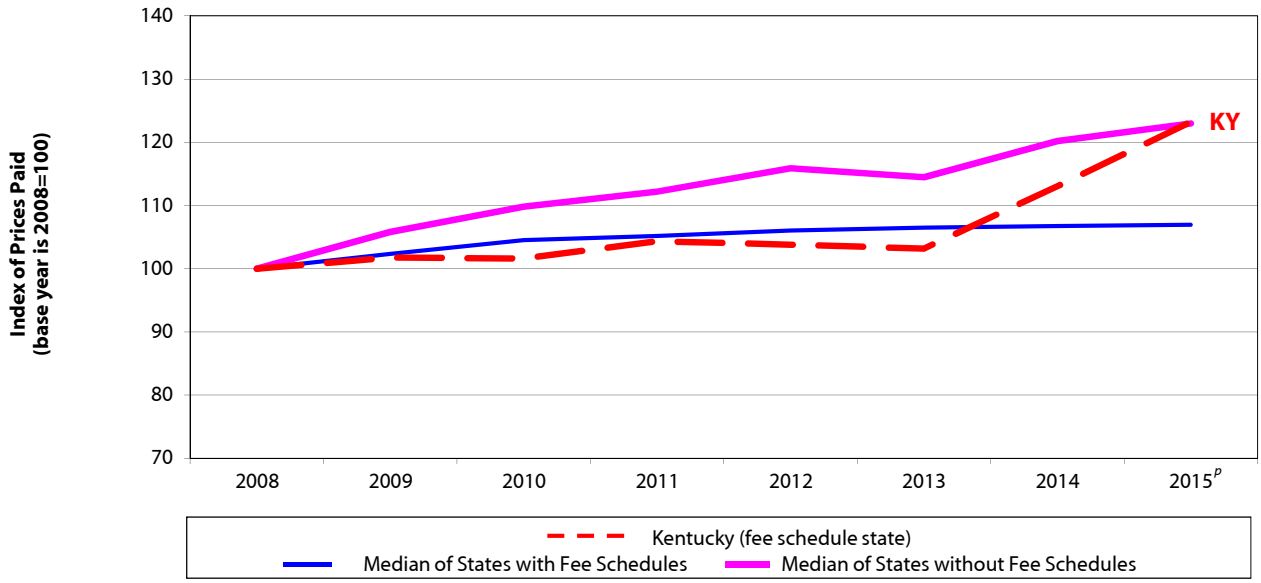
Figure B.13 Kentucky Trends in Prices Paid for Professional Services, WCRI MPI-WC, 2008 to 2015



Calendar Year 2008 Is the Base Year for Index



Calendar Year 2008 Is the Base Year for Index

Kentucky	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015P
State average annual change in prices paid for professional services	2%	0%	3%	-1%	-1%	10%	9%
Median annual change for fee schedule states[a]	2%	2%	1%	1%	0%	0%	0%
Median annual change for non-fee schedule states	6%	4%	2%	3%	-1%	5%	2%

Special notation: ^{P} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the trend lines for the median of states with fee schedules and the median of states without fee schedules represent the median rates of growth of prices paid among states with and without fee schedules from year to year.

Notes:

Kentucky periodically updates its fee schedule for professional services, typically every two to three years. Effective June 6, 2014, Kentucky discontinued the use of relative values from Medicare's resource-based relative value scale (RBRVS) for its professional fee schedule and transitioned to using relative values based on historic data from Fair Health Commercial Database Values.

[a] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

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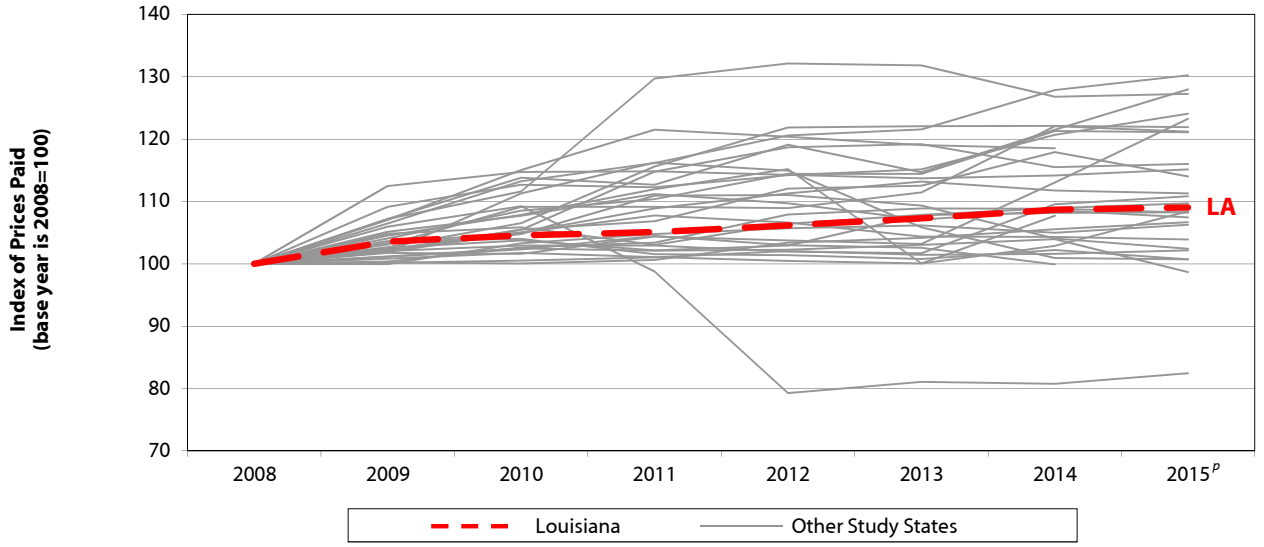
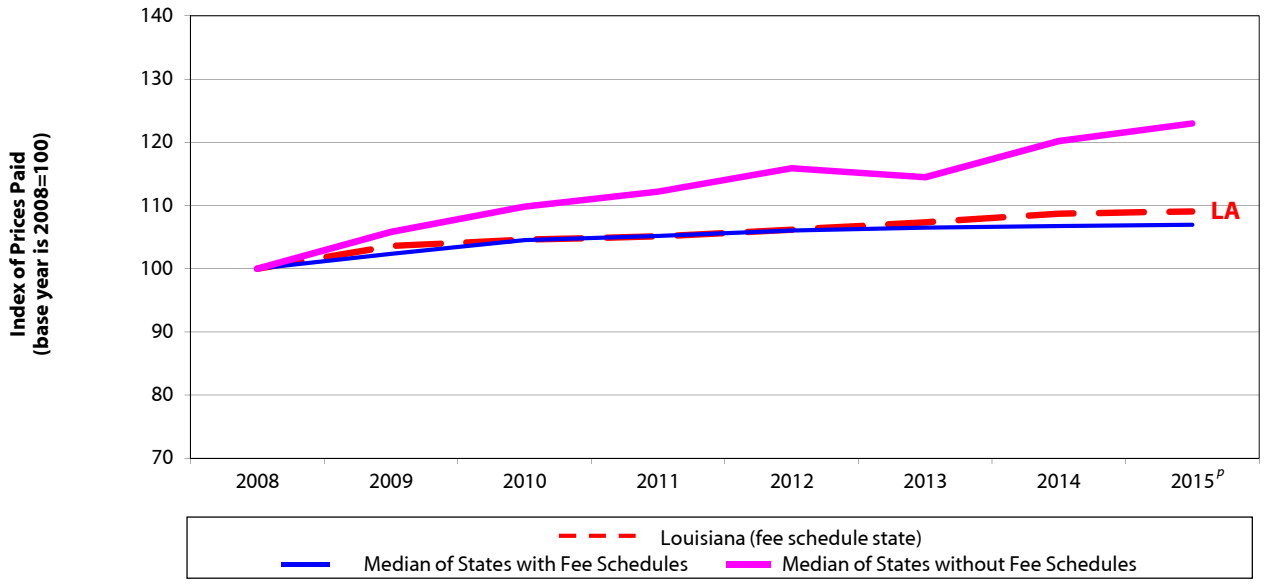
Figure B.14 Louisiana Trends in Prices Paid for Professional Services, WCRI MPI-WC, 2008 to 2015



Calendar Year 2008 Is the Base Year for Index



Calendar Year 2008 Is the Base Year for Index

Louisiana	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 P
State average annual change in prices paid for professional services	4%	1%	0%	1%	1%	1%	0%
Median annual change for fee schedule states[a]	2%	2%	1%	1%	0%	0%	0%
Median annual change for non-fee schedule states	6%	4%	2%	3%	-1%	5%	2%

Special notation: ^{P} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the trend lines for the median of states with fee schedules and the median of states without fee schedules represent the median rates of growth of prices paid among states with and without fee schedules from year to year.

Notes: Louisiana's fee schedule for professional services uses the 1999 CPT list published by the American Medical Association and the maximum allowable reimbursement rates effective as of March 2001. Effective July 20, 2013, Louisiana updated its fee schedule using the 2012 CPT list. Maximum allowable reimbursement rates were added for new or revised codes; however, the fee schedule rates for the existing codes appeared to remain at the March 2001 rates. The state-specific codes relating to physical and occupational therapies were discontinued in favor of national CPT codes.

[a] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

Key: CPT: Current Procedural Terminology.

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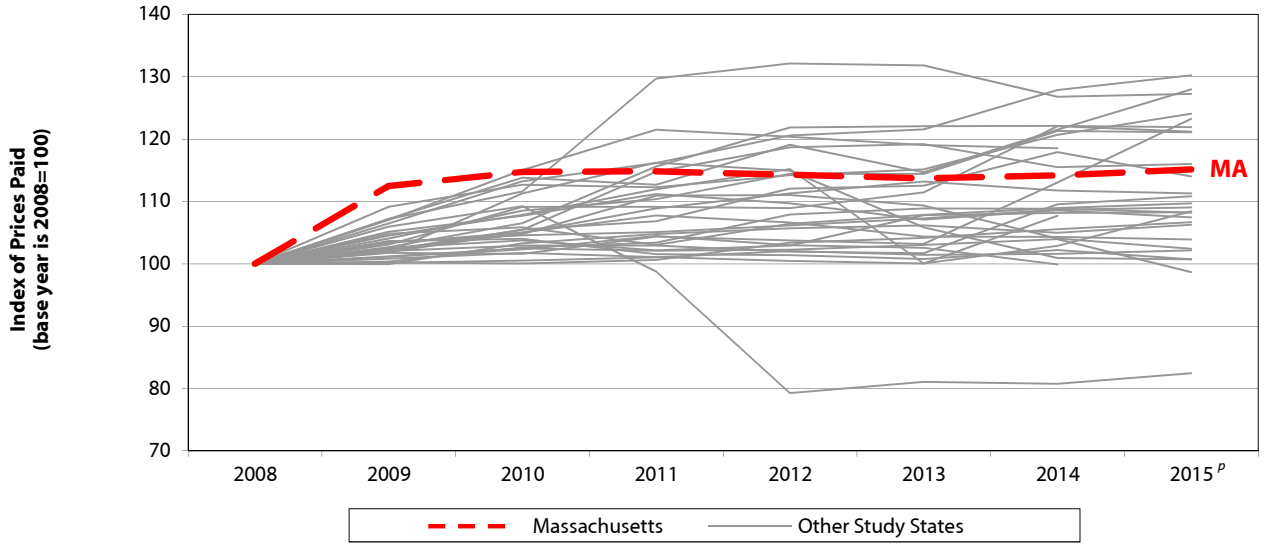
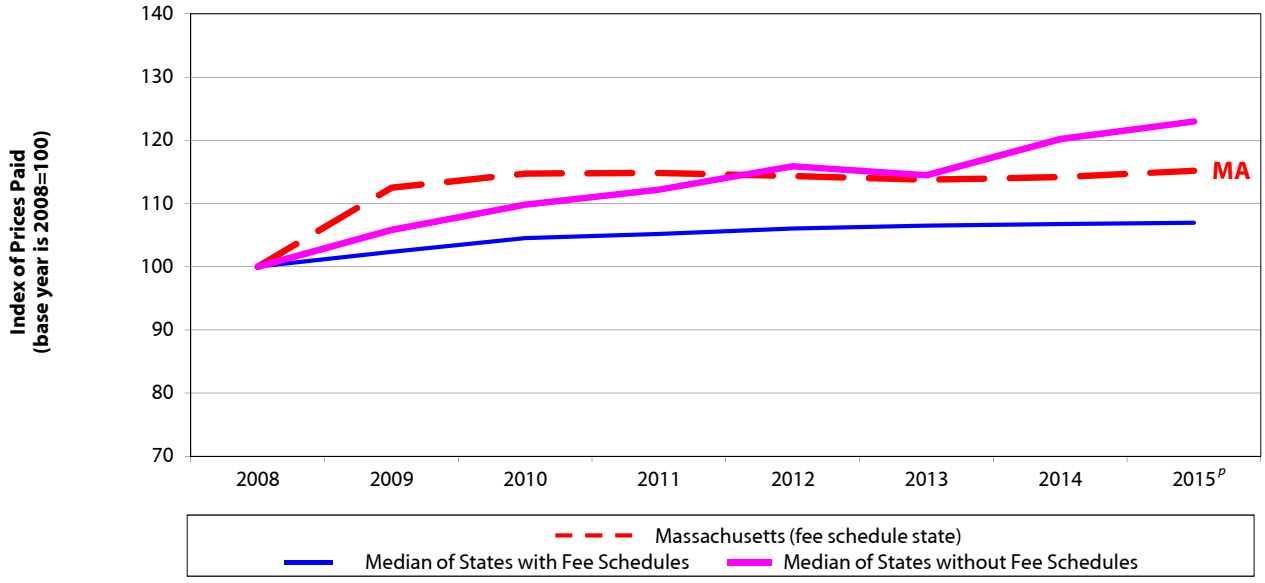
Figure B.15 Massachusetts Trends in Prices Paid for Professional Services, WCRI MPI-WC, 2008 to 2015



Calendar Year 2008 Is the Base Year for Index



Calendar Year 2008 Is the Base Year for Index

Massachusetts	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 P
State average annual change in prices paid for professional services	12%	2%	0%	0%	0%	0%	1%
Median annual change for fee schedule states[a]	2%	2%	1%	1%	0%	0%	0%
Median annual change for non-fee schedule states	6%	4%	2%	3%	-1%	5%	2%

Special notation: ^{P} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the trend lines for the median of states with fee schedules and the median of states without fee schedules represent the median rates of growth of prices paid among states with and without fee schedules from year to year.

Notes: Massachusetts increased the fee schedule rates for many professional services, effective April 2009. The fee schedule increases for major surgeries were especially significant; the rates for some surgeries increased to two to three times the previous rates to be more in line with the median prices paid. Prior to that, the fee schedule for professional services had not been updated since September 2004. A WCRI study showed that major surgeries were often paid above the fee schedule rates (Eccleston, 2006). This study found that for many of these surgeries, it was not uncommon for the median prices paid to be two or three times the fee schedule amount. Typically, 50–60 percent of these surgical procedures were paid above the fee schedule rate. System participants indicated that payors in the state were willing to negotiate with surgeons because injured workers had better outcomes and return to work was faster (Radeva, 2014b).

[a] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

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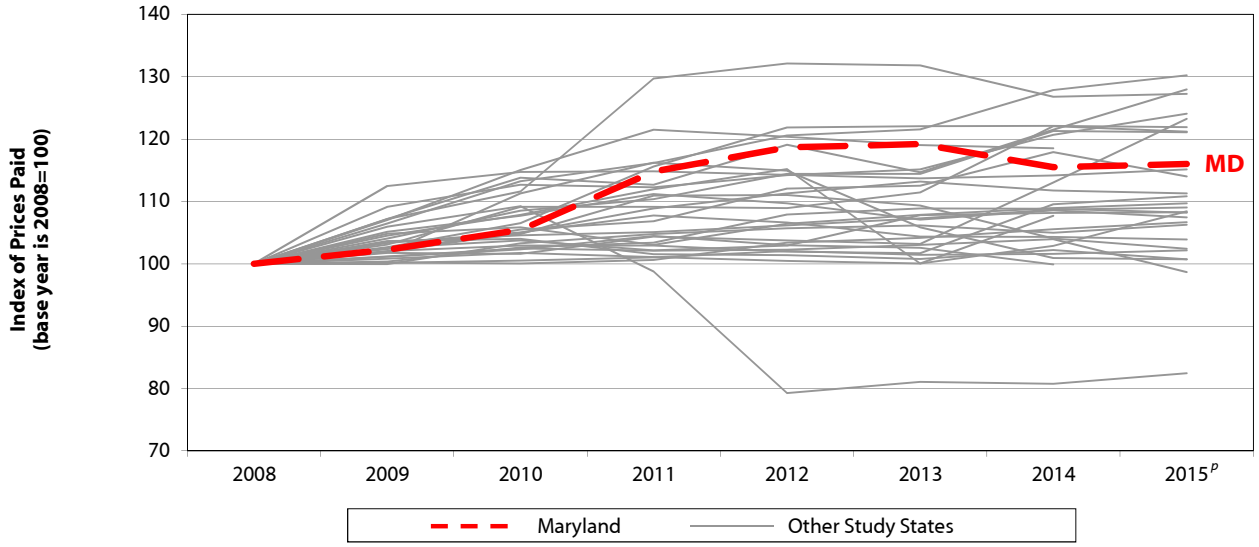
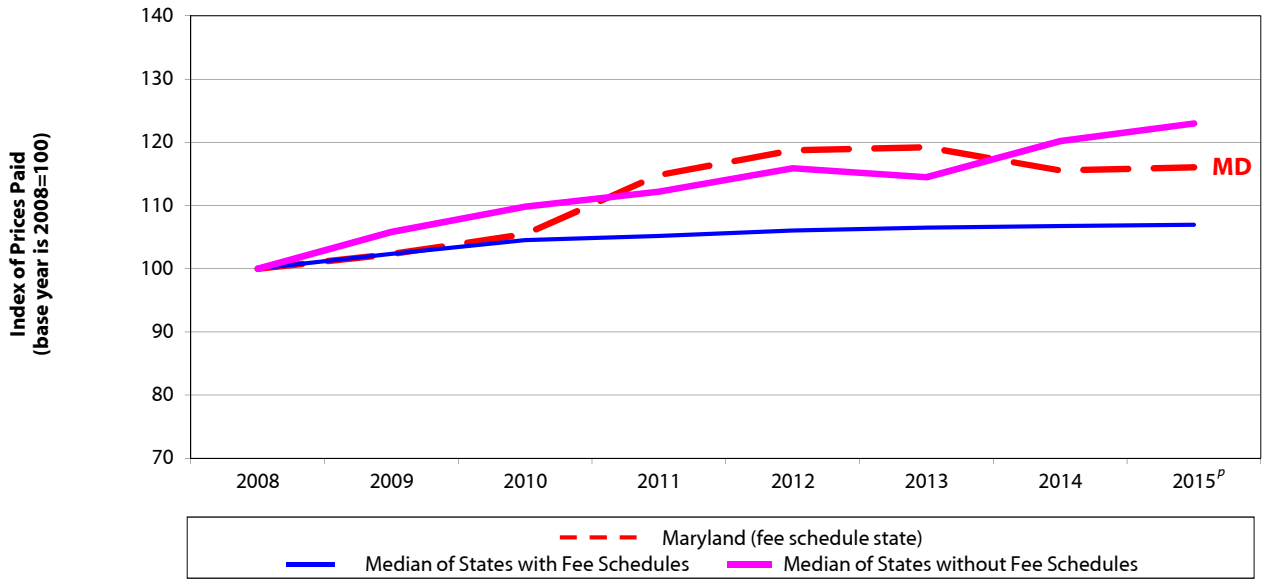
Figure B.16 Maryland Trends in Prices Paid for Professional Services, WCRI MPI-WC, 2008 to 2015



Calendar Year 2008 Is the Base Year for Index



Calendar Year 2008 Is the Base Year for Index

Maryland	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 P
State average annual change in prices paid for professional services	2%	3%	9%	3%	0%	-3%	0%
Median annual change for fee schedule states[a]	2%	2%	1%	1%	0%	0%	0%
Median annual change for non-fee schedule states	6%	4%	2%	3%	-1%	5%	2%

Special notation: ^{P} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the trend lines for the median of states with fee schedules and the median of states without fee schedules represent the median rates of growth of prices paid among states with and without fee schedules from year to year.

Notes: Starting in March 2008, Maryland implemented annual increases to its fee schedule rates for professional services based on changes in the Medicare Economic Index. The most recent update covered during the study period in this report was made to the January 1, 2015, fee schedule and became effective June 15, 2015.

[a] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

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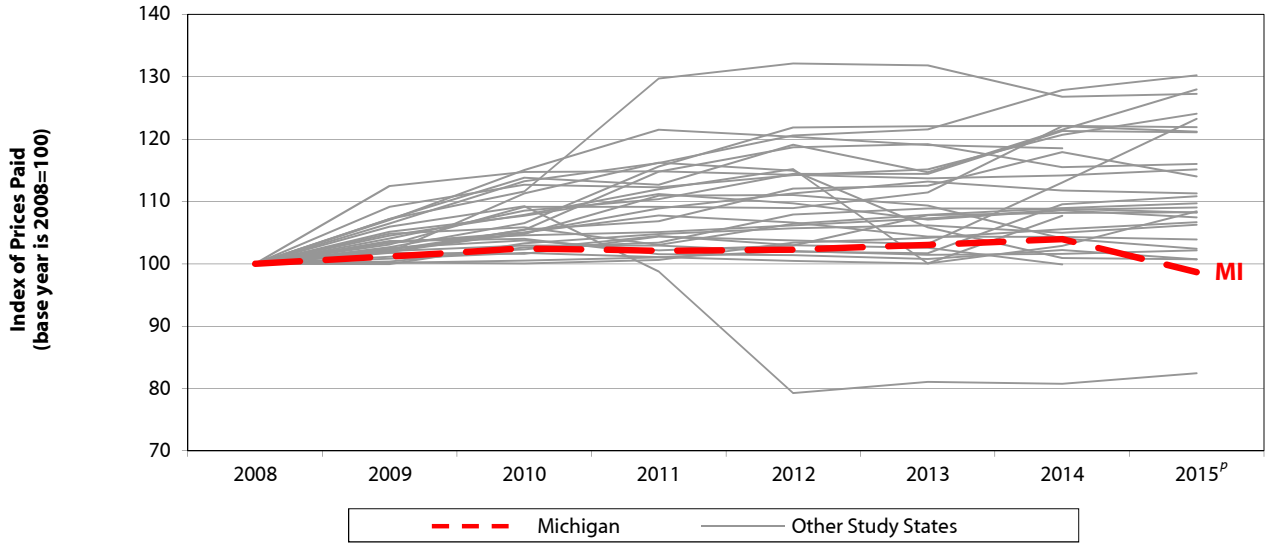
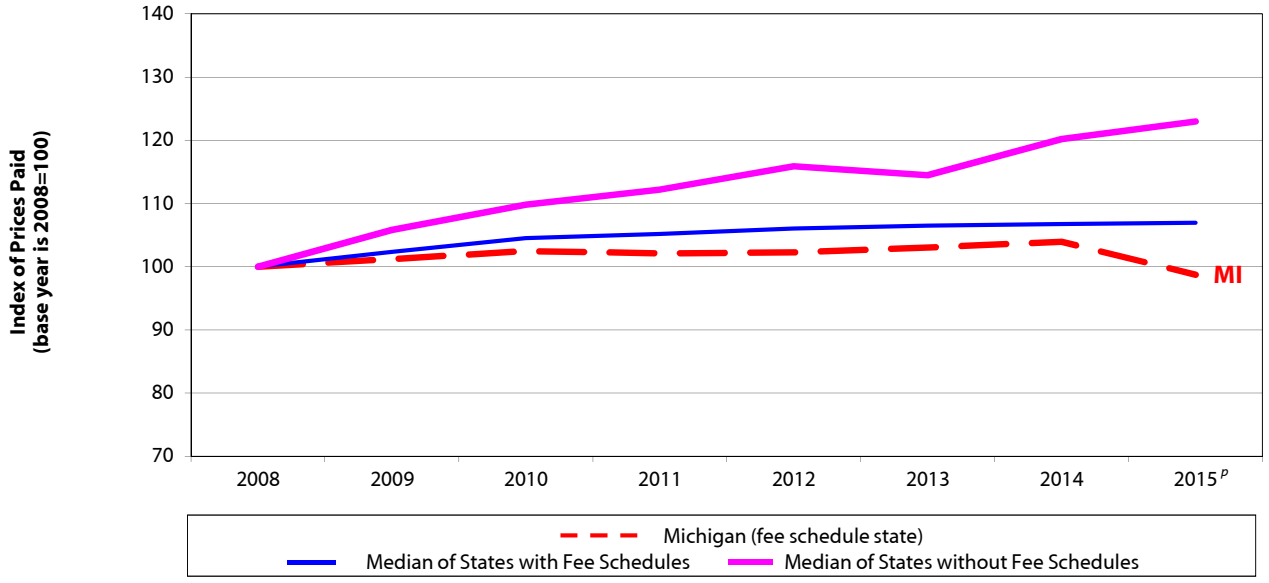
Figure B.17 Michigan Trends in Prices Paid for Professional Services, WCRI MPI-WC, 2008 to 2015



Calendar Year 2008 Is the Base Year for Index



Calendar Year 2008 Is the Base Year for Index

Michigan	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 p
State average annual change in prices paid for professional services	1%	1%	0%	0%	1%	1%	-5%
Median annual change for fee schedule states[a]	2%	2%	1%	1%	0%	0%	0%
Median annual change for non-fee schedule states	6%	4%	2%	3%	-1%	5%	2%

Special notation: ^{p} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the trend lines for the median of states with fee schedules and the median of states without fee schedules represent the median rates of growth of prices paid among states with and without fee schedules from year to year.

Notes: Michigan updates its fee schedule for professional services annually. The most recent update covered in the study period in this report was effective December 26, 2014.

[a] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

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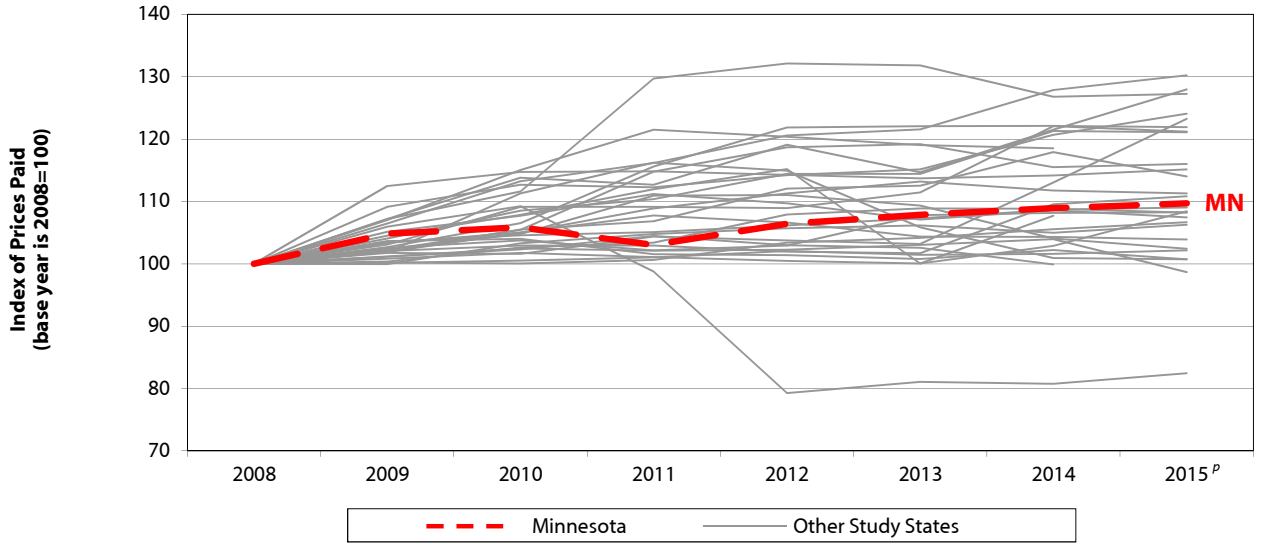
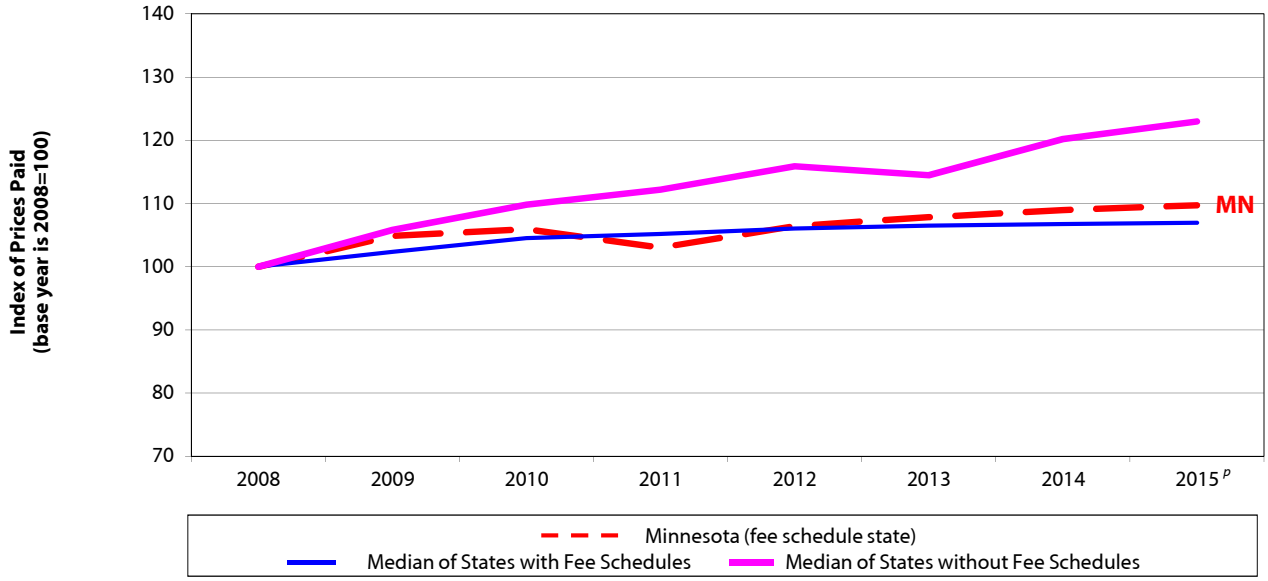
Figure B.18 Minnesota Trends in Prices Paid for Professional Services, WCRI MPI-WC, 2008 to 2015



Calendar Year 2008 Is the Base Year for Index



Calendar Year 2008 Is the Base Year for Index

Minnesota	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 p
State average annual change in prices paid for professional services	5%	1%	-3%	3%	1%	1%	1%
Median annual change for fee schedule states[a]	2%	2%	1%	1%	0%	0%	0%
Median annual change for non-fee schedule states	6%	4%	2%	3%	-1%	5%	2%

Special notation: ^{p} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the trend lines for the median of states with fee schedules and the median of states without fee schedules represent the median rates of growth of prices paid among states with and without fee schedules from year to year.

Notes: Minnesota's fee schedule for professional services from 2002 to September 2010 was based on 1998 Medicare relative value units (RVUs), with annual updates to the conversion factor. Effective October 1, 2010, Minnesota updated its fee schedule by using 2009 Medicare RVUs and decreasing the state conversion factor. The most recent update covered in the study period in this report was effective October 1, 2014, and is based on 2013 Medicare RVUs .

[a] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

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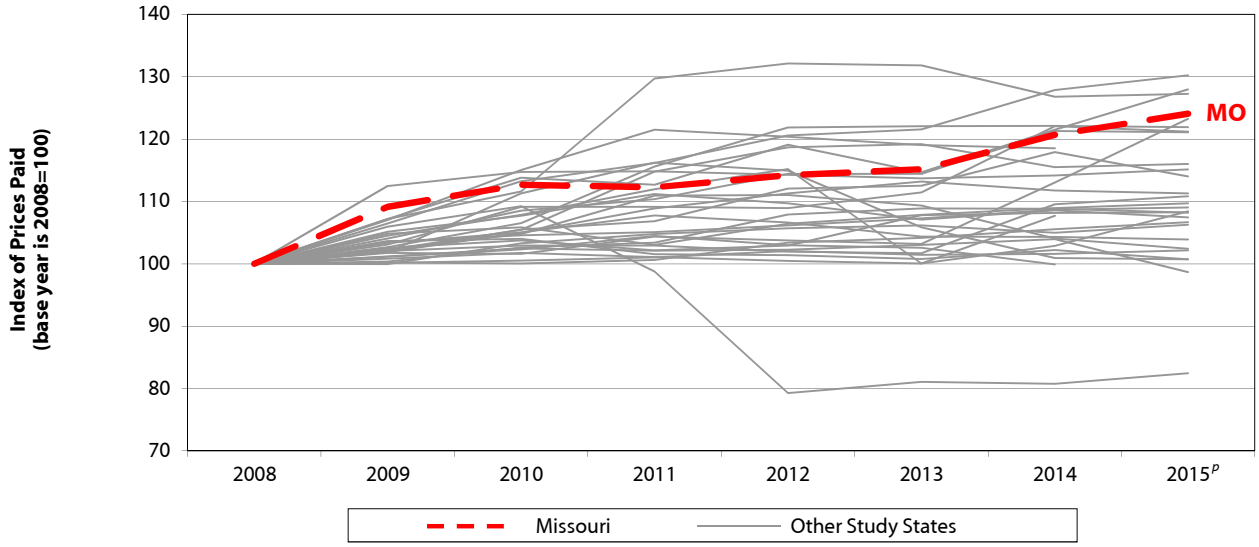
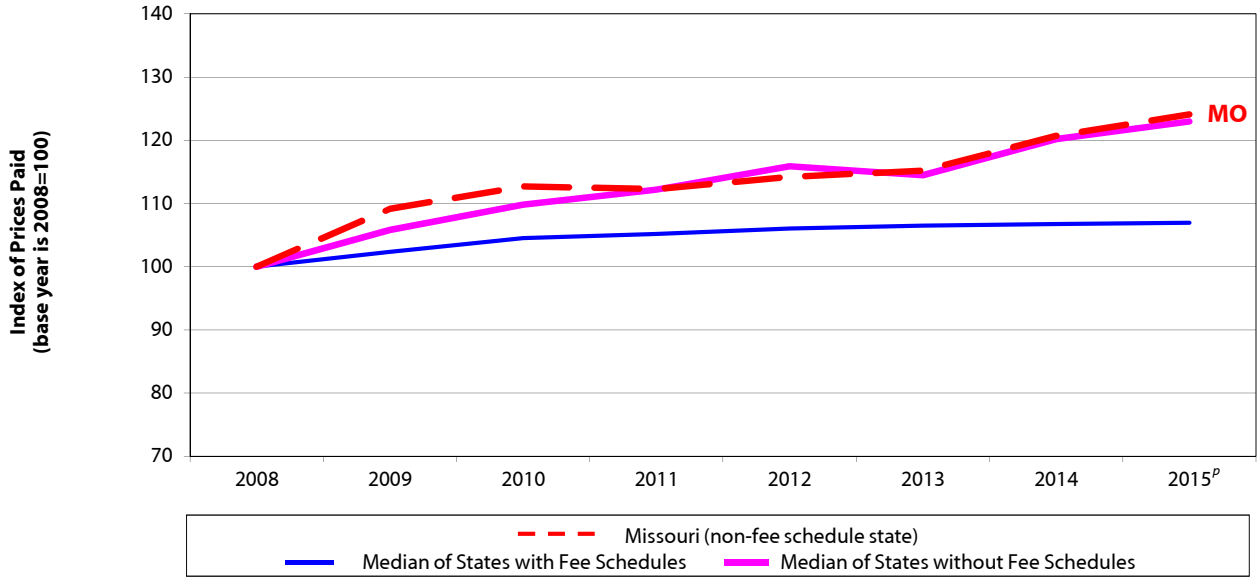
Figure B.19 Missouri Trends in Prices Paid for Professional Services, WCRI MPI-WC, 2008 to 2015



Calendar Year 2008 Is the Base Year for Index



Calendar Year 2008 Is the Base Year for Index

Missouri	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 P
State average annual change in prices paid for professional services	9%	3%	0%	2%	1%	5%	3%
Median annual change for fee schedule states[a]	2%	2%	1%	1%	0%	0%	0%
Median annual change for non-fee schedule states	6%	4%	2%	3%	-1%	5%	2%

Special notation: ^{P} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the trend lines for the median of states with fee schedules and the median of states without fee schedules represent the median rates of growth of prices paid among states with and without fee schedules from year to year.

Notes:

The data for Missouri are not necessarily representative because the state is missing data from a larger data source that is significant in the state. To the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to under- or overestimations in the results.

Missouri did not have a workers' compensation fee schedule as of 2015.

[a] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

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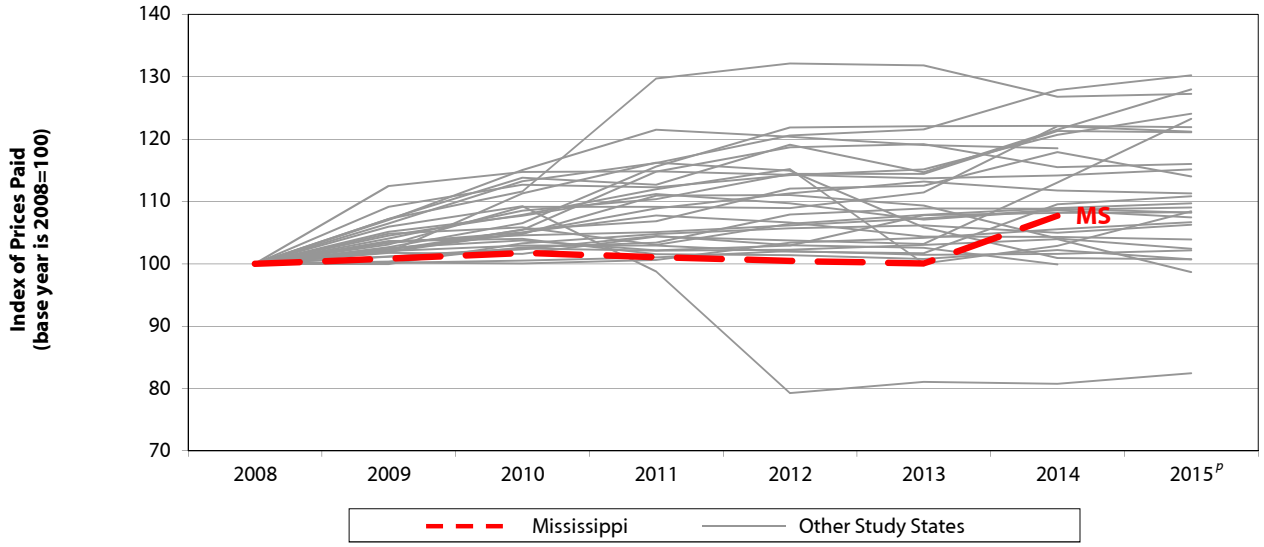
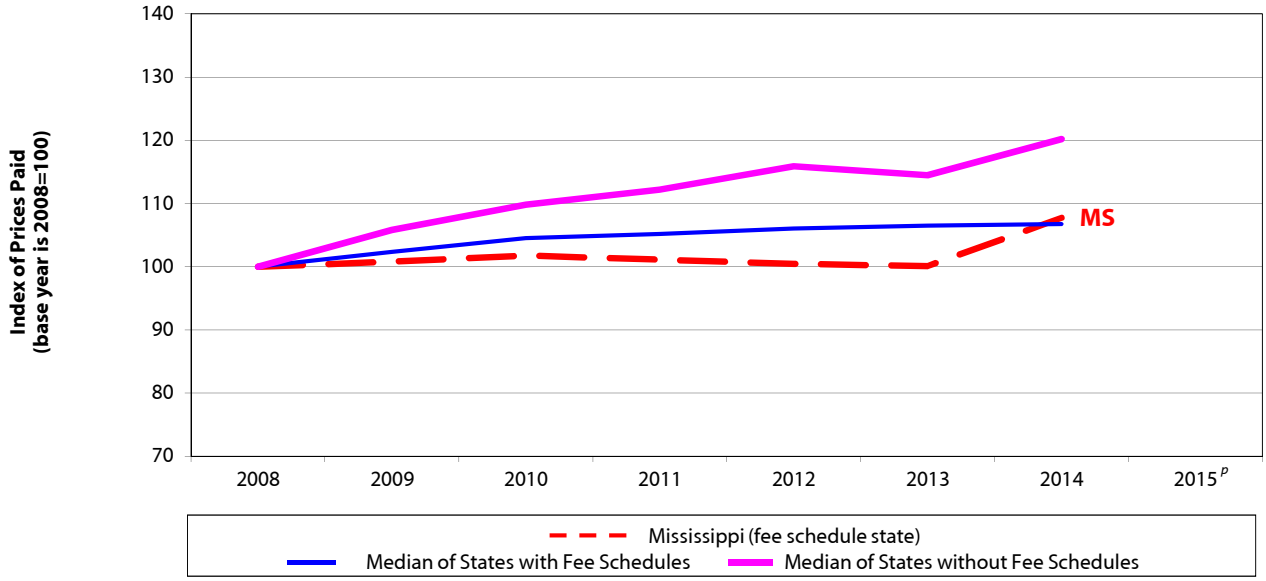
Figure B.20 Mississippi Trends in Prices Paid for Professional Services, WCRI MPI-WC, 2008 to 2015



Calendar Year 2008 Is the Base Year for Index



Calendar Year 2008 Is the Base Year for Index

Mississippi	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 P
State average annual change in prices paid for professional services	1%	1%	-1%	-1%	0%	8%	n/a
Median annual change for fee schedule states[a]	2%	2%	1%	1%	0%	0%	0%
Median annual change for non-fee schedule states	6%	4%	2%	3%	-1%	5%	2%

Special notation: ^{P} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the trend lines for the median of states with fee schedules and the median of states without fee schedules represent the median rates of growth of prices paid among states with and without fee schedules from year to year.

Notes:

The prices paid for professional services in Mississippi are not reported for 2015. Mississippi was excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

Mississippi updates its fee schedule for professional services periodically every few years. The most recent full revision to the fee schedule covered in the study period in this report occurred on November 1, 2013, and was amended with an update effective June 19, 2015. This most recent update was made to account for new and discontinued Current Procedural Terminology (CPT) codes published by the American Medical Association for 2015.

[a] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

Key: n/a: not applicable.

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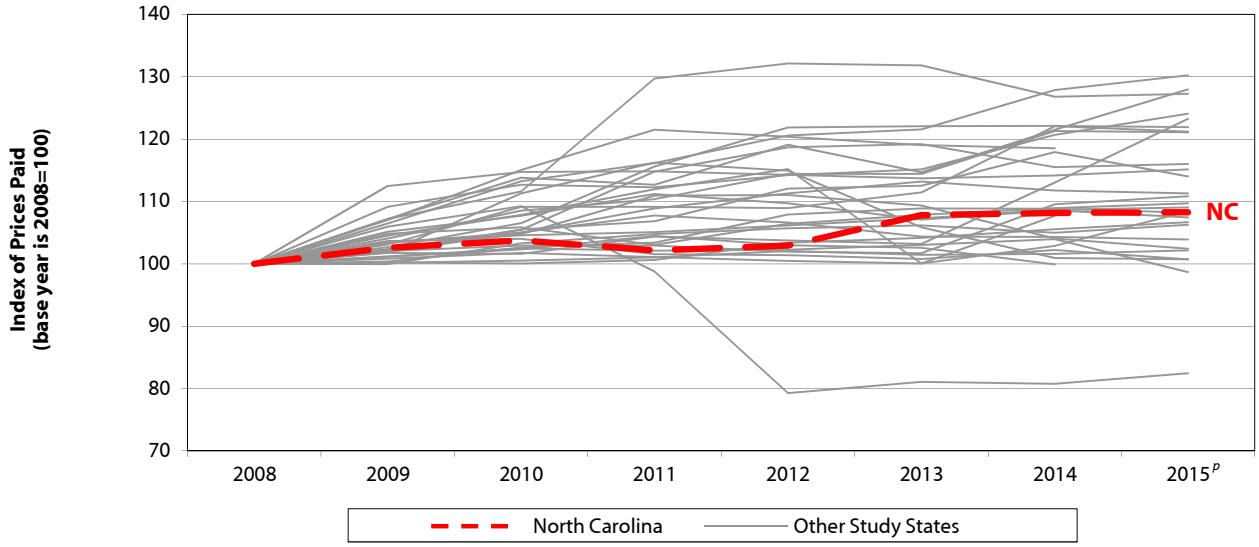
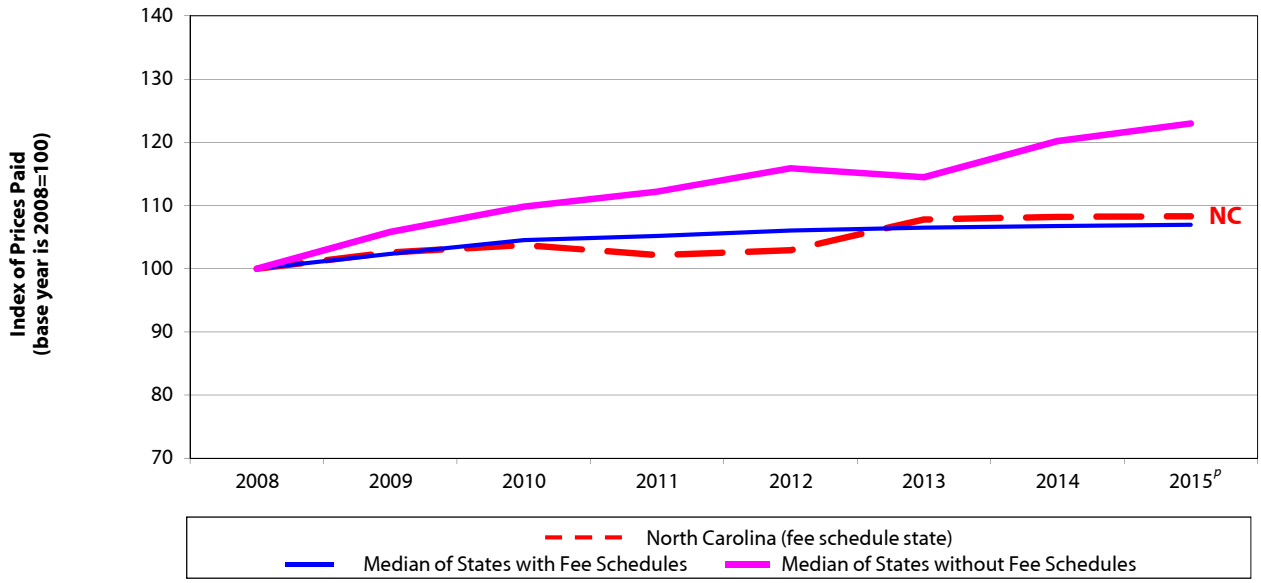
Figure B.21 North Carolina Trends in Prices Paid for Professional Services, WCRI MPI-WC, 2008 to 2015



Calendar Year 2008 Is the Base Year for Index



Calendar Year 2008 Is the Base Year for Index

North Carolina	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015p
State average annual change in prices paid for professional services	3%	1%	-2%	1%	5%	0%	0%
Median annual change for fee schedule states[a]	2%	2%	1%	1%	0%	0%	0%
Median annual change for non-fee schedule states	6%	4%	2%	3%	-1%	5%	2%

Special notation: ^{p} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the trend lines for the median of states with fee schedules and the median of states without fee schedules represent the median rates of growth of prices paid among states with and without fee schedules from year to year.

Notes: Maximum reimbursement amounts in the North Carolina fee schedule for professional services are based on those adopted by the North Carolina Industrial Commission effective January 1996, which was based on the 1995 Medicare values. North Carolina updates its fee schedule annually in January to account for new and discontinued Current Procedural Terminology (CPT) codes published by the American Medical Association. In 2013, the fee schedule rates for office visits increased in North Carolina. Effective July 1, 2015, North Carolina updated the professional fee schedules to be based on the current year Medicare fees for North Carolina. Starting in 2016, and each year thereafter, North Carolina will publish a fee schedule table that will be effective January 1. The next edition of this Medical Price Index study series will monitor the price changes after the July 2015 fee schedule change and the 2016 update.

[a] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

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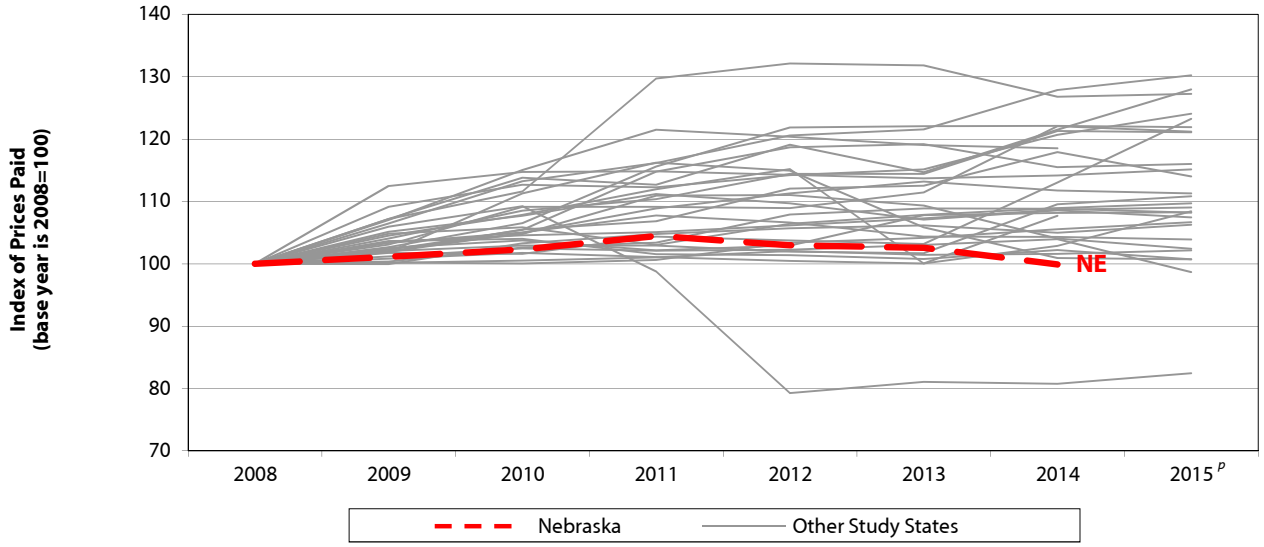
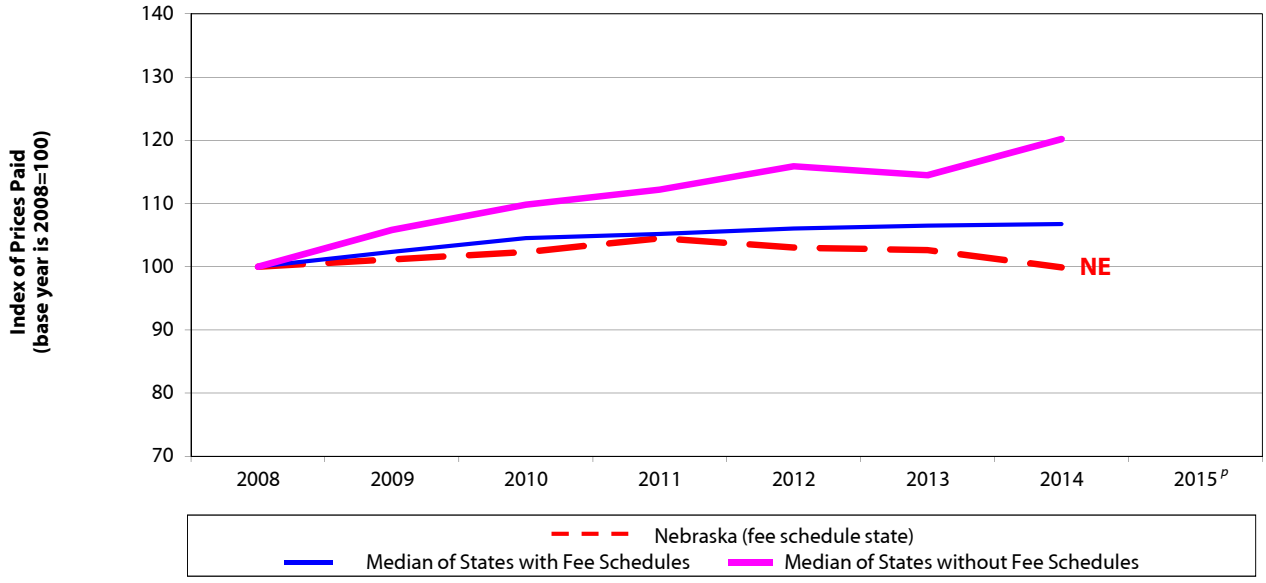
Figure B.22 Nebraska Trends in Prices Paid for Professional Services, WCRI MPI-WC, 2008 to 2015





Nebraska	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 p
State average annual change in prices paid for professional services	1%	1%	2%	-1%	0%	-3%	n/a
Median annual change for fee schedule states[a]	2%	2%	1%	1%	0%	0%	0%
Median annual change for non-fee schedule states	6%	4%	2%	3%	-1%	5%	2%

Special notation: [p] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the trend lines for the median of states with fee schedules and the median of states without fee schedules represent the median rates of growth of prices paid among states with and without fee schedules from year to year.

Notes:

The prices paid for professional services in Nebraska are not reported for 2015. Nebraska was excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

Nebraska has updated its fee schedule for professional services biennially in June since 2008. The most recent update covered in the study period in this report was effective June 1, 2014.

[a] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

Key: n/a: not applicable.

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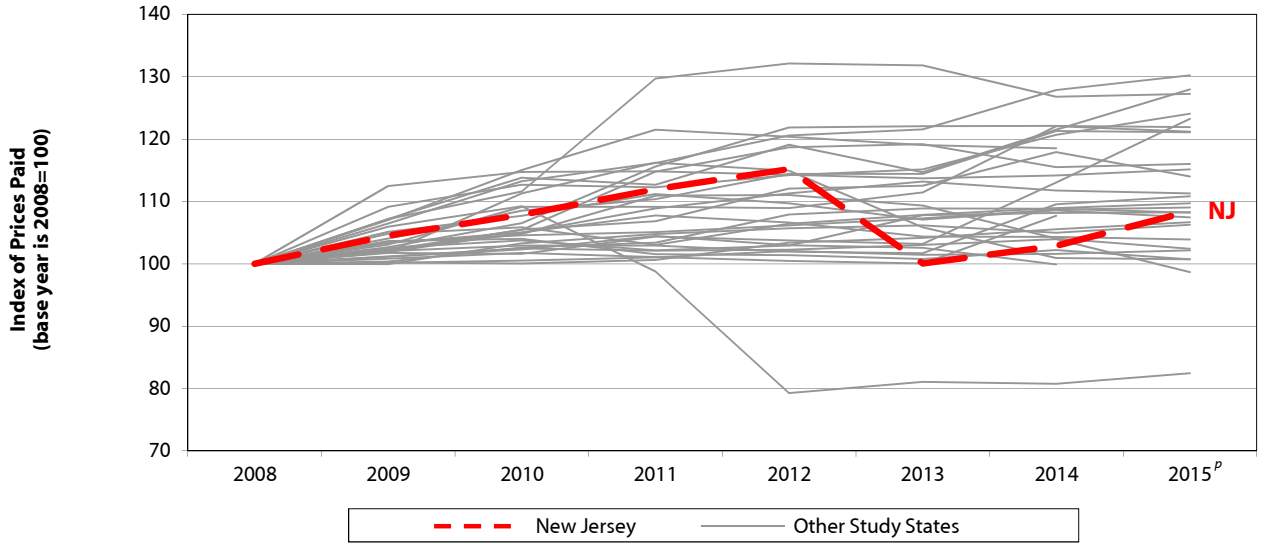
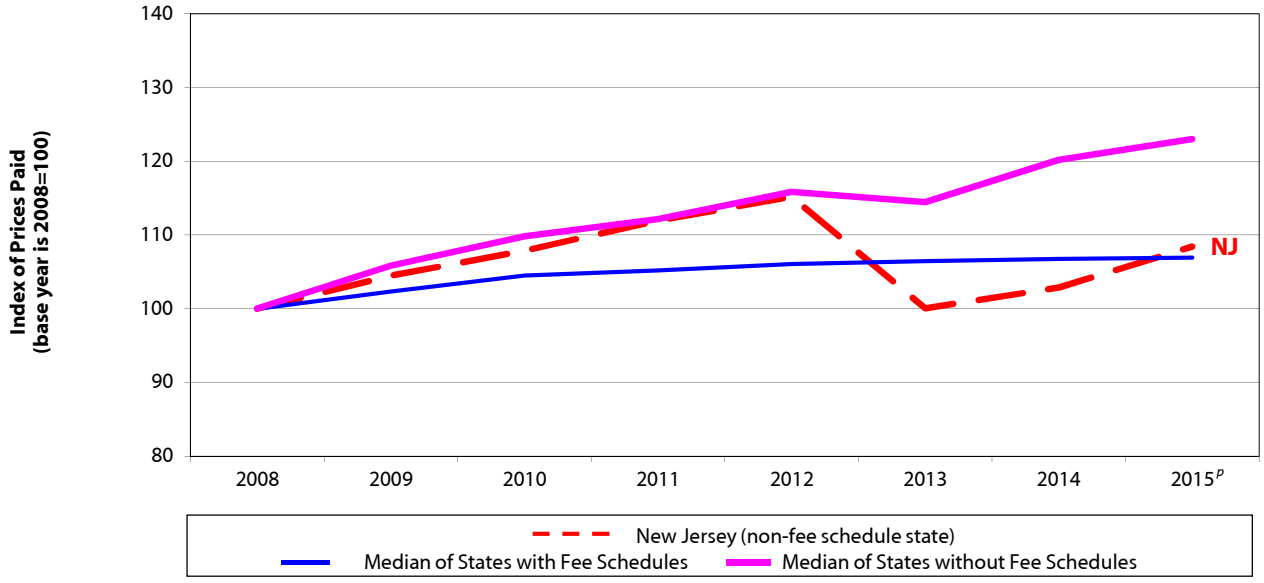
Figure B.23 New Jersey Trends in Prices Paid for Professional Services, WCRI MPI-WC, 2008 to 2015



Calendar Year 2008 Is the Base Year for Index



Calendar Year 2008 Is the Base Year for Index

New Jersey	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015P
State average annual change in prices paid for professional services	5%	3%	4%	3%	-13%	3%	5%
Median annual change for fee schedule states[a]	2%	2%	1%	1%	0%	0%	0%
Median annual change for non-fee schedule states	6%	4%	2%	3%	-1%	5%	2%

Special notation: ^{P} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the trend lines for the median of states with fee schedules and the median of states without fee schedules represent the median rates of growth of prices paid among states with and without fee schedules from year to year.

Notes: New Jersey did not have a workers' compensation fee schedule as of 2015. Note that in 2013, New Jersey experienced decreases in prices paid for multiple types of professional services. More prevalent network participation and bigger discounts in the negotiated prices under network agreements were the main factors underlying this unusual trend among the states with no fee schedules.

[a] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

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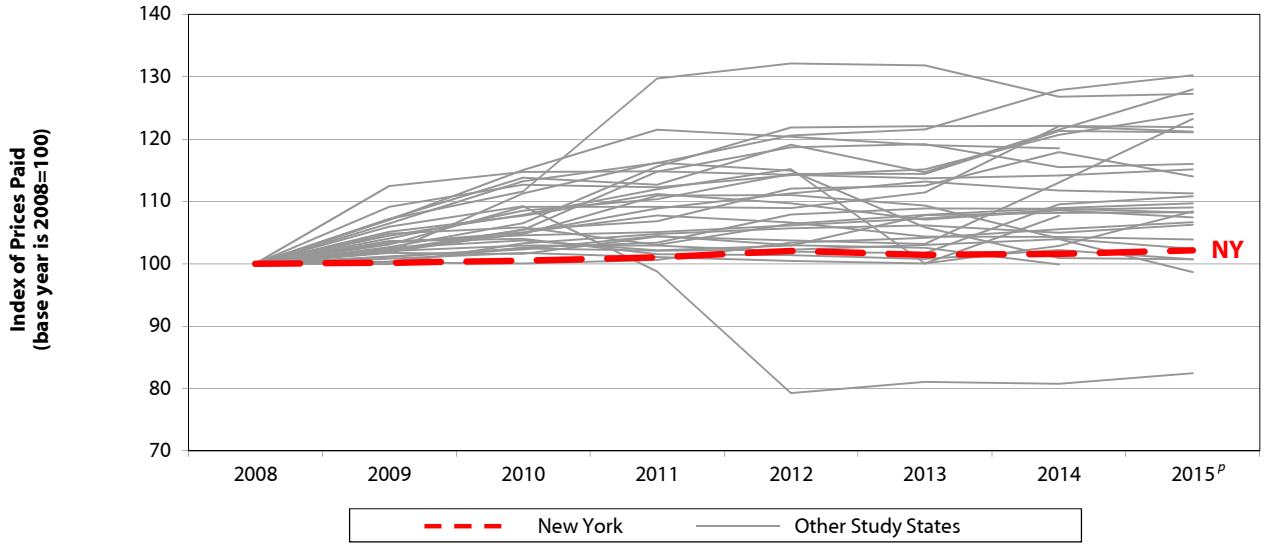
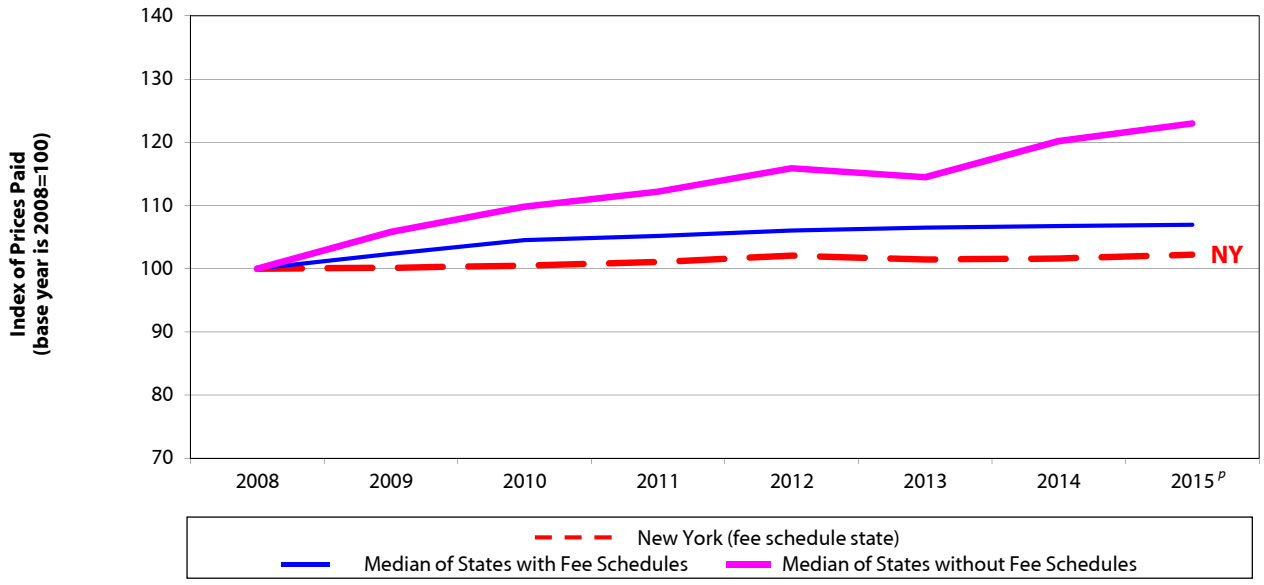
Figure B.24 New York Trends in Prices Paid for Professional Services, WCRI MPI-WC, 2008 to 2015



Calendar Year 2008 Is the Base Year for Index



Calendar Year 2008 Is the Base Year for Index

New York	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 P
State average annual change in prices paid for professional services	0%	0%	1%	1%	-1%	0%	1%
Median annual change for fee schedule states[a]	2%	2%	1%	1%	0%	0%	0%
Median annual change for non-fee schedule states	6%	4%	2%	3%	-1%	5%	2%

Special notation: ^{P} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the trend lines for the median of states with fee schedules and the median of states without fee schedules represent the median rates of growth of prices paid among states with and without fee schedules from year to year.

Notes:

The data for New York are not necessarily representative because it is missing data from a larger data source that is significant in this state. The results in New York are unlikely to be significantly under- or overestimated, given that the state uses a fee schedule to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in New York were materially different from other data sources included in this study from the same state.

New York periodically updates its fee schedule for professional services; however, the maximum allowable reimbursement rates for most services covered in this report did not change from 2002 to November 2010. Effective December 1, 2010, the fee schedule rates in New York increased for evaluation and management services and emergency services. The most recent update covered in the study period in this report was effective June 1, 2015.

[a] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

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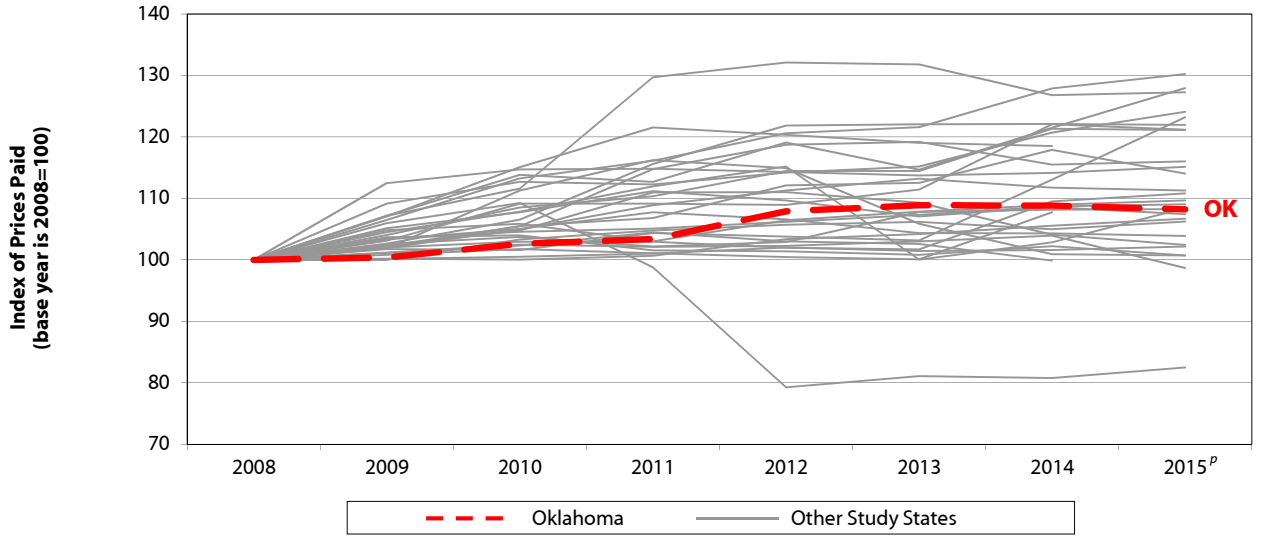
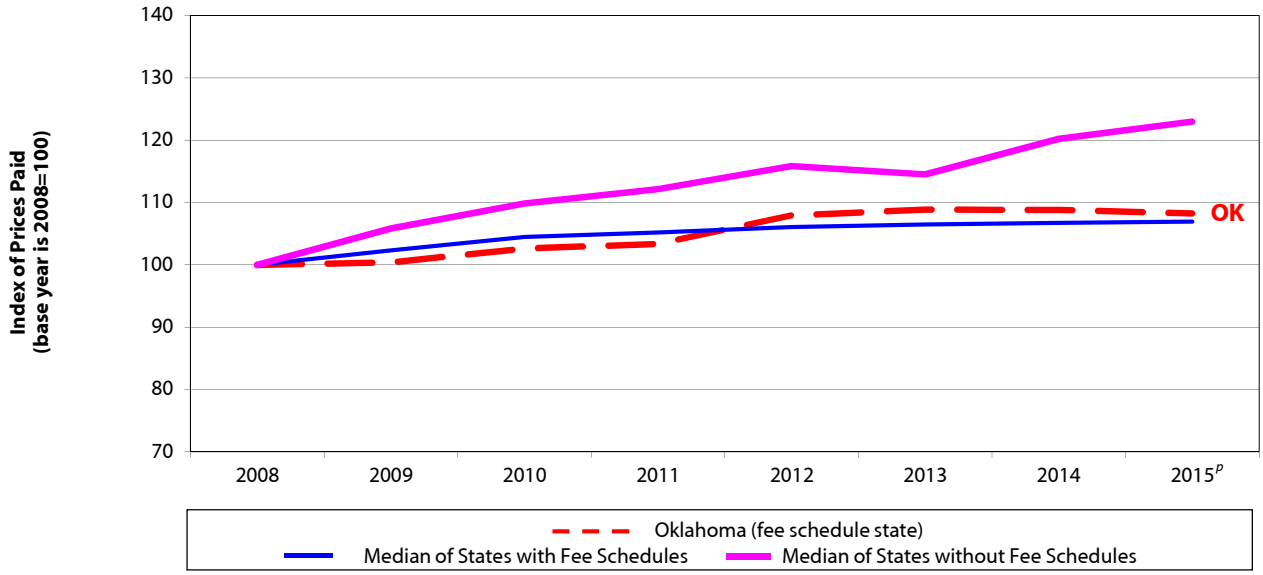
Figure B.25 Oklahoma Trends in Prices Paid for Professional Services, WCRI MPI-WC, 2008 to 2015



Calendar Year 2008 Is the Base Year for Index



Calendar Year 2008 Is the Base Year for Index

Oklahoma	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015p
State average annual change in prices paid for professional services	0%	2%	1%	4%	1%	0%	-1%
Median annual change for fee schedule states[a]	2%	2%	1%	1%	0%	0%	0%
Median annual change for non-fee schedule states	6%	4%	2%	3%	-1%	5%	2%

Special notation: ^{p} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the trend lines for the median of states with fee schedules and the median of states without fee schedules represent the median rates of growth of prices paid among states with and without fee schedules from year to year.

Notes:

The data for Oklahoma are not necessarily representative because it is missing data from a larger data source that is significant in this state. The results in Oklahoma are unlikely to be significantly under- or overestimated, given that the state uses a fee schedule to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in Oklahoma were materially different from other data sources included in this study from the same state.

Oklahoma regularly updated its fee schedule for professional services over the study period. The most recent update covered during the study period in this report was made to the January 1, 2012, fee schedule and became effective January 1, 2015. Note that the fee schedule rates for office visits increased materially in 2012. For the most frequently billed office visits for low to moderate severity for established patients (Current Procedural Terminology [CPT] 99213), the fee schedule rate increased 51 percent in that year.

[a] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

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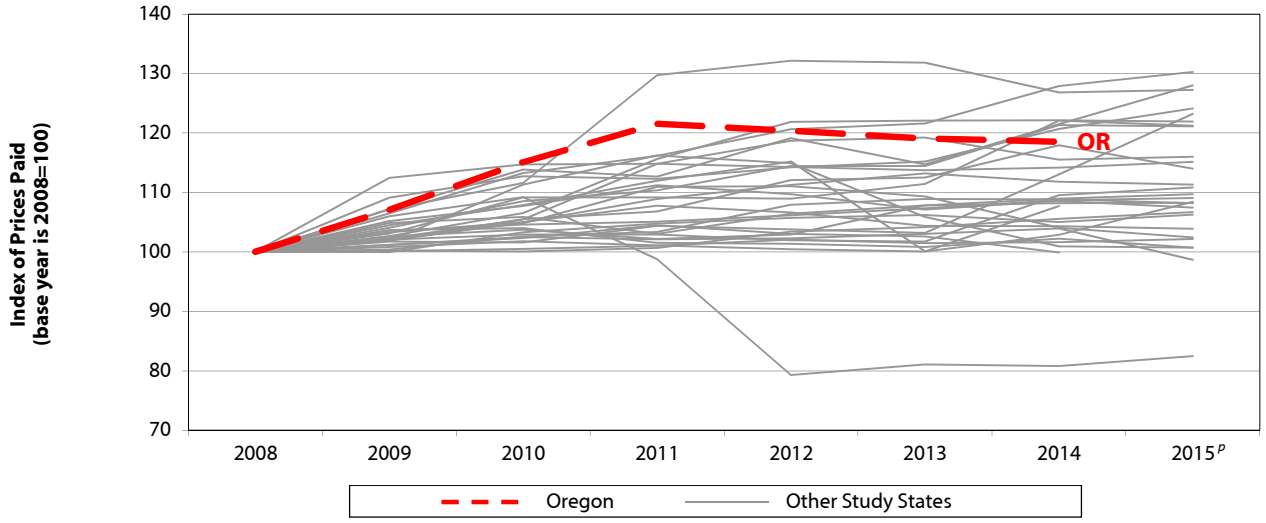
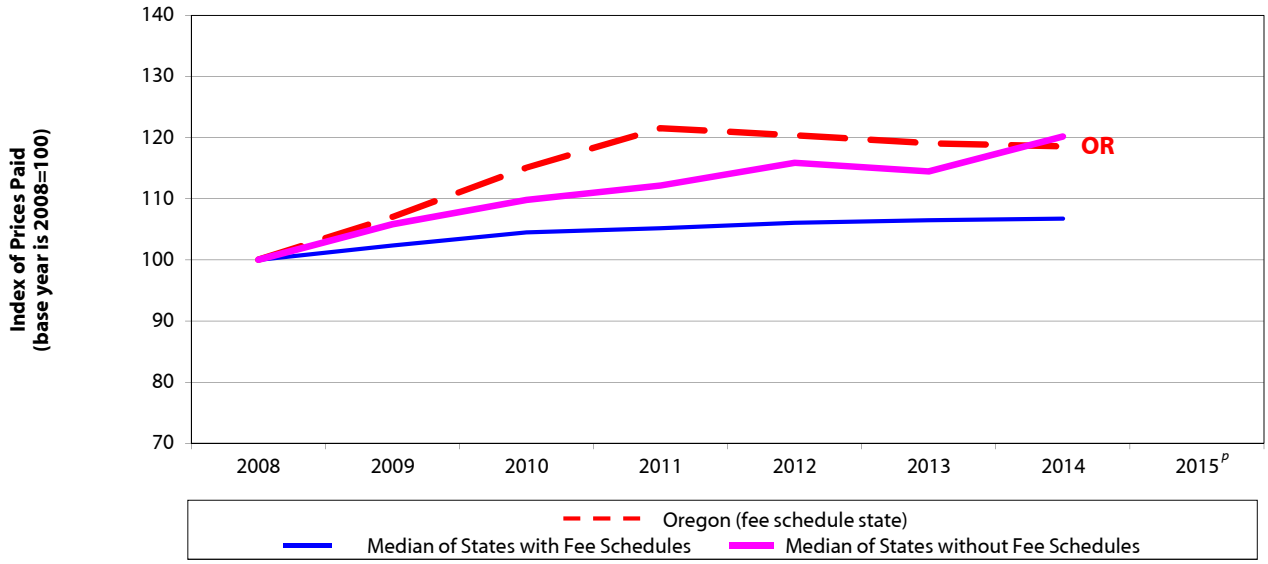
Figure B.26 Oregon Trends in Prices Paid for Professional Services, WCRI MPI-WC, 2008 to 2015





Oregon	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 P
State average annual change in prices paid for professional services	7%	7%	6%	-1%	-1%	0%	n/a
Median annual change for fee schedule states[a]	2%	2%	1%	1%	0%	0%	0%
Median annual change for non-fee schedule states	6%	4%	2%	3%	-1%	5%	2%

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the trend lines for the median of states with fee schedules and the median of states without fee schedules represent the median rates of growth of prices paid among states with and without fee schedules from year to year.

Notes:

The prices paid for professional services in Oregon are not reported for 2015. Oregon was excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

The data for Oregon are not necessarily representative because it is missing data from a larger data source that is significant in this state. The results in Oregon are unlikely to be significantly under- or overestimated, given that the state uses a fee schedule to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in Oregon were materially different from other data sources included in this study from the same state.

In July 2010, Oregon moved away from referencing the Federal RBRVS values in their fee schedule regulation. Instead, the state established the maximum allowable payment (MAP) amounts published by the Oregon Workers' Compensation Division to make it easier for payors and providers to find the correct fee schedule MAP. The underlying values of the Oregon MAP amounts reported in Appendix B of the Oregon Medical Fee and Payment Rules (Oregon Administrative Rules, Chapter 436, Division 009) are based on Medicare RVU values. Oregon typically updates its fee schedule annually. The most recent update covered in the study period in this report was effective April 1, 2015.

[a] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

Key: n/a: not applicable; RBRVS: resource-based relative value scale (Medicare); RVU: relative value unit.

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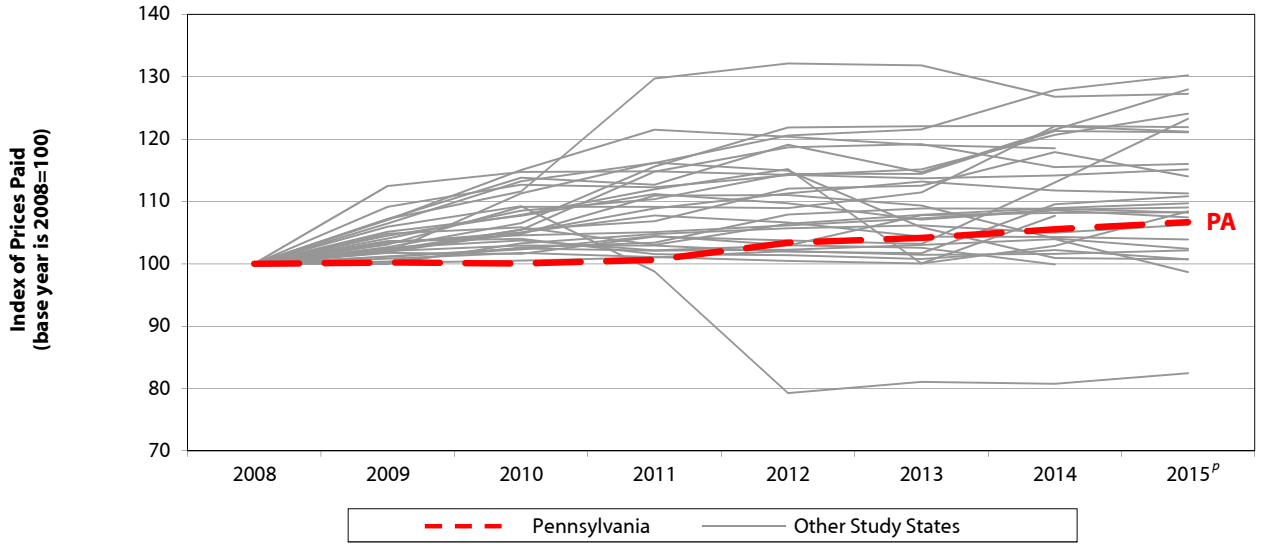
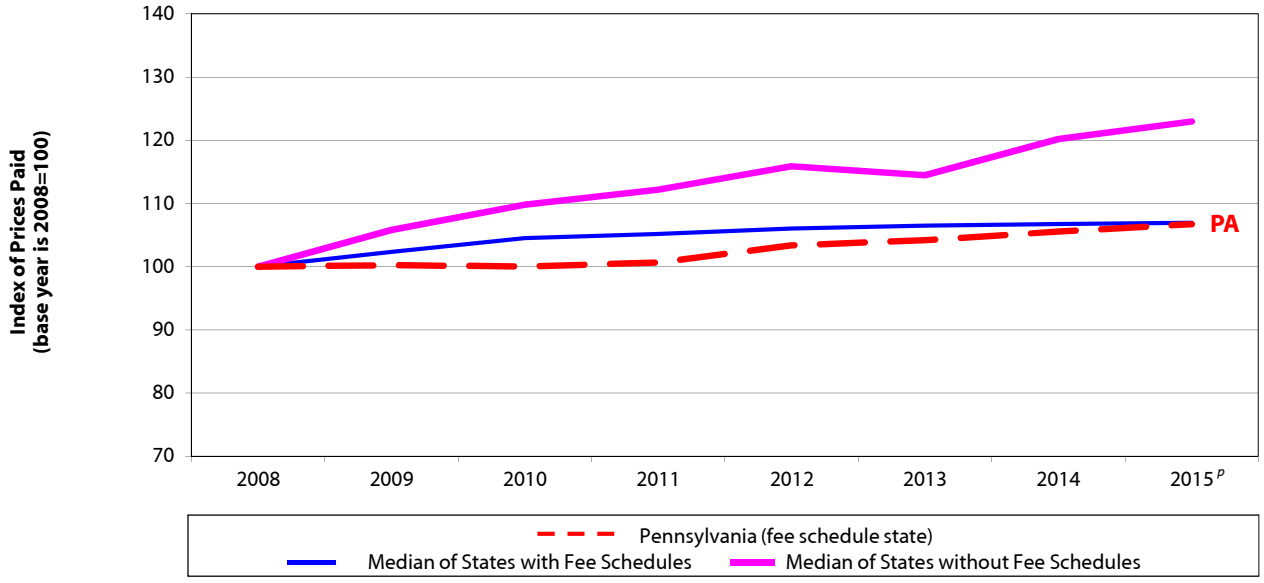
Figure B.27 Pennsylvania Trends in Prices Paid for Professional Services, WCRI MPI-WC, 2008 to 2015



Calendar Year 2008 Is the Base Year for Index



Calendar Year 2008 Is the Base Year for Index

Pennsylvania	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 p
State average annual change in prices paid for professional services	0%	0%	1%	3%	1%	1%	1%
Median annual change for fee schedule states[a]	2%	2%	1%	1%	0%	0%	0%
Median annual change for non-fee schedule states	6%	4%	2%	3%	-1%	5%	2%

Special notation: ^{p} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the trend lines for the median of states with fee schedules and the median of states without fee schedules represent the median rates of growth of prices paid among states with and without fee schedules from year to year.

Notes: Pennsylvania updates its fee schedule for professional services annually, based on the percentage change in the statewide average weekly wage. For 2015, this percentage change was 2.0 percent and applies to all services rendered on or after January 1, 2015.

[a] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

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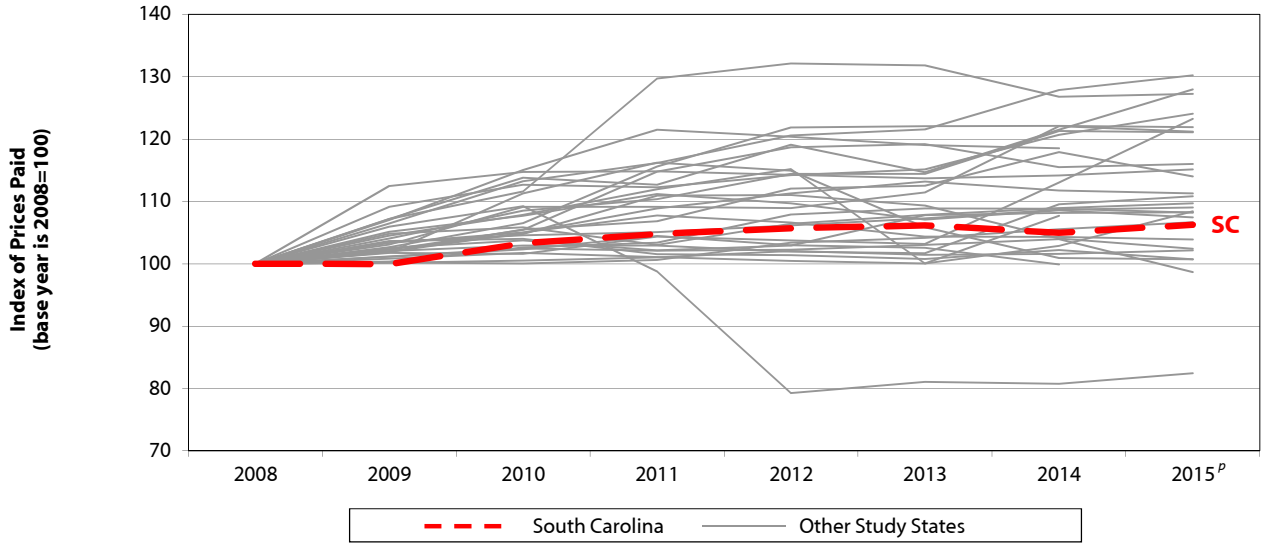
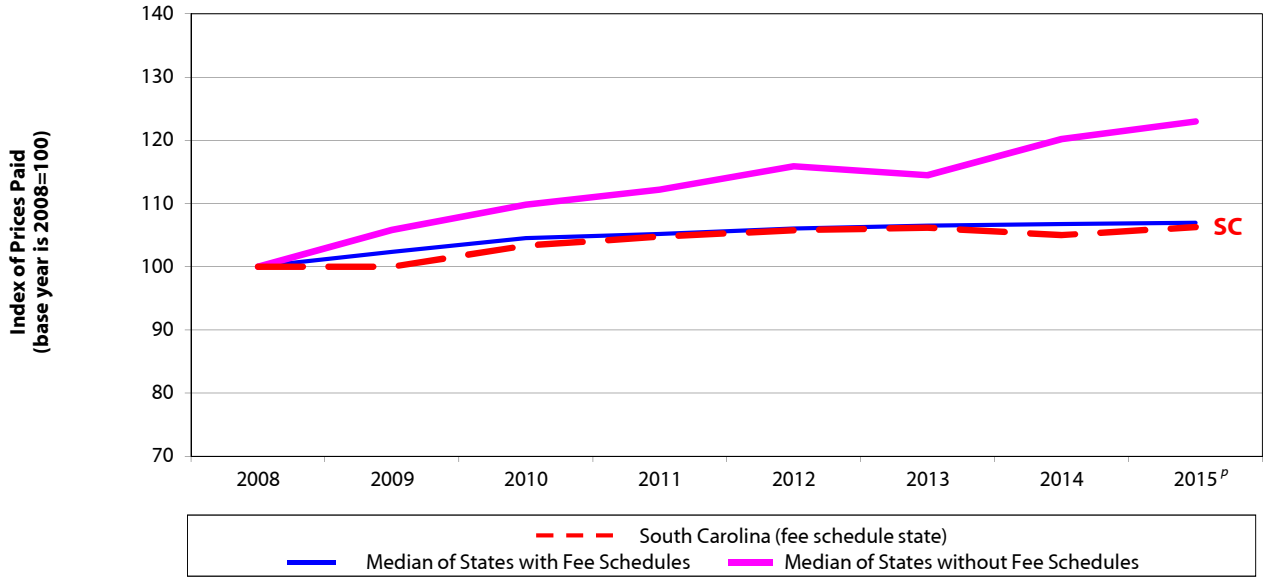
Figure B.28 South Carolina Trends in Prices Paid for Professional Services, WCRI MPI-WC, 2008 to 2015



Calendar Year 2008 Is the Base Year for Index



Calendar Year 2008 Is the Base Year for Index

South Carolina	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 p
State average annual change in prices paid for professional services	0%	3%	1%	1%	0%	-1%	1%
Median annual change for fee schedule states[a]	2%	2%	1%	1%	0%	0%	0%
Median annual change for non-fee schedule states	6%	4%	2%	3%	-1%	5%	2%

Special notation: ^{p} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the trend lines for the median of states with fee schedules and the median of states without fee schedules represent the median rates of growth of prices paid among states with and without fee schedules from year to year.

Notes: South Carolina's fee schedule for professional services remained unchanged (after the update in January 2003) until 2009. Effective July 1, 2010, South Carolina had another update to its fee schedule, which increased the fee schedule rates for many professional services (such as evaluation and management, emergency, etc.) and decreased the rates for others (such as pain management injections, radiology services, etc.). The most recent revision to the 2010 fee schedule covered in the study period in this report was effective April 1, 2015.

[a] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

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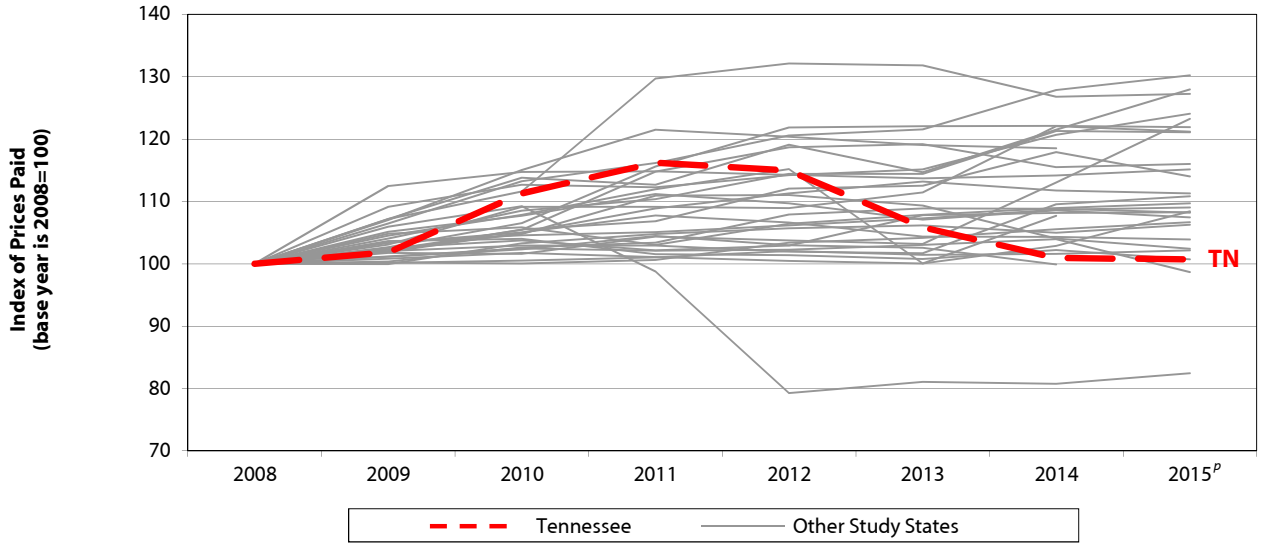
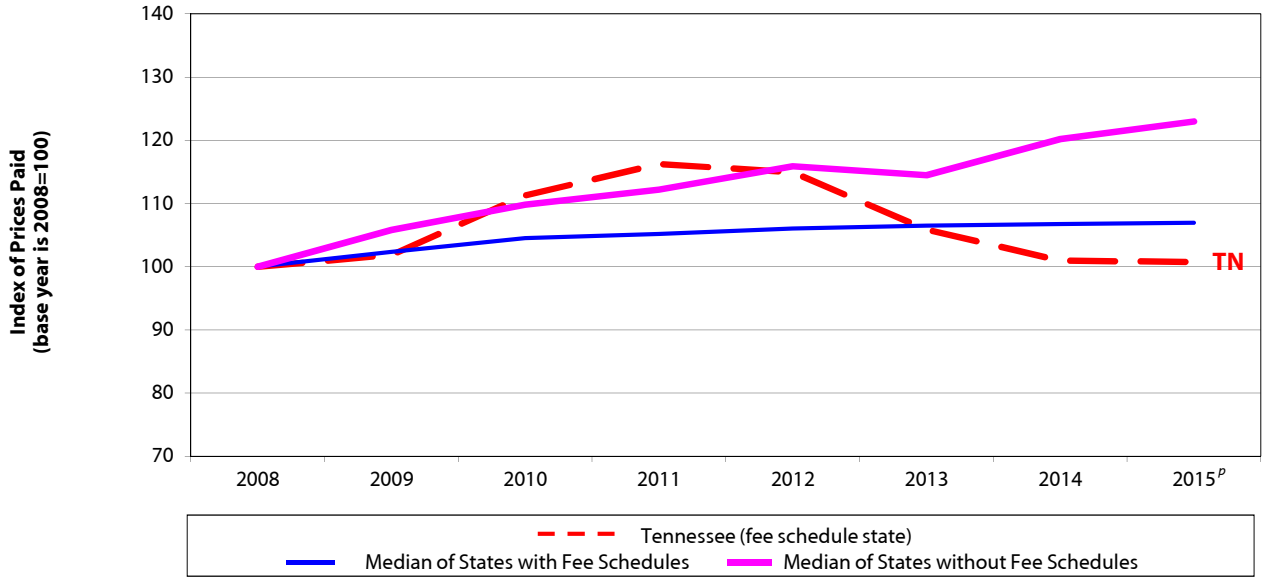
Figure B.29 Tennessee Trends in Prices Paid for Professional Services, WCRI MPI-WC, 2008 to 2015



Calendar Year 2008 Is the Base Year for Index



Calendar Year 2008 Is the Base Year for Index

Tennessee	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 p
State average annual change in prices paid for professional services	2%	9%	4%	-1%	-8%	-5%	0%
Median annual change for fee schedule states[a]	2%	2%	1%	1%	0%	0%	0%
Median annual change for non-fee schedule states	6%	4%	2%	3%	-1%	5%	2%

Special notation: ^{p} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the trend lines for the median of states with fee schedules and the median of states without fee schedules represent the median rates of growth of prices paid among states with and without fee schedules from year to year.

Note: Tennessee implemented an RBRVS-based fee schedule in July 2005 and had regular updates in the following years. For instance, the fee schedule rates decreased across service groups in 2013.

[a] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

Key: RBRVS: resource-based relative value scale (Medicare).

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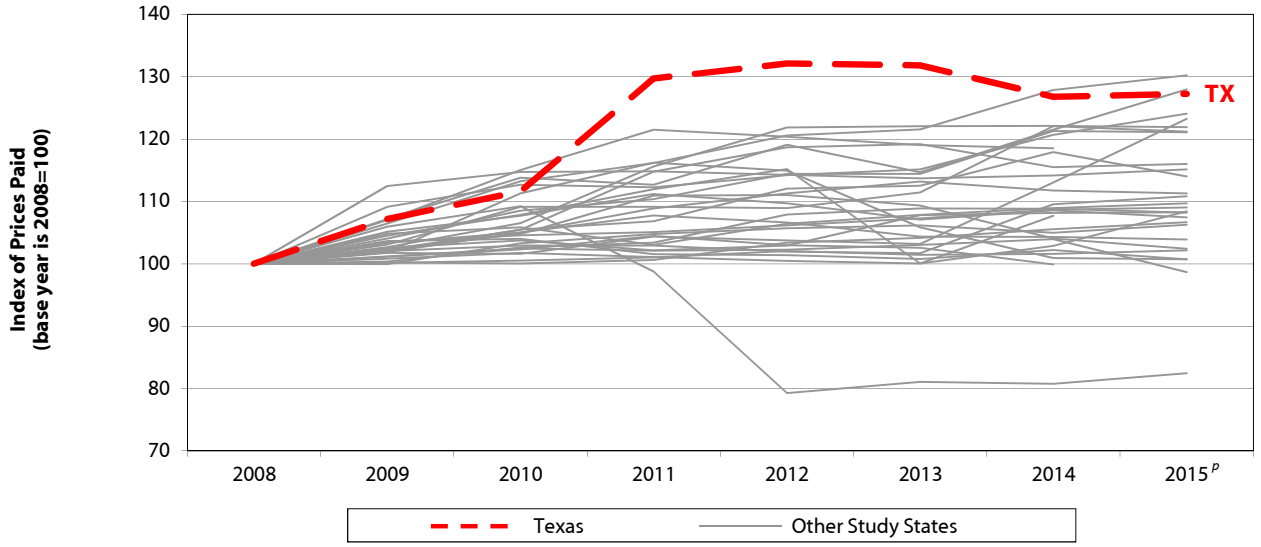
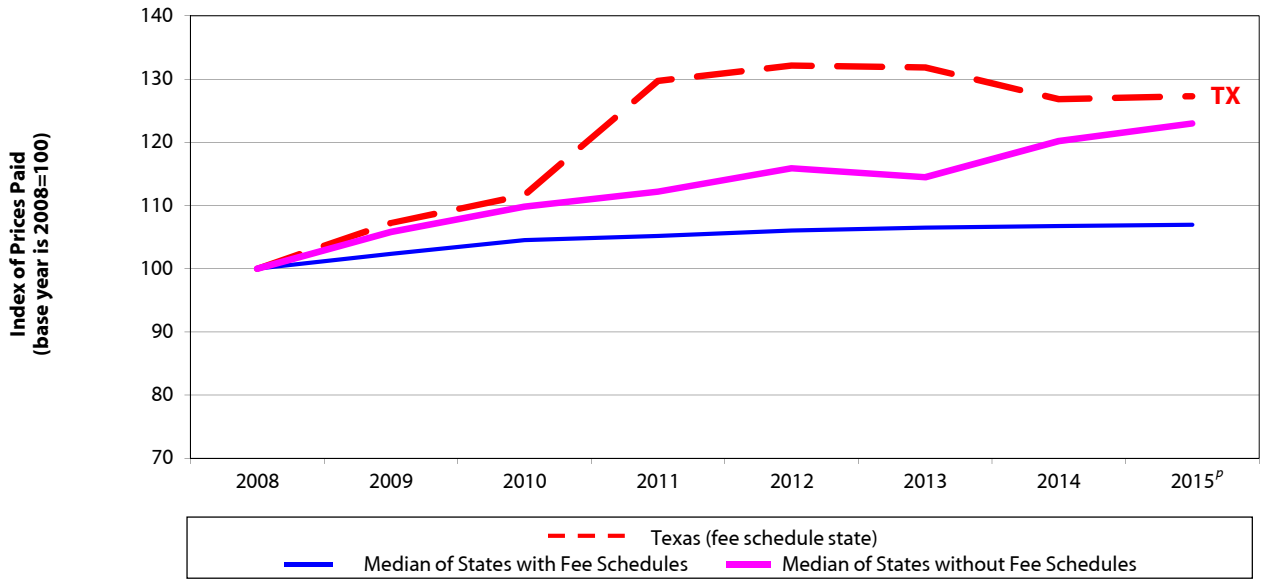
Figure B.30 Texas Trends in Prices Paid for Professional Services, WCRI MPI-WC, 2008 to 2015



Calendar Year 2008 Is the Base Year for Index



Calendar Year 2008 Is the Base Year for Index

Texas	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 P
State average annual change in prices paid for professional services	7%	4%	16%	2%	0%	-4%	0%
Median annual change for fee schedule states[a]	2%	2%	1%	1%	0%	0%	0%
Median annual change for non-fee schedule states	6%	4%	2%	3%	-1%	5%	2%

Special notation: ^{P} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the trend lines for the median of states with fee schedules and the median of states without fee schedules represent the median rates of growth of prices paid among states with and without fee schedules from year to year.

Notes: In March 2008, Texas increased fee schedule rates for professional services, especially for surgeries, and allowed annual increases based on changes in the Medicare Economic Index. In 2011, the fee schedule rates in Texas increased for most professional services following the Medicare updates. The most recent update covered in the study period in this report was effective April 1, 2015.

[a] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

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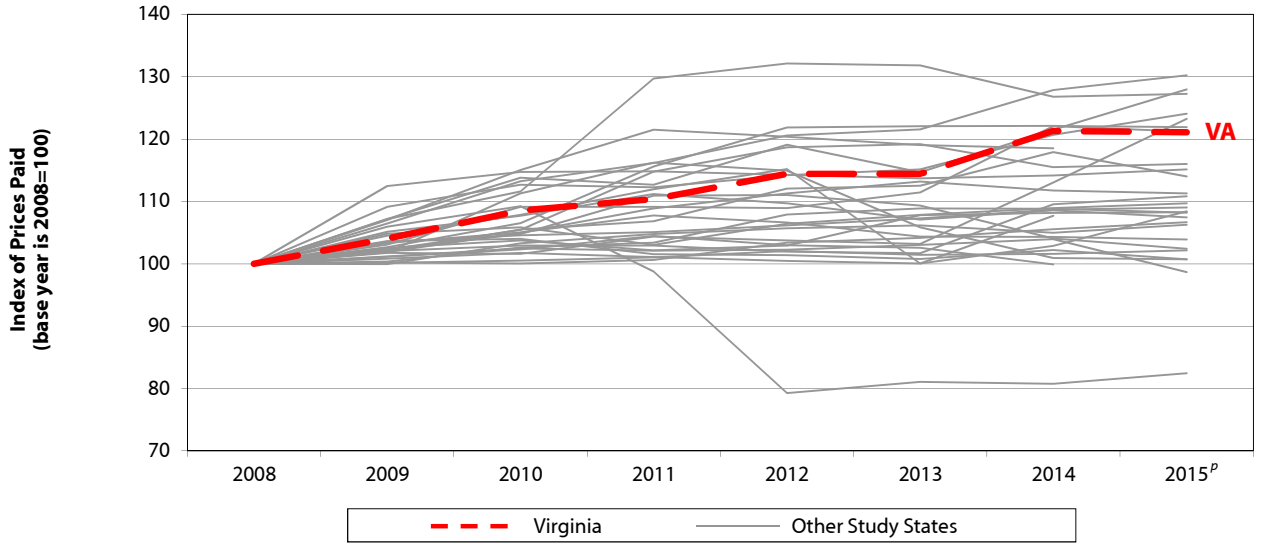
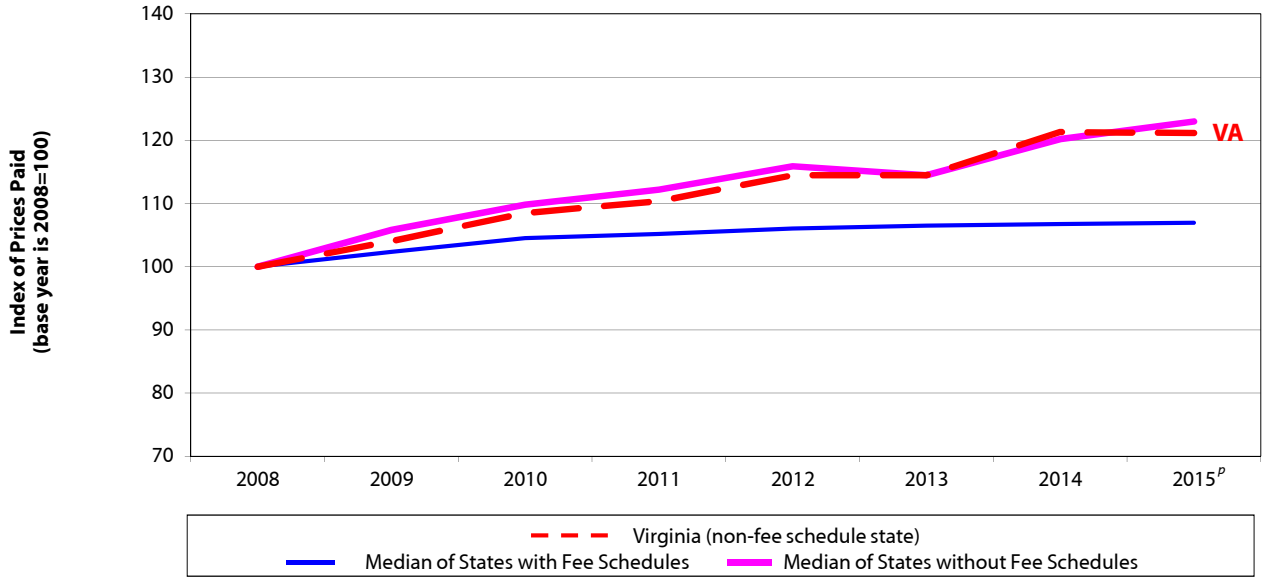
Figure B.31 Virginia Trends in Prices Paid for Professional Services, WCRI MPI-WC, 2008 to 2015



Calendar Year 2008 Is the Base Year for Index



Calendar Year 2008 Is the Base Year for Index

Virginia	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 P
State average annual change in prices paid for professional services	4%	4%	2%	4%	0%	6%	0%
Median annual change for fee schedule states[a]	2%	2%	1%	1%	0%	0%	0%
Median annual change for non-fee schedule states	6%	4%	2%	3%	-1%	5%	2%

Special notation: ^{P} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the trend lines for the median of states with fee schedules and the median of states without fee schedules represent the median rates of growth of prices paid among states with and without fee schedules from year to year.

Note: Virginia did not have a workers' compensation fee schedule as of 2015.

[a] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

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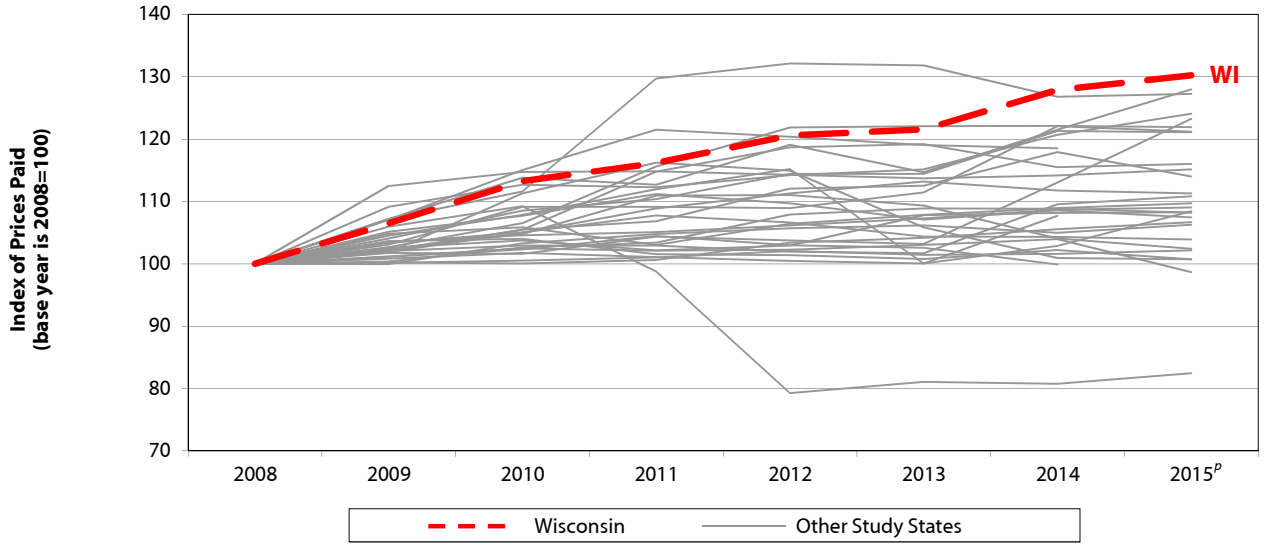
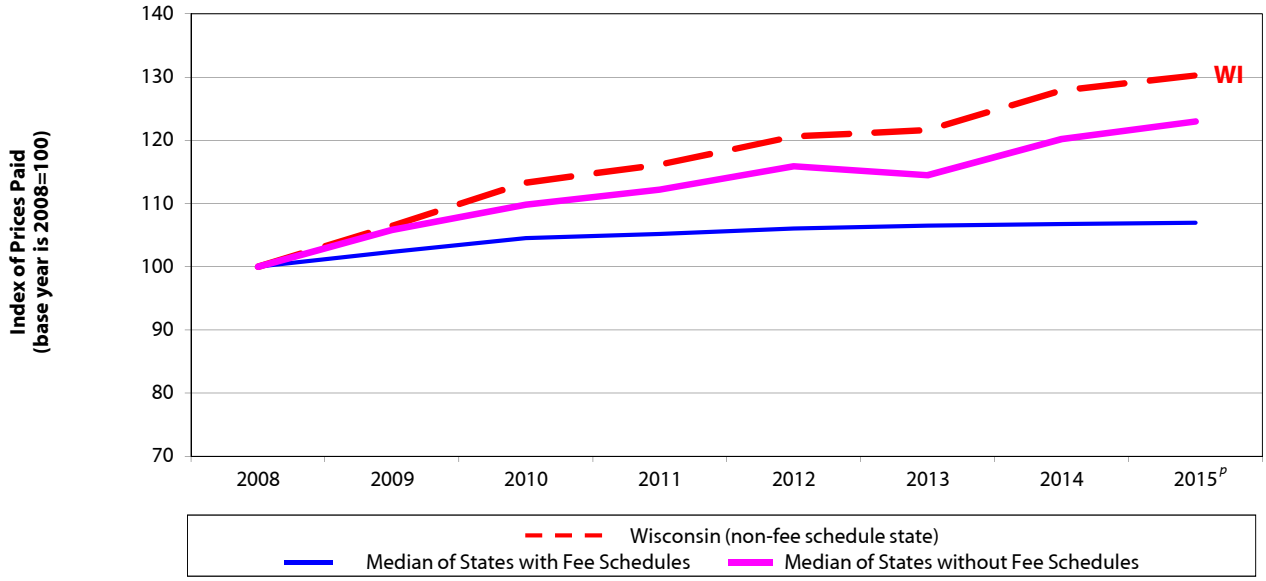
Figure B.32 Wisconsin Trends in Prices Paid for Professional Services, WCRI MPI-WC, 2008 to 2015



Calendar Year 2008 Is the Base Year for Index



Calendar Year 2008 Is the Base Year for Index

Wisconsin	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 p
State average annual change in prices paid for professional services	6%	6%	3%	4%	1%	5%	2%
Median annual change for fee schedule states[a]	2%	2%	1%	1%	0%	0%	0%
Median annual change for non-fee schedule states	6%	4%	2%	3%	-1%	5%	2%

Special notation: ^{p} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015. Note that the trend lines for the median of states with fee schedules and the median of states without fee schedules represent the median rates of growth of prices paid among states with and without fee schedules from year to year.

Note: Wisconsin did not have a conventional workers' compensation fee schedule as of 2015.

[a] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

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Table B.1 Trends in Prices Paid for Professional Evaluation and Management Services, WCRI MPI-WC, 2008 to 2015

State	Fee Regulation Type	2008	2009	2010	2011	2012	2013	2014	2015[P]
AR	FS	100	101	109	115	117	117	114	115
AZ[a,b]	FS	100	103	114	115	116	118	139	139
CA	FS	100	100	101	101	100	100	131	136
CO[a]	FS	100	104	108	113	115	116	118	119
CT[b]	FS	100	106	116	127	131	131	133	135
FL	FS	100	102	104	104	104	103	104	103
GA	FS	100	102	108	118	124	129	130	131
IA	Non-FS	100	107	111	114	116	120	124	125
IL	FS	100	104	105	97	78	79	83	87
IN	Non-FS	100	104	111	115	117	118	125	134
KS	FS	100	100	115	120	128	130	140	140
KY	FS	100	102	102	108	109	109	121	133
LA	FS	100	102	102	104	105	106	108	108
MA	FS	100	107	110	109	108	108	107	107
MD	FS	100	104	109	120	127	131	127	128
MI	FS	100	103	104	106	105	110	112	109
MN[b]	FS	100	103	109	125	129	133	145	146
MO[a]	Non-FS	100	106	110	111	115	118	122	126
MS[c]	FS	100	101	101	102	101	99	100	n/a
NC[b]	FS	100	101	101	100	101	123	125	125
NE[c]	FS	100	100	111	121	120	121	121	n/a
NJ	Non-FS	100	103	109	112	114	105	108	111
NY[a]	FS	100	104	105	125	127	128	129	130
OK[a]	FS	100	101	103	103	142	143	143	142
OR[a,c]	FS	100	110	121	134	135	135	135	n/a
PA	FS	100	99	98	100	103	105	108	109
SC[b]	FS	100	99	107	115	115	115	114	113
TN	FS	100	101	110	117	115	114	110	109
TX	FS	100	108	114	134	138	142	139	141
VA	Non-FS	100	106	111	115	117	121	126	129
WI	Non-FS	100	106	112	118	124	132	140	146
Median growth rate in FS states[c]		100	102	106	111	112	113	114	115
Median growth rate in non-FS states		100	106	111	114	117	121	125	129

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes:

Calendar year 2008 is the base year, which is equal to 100 in the index.

Evaluation and management: The services in this group are new and established patient office visits. These consist of office visits that require at least two of three parts: a problem focused history, a problem focused examination, and/or straightforward medical decision making of various complexities. See Table TA.2 for a detailed description of all service codes included in this group.

[a] The data for each of these states are not necessarily representative because each state is missing data from a larger data source that is significant in that state. The results in AZ, CO, NY, OK, and OR are unlikely to be significantly under- or overestimated, given that these states use fee schedules to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in each state were materially different from other data sources included in this study from the same state. For MO, to the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to possible under- or overestimations in the results.

[b] This state had fee schedule changes or updates within 2015 but after June 30, 2015, that are not reflected in the results.

[c] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded from the median calculations because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

Key: FS: fee schedule; n/a: not applicable.

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Table B.2 Trends in Prices Paid for Professional Physical Medicine Services, WCRI MPI-WC, 2008 to 2015

State	Fee Regulation Type	2008	2009	2010	2011	2012	2013	2014	2015[P]
AR	FS	100	106	110	116	117	122	117	114
AZ[a,b]	FS	100	107	115	114	115	117	135	135
CA	FS	100	105	104	104	103	99	126	129
CO[a]	FS	100	102	109	112	114	116	119	117
CT[b]	FS	100	104	108	113	113	114	118	118
FL	FS	100	107	108	103	104	102	104	103
GA	FS	100	102	106	113	120	124	125	127
IA	Non-FS	100	106	112	115	112	111	115	114
IL	FS	100	109	113	102	84	85	86	87
IN	Non-FS	100	107	113	107	117	119	133	141
KS	FS	100	101	102	103	113	113	127	123
KY	FS	100	102	103	103	102	101	118	135
LA	FS	100	106	106	107	109	111	115	114
MA	FS	100	106	112	110	111	109	109	111
MD	FS	100	104	106	119	126	131	130	131
MI	FS	100	102	106	104	104	108	108	109
MN[b]	FS	100	106	106	106	108	112	115	114
MO[a]	Non-FS	100	103	108	102	109	115	120	124
MS[c]	FS	100	102	103	101	99	103	120	n/a
NC[b]	FS	100	103	105	103	102	106	107	105
NE[c]	FS	100	100	102	106	102	102	103	n/a
NJ	Non-FS	100	108	112	111	119	120	133	144
NY[a]	FS	100	100	100	96	96	95	94	96
OK[a]	FS	100	101	105	105	104	106	106	104
OR[a,c]	FS	100	111	123	132	128	133	133	n/a
PA	FS	100	101	101	102	107	110	112	112
SC[b]	FS	100	104	107	108	109	111	111	114
TN	FS	100	105	114	118	117	117	113	110
TX	FS	100	109	111	130	134	140	137	137
VA	Non-FS	100	110	114	111	116	127	136	135
WI	Non-FS	100	105	112	115	120	126	134	142
Median growth rate in FS states[c]		100	104	107	107	108	110	111	111
Median growth rate in non-FS states		100	106	112	110	116	120	128	134

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes:

Calendar year 2008 is the base year, which is equal to 100 in the index.

Physical medicine: The services in this group include physical medicine procedures, modalities, therapeutic activities and manual therapy techniques involving one or more areas, electronic stimulation, and work hardening/conditioning, as well as chiropractic care and manipulations. These services may be provided by physical therapists and occupational therapists as well as chiropractors. Physical medicine codes may be billed by physicians, chiropractors, or physical therapists and occupational therapists. See Table TA.2 for a detailed description of all service codes included in this group.

[a] The data for each of these states are not necessarily representative because each state is missing data from a larger data source that is significant in that state. The results in AZ, CO, NY, OK, and OR are unlikely to be significantly under- or overestimated, given that these states use fee schedules to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in each state were materially different from other data sources included in this study from the same state. For MO, to the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to possible under- or overestimations in the results.

[b] This state had fee schedule changes or updates within 2015 but after June 30, 2015, that are not reflected in the results.

[c] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded from the median calculations because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

Key: FS: fee schedule; n/a: not applicable.

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Table B.3 Trends in Prices Paid for Professional Major Surgery Services, WCRI MPI-WC, 2008 to 2015

State	Fee Regulation Type	2008	2009	2010	2011	2012	2013	2014	2015[P]
AR	FS	100	99	104	112	108	109	106	106
AZ[a,b]	FS	100	102	104	105	103	105	107	106
CA	FS	100	103	106	107	106	109	86	83
CO[a]	FS	100	100	99	105	105	107	106	105
CT[b]	FS	100	101	99	99	96	94	94	93
FL	FS	100	102	99	97	96	97	99	95
GA	FS	100	104	106	118	124	127	127	125
IA	Non-FS	100	105	105	109	105	102	96	91
IL	FS	100	106	110	99	77	78	78	79
IN	Non-FS	100	114	122	120	128	122	122	128
KS	FS	100	106	109	110	109	113	116	112
KY	FS	100	100	99	100	98	98	101	104
LA	FS	100	103	106	104	104	105	105	107
MA	FS	100	127	127	129	125	122	123	125
MD	FS	100	104	108	115	111	113	111	112
MI	FS	100	97	95	94	94	93	93	92
MN[b]	FS	100	106	102	80	83	86	85	89
MO[a]	Non-FS	100	120	121	127	125	127	133	138
MS[c]	FS	100	100	101	102	103	102	110	n/a
NC[b]	FS	100	103	105	103	104	102	101	104
NE[c]	FS	100	100	97	93	93	94	91	n/a
NJ	Non-FS	100	104	105	111	112	92	91	98
NY[a]	FS	100	101	101	98	100	99	99	99
OK[a]	FS	100	100	100	105	93	92	92	93
OR[a,c]	FS	100	100	104	106	103	104	101	n/a
PA	FS	100	101	101	101	104	109	110	112
SC[b]	FS	100	96	97	94	96	94	90	93
TN	FS	100	102	114	116	114	101	98	103
TX	FS	100	108	116	140	133	136	131	132
VA	Non-FS	100	93	97	103	108	104	110	107
WI	Non-FS	100	107	113	118	123	127	135	134
Median growth rate in FS states[c]		100	102	104	104	103	104	103	104
Median growth rate in non-FS states		100	106	109	114	117	114	116	118

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes:

Calendar year 2008 is the base year, which is equal to 100 in the index.

Major surgery: The majority of the services in this group include orthopedic surgeries, such as arthroscopy of the shoulder or knee and lumbar laminotomies, neuroplasty and/or transposition of the median nerve at the carpal tunnel, and hernia repair. See Table TA.2 for a detailed description of all service codes included in this group.

[a] The data for each of these states are not necessarily representative because each state is missing data from a larger data source that is significant in that state. The results in AZ, CO, NY, OK, and OR are unlikely to be significantly under- or overestimated, given that these states use fee schedules to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in each state were materially different from other data sources included in this study from the same state. For MO, to the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to possible under- or overestimations in the results.

[b] This state had fee schedule changes or updates within 2015 but after June 30, 2015, that are not reflected in the results.

[c] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded from the median calculations because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

Key: FS: fee schedule; n/a: not applicable.

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Table B.4 Trends in Prices Paid for Professional Pain Management Injection Services, WCRI MPI-WC, 2008 to 2015

State	Fee Regulation Type	2008	2009	2010	2011	2012	2013	2014	2015[P]
AR	FS	100	108	118	128	128	125	102	114
AZ[a,b]	FS	100	105	106	111	110	118	119	118
CA	FS	100	100	98	98	97	97	94	93
CO[a]	FS	100	90	110	107	112	116	72	68
CT[b]	FS	100	100	105	102	99	98	93	92
FL	FS	100	100	102	98	97	101	102	101
GA	FS	100	101	104	112	118	123	108	107
IA	Non-FS	100	114	119	123	120	118	125	121
IL	FS	100	112	123	110	89	92	92	94
IN	Non-FS	100	103	119	119	120	124	128	137
KS	FS	100	106	95	92	95	96	98	81
KY	FS	100	102	101	100	95	91	95	98
LA	FS	100	108	107	105	115	118	112	127
MA	FS	100	106	111	108	109	112	114	110
MD	FS	100	87	95	87	93	89	79	86
MI	FS	100	94	94	91	94	100	98	86
MN[b]	FS	100	99	94	72	74	72	67	66
MO[a]	Non-FS	100	108	114	109	112	107	119	111
MS[c]	FS	100	107	107	108	108	104	106	n/a
NC[b]	FS	100	101	103	100	96	98	96	96
NE[c]	FS	100	101	92	88	84	90	81	n/a
NJ	Non-FS	100	110	121	132	146	123	107	100
NY[a]	FS	100	101	102	101	101	99	98	97
OK[a]	FS	100	104	95	93	92	91	94	95
OR[a,c]	FS	100	87	83	80	83	83	87	n/a
PA	FS	100	103	99	103	106	108	109	109
SC[b]	FS	100	99	95	88	88	86	84	90
TN	FS	100	93	103	110	114	100	86	114
TX	FS	100	105	108	125	127	124	106	121
VA	Non-FS	100	98	105	108	112	117	122	122
WI	Non-FS	100	114	131	136	147	146	157	163
Median growth rate in FS states[c]		100	101	103	100	101	102	100	99
Median growth rate in non-FS states		100	109	118	122	125	124	131	128

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes:

Calendar year 2008 is the base year, which is equal to 100 in the index.

Pain management injections: The services in this group include injection procedures that are commonly used for pain management, such as epidural or steroid injections on nerve roots and muscles for lumbar, sacral, cervical, or thoracic areas. See Table TA.2 for a detailed description of all service codes included in this group.

[a] The data for each of these states are not necessarily representative because each state is missing data from a larger data source that is significant in that state. The results in AZ, CO, NY, OK, and OR are unlikely to be significantly under- or overestimated, given that these states use fee schedules to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in each state were materially different from other data sources included in this study from the same state. For MO, to the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to possible under- or overestimations in the results.

[b] This state had fee schedule changes or updates within 2015 but after June 30, 2015, that are not reflected in the results.

[c] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded from the median calculations because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

Key: FS: fee schedule; n/a: not applicable.

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Table B.5 Trends in Prices Paid for Professional Major Radiology Services, WCRI MPI-WC, 2008 to 2015

State	Fee Regulation Type	2008	2009	2010	2011	2012	2013	2014	2015[P]
AR	FS	100	103	76	76	79	74	61	54
AZ[a,b]	FS	100	98	97	98	97	99	99	103
CA	FS	100	100	100	100	99	95	76	72
CO[a]	FS	100	104	104	105	102	104	103	103
CT[b]	FS	100	109	108	112	107	103	91	82
FL	FS	100	104	105	99	99	97	96	96
GA	FS	100	104	103	101	104	103	100	100
IA	Non-FS	100	103	103	105	105	112	114	114
IL	FS	100	102	105	94	80	85	83	82
IN	Non-FS	100	101	103	100	101	105	105	103
KS	FS	100	105	98	93	82	84	64	56
KY	FS	100	105	101	110	109	111	110	110
LA	FS	100	105	106	107	106	105	102	101
MA	FS	100	109	109	111	109	109	107	106
MD	FS	100	100	97	102	101	93	75	69
MI	FS	100	103	106	105	108	98	96	59
MN[b]	FS	100	106	108	98	100	95	72	71
MO[a]	Non-FS	100	107	105	106	104	105	109	104
MS[c]	FS	100	101	102	101	99	101	82	n/a
NC[b]	FS	100	105	104	104	105	104	103	103
NE[c]	FS	100	105	102	100	94	95	76	n/a
NJ	Non-FS	100	100	100	101	102	102	102	98
NY[a]	FS	100	95	96	94	92	91	91	91
OK[a]	FS	100	98	100	101	97	101	101	102
OR[a,c]	FS	100	106	102	96	95	93	95	n/a
PA	FS	100	97	99	98	98	100	98	96
SC[b]	FS	100	100	88	75	75	75	74	73
TN	FS	100	99	101	106	101	90	74	70
TX	FS	100	103	101	98	107	96	77	73
VA	Non-FS	100	110	107	109	108	110	115	111
WI	Non-FS	100	106	107	102	103	101	101	94
Median growth rate in FS states[c]		100	103	103	102	102	101	99	98
Median growth rate in non-FS states		100	104	104	106	106	107	108	104

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes:

Calendar year 2008 is the base year, which is equal to 100 in the index.

Major radiology: The services in this group mostly include magnetic resonance imaging of various areas, including, but not limited to, spinal canal and contents, cervical, lumbar, and any joint of the upper or lower extremity. See Table TA.2 for a detailed description of all service codes included in this group.

[a] The data for each of these states are not necessarily representative because each state is missing data from a larger data source that is significant in that state. The results in AZ, CO, NY, OK, and OR are unlikely to be significantly under- or overestimated, given that these states use fee schedules to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in each state were materially different from other data sources included in this study from the same state. For MO, to the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to possible under- or overestimations in the results.

[b] This state had fee schedule changes or updates within 2015 but after June 30, 2015, that are not reflected in the results.

[c] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded from the median calculations because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

Key: FS: fee schedule; n/a: not applicable.

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Table B.6 Trends in Prices Paid for Professional Minor Radiology Services, WCRI MPI-WC, 2008 to 2015

State	Fee Regulation Type	2008	2009	2010	2011	2012	2013	2014	2015[P]
AR	FS	100	103	105	105	104	106	98	93
AZ[a,b]	FS	100	99	100	87	86	88	89	93
CA	FS	100	100	100	100	100	100	114	106
CO[a]	FS	100	101	101	103	105	105	106	107
CT[b]	FS	100	105	103	103	99	102	98	94
FL	FS	100	103	109	103	103	103	103	102
GA	FS	100	104	107	117	123	126	120	115
IA	Non-FS	100	103	105	102	101	102	101	97
IL	FS	100	104	107	94	75	77	78	80
IN	Non-FS	100	104	107	105	106	106	106	108
KS	FS	100	101	99	96	101	99	105	97
KY	FS	100	101	100	111	113	115	116	116
LA	FS	100	102	104	105	106	105	105	104
MA	FS	100	104	107	108	104	104	103	102
MD	FS	100	99	99	111	116	118	107	100
MI	FS	100	101	104	104	103	102	102	93
MN[b]	FS	100	103	103	95	96	99	106	106
MO[a]	Non-FS	100	105	104	104	103	104	104	106
MS[c]	FS	100	100	101	101	97	101	117	n/a
NC[b]	FS	100	102	101	99	99	97	97	98
NE[c]	FS	100	108	107	109	108	108	102	n/a
NJ	Non-FS	100	105	109	121	122	102	99	100
NY[a]	FS	100	99	98	93	94	93	93	93
OK[a]	FS	100	101	101	100	99	100	99	99
OR[a,c]	FS	100	104	106	110	113	115	113	n/a
PA	FS	100	104	104	106	108	111	113	115
SC[b]	FS	100	99	103	99	99	99	98	97
TN	FS	100	99	108	112	114	106	95	90
TX	FS	100	106	109	112	125	130	117	110
VA	Non-FS	100	102	104	103	103	105	110	107
WI	Non-FS	100	106	114	112	115	118	123	124
Median growth rate in FS states[c]		100	102	102	103	103	104	103	102
Median growth rate in non-FS states		100	105	107	106	106	107	107	108

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes:

Calendar year 2008 is the base year, which is equal to 100 in the index.

Minor radiology: The services in this group mostly include radiologic exams (X rays or ultrasounds) involving at least two views of various areas of the body, including, but not limited to, the spine, lumbosacral, shoulder, and wrist. See Table TA.2 for a detailed description of all service codes included in this group.

[a] The data for each of these states are not necessarily representative because each state is missing data from a larger data source that is significant in that state. The results in AZ, CO, NY, OK, and OR are unlikely to be significantly under- or overestimated, given that these states use fee schedules to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in each state were materially different from other data sources included in this study from the same state. For MO, to the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to possible under- or overestimations in the results.

[b] This state had fee schedule changes or updates within 2015 but after June 30, 2015, that are not reflected in the results.

[c] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded from the median calculations because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

Key: FS: fee schedule; n/a: not applicable.

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Table B.7 Trends in Prices Paid for Professional Neurological/Neuromuscular Testing Services, WCRI MPI-WC, 2008 to 2015

State	Fee Regulation Type	2008	2009	2010	2011	2012	2013	2014	2015[P]
AR	FS	100	97	115	124	127	78	75	82
AZ[a,b]	FS	100	102	112	112	114	119	103	70
CA	FS	100	101	102	100	97	100	58	60
CO[a]	FS	100	98	98	102	116	119	58	61
CT[b]	FS	100	100	96	90	88	73	61	60
FL	FS	100	101	102	103	103	104	105	106
GA	FS	100	102	110	127	139	94	88	89
IA	Non-FS	100	98	99	107	112	69	82	84
IL	FS	100	104	107	98	74	80	55	60
IN	Non-FS	100	103	108	116	123	73	89	90
KS	FS	100	98	98	101	117	106	76	78
KY	FS	100	101	104	105	108	104	87	80
LA	FS	100	99	100	101	103	102	109	108
MA	FS	100	98	94	100	115	131	137	148
MD	FS	100	92	96	101	107	86	83	84
MI	FS	100	97	93	92	97	88	96	71
MN[b]	FS	100	104	107	110	124	113	87	87
MO[a]	Non-FS	100	113	127	117	118	85	104	111
MS[c]	FS	100	99	101	98	102	84	109	n/a
NC[b]	FS	100	99	98	99	111	110	110	109
NE[c]	FS	100	102	99	102	110	97	88	n/a
NJ	Non-FS	100	99	106	114	114	66	80	87
NY[a]	FS	100	98	99	97	97	98	100	100
OK[a]	FS	100	101	104	102	100	97	101	103
OR[a,c]	FS	100	104	104	109	122	80	72	n/a
PA	FS	100	102	102	103	97	64	62	63
SC[b]	FS	100	98	109	124	129	128	127	130
TN	FS	100	97	107	122	125	76	76	76
TX	FS	100	100	106	127	133	93	91	94
VA	Non-FS	100	107	121	121	127	87	99	105
WI	Non-FS	100	110	121	121	124	88	91	92
Median growth rate in FS states[c]		100	99	102	103	105	102	99	101
Median growth rate in non-FS states		100	105	114	118	122	80	95	100

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes:

Calendar year 2008 is the base year, which is equal to 100 in the index.

Neurological/neuromuscular testing: The services in this group are largely made up of sensory and motor nerve conduction tests but also include range of motion tests and application of neurostimulators; these services may be billed by physicians as well as by chiropractors and physical therapists. See Table TA.2 for a detailed description of all service codes included in this group.

Prices paid for neurological/neuromuscular testing services in most study states decreased starting in 2013. This general trend is related to a fundamental change implemented by The Centers for Medicare & Medicaid Services in the coding system for nerve conduction studies, which are the most commonly billed procedures in the neurological/neuromuscular testing service group. For more details, see "Discussion of Substantial Changes in Prices at Service-Type Level" and "Technical Appendix."

[a] The data for each of these states are not necessarily representative because each state is missing data from a larger data source that is significant in that state. The results in AZ, CO, NY, OK, and OR are unlikely to be significantly under- or overestimated, given that these states use fee schedules to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in each state were materially different from other data sources included in this study from the same state. For MO, to the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to possible under- or overestimations in the results.

[b] This state had fee schedule changes or updates within 2015 but after June 30, 2015, that are not reflected in the results.

[c] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded from the median calculations because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

Key: FS: fee schedule; n/a: not applicable.

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Table B.8 Trends in Prices Paid for Professional Emergency Services, WCRI MPI-WC, 2008 to 2015

State	Fee Regulation Type	2008	2009	2010	2011	2012	2013	2014	2015[P]
AR	FS	100	98	103	106	103	103	101	101
AZ[a,b]	FS	100	105	125	130	126	127	133	136
CA	FS	100	101	102	98	98	99	87	91
CO[a]	FS	100	104	108	115	116	117	118	120
CT[b]	FS	100	99	101	98	96	96	95	97
FL	FS	100	101	100	101	101	101	100	100
GA	FS	100	105	105	109	112	113	113	116
IA	Non-FS	100	107	109	108	105	107	109	114
IL	FS	100	106	106	99	86	89	89	89
IN	Non-FS	100	111	121	121	135	139	153	175
KS	FS	100	100	119	121	128	129	134	134
KY	FS	100	103	104	108	108	108	126	141
LA	FS	100	101	101	103	104	104	104	104
MA	FS	100	106	112	109	110	109	108	108
MD	FS	100	101	102	109	113	114	112	113
MI	FS	100	103	102	104	101	97	97	94
MN[b]	FS	100	110	109	100	103	105	102	103
MO[a]	Non-FS	100	112	121	119	123	134	155	180
MS[c]	FS	100	102	100	100	100	101	101	n/a
NC[b]	FS	100	104	108	105	104	104	104	103
NE[c]	FS	100	99	120	134	133	134	133	n/a
NJ	Non-FS	100	111	115	120	127	127	111	104
NY[a]	FS	100	104	104	122	123	128	128	127
OK[a]	FS	100	101	101	104	118	124	114	114
OR[a,c]	FS	100	104	137	124	115	113	112	n/a
PA	FS	100	94	93	95	99	102	103	105
SC[b]	FS	100	101	122	129	130	129	130	131
TN	FS	100	106	117	120	112	106	105	107
TX	FS	100	111	113	123	121	122	121	123
VA	Non-FS	100	108	114	118	125	123	138	146
WI	Non-FS	100	107	112	120	125	132	139	142
Median growth rate in FS states[c]		100	103	104	107	107	108	107	108
Median growth rate in non-FS states		100	110	115	117	123	126	136	143

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes:

Calendar year 2008 is the base year, which is equal to 100 in the index.

Emergency services: The services in this group include emergency department visits for patients with various levels of severity and office services provided on an emergency basis. See Table TA.2 for a detailed description of all service codes included in this group.

[a] The data for each of these states are not necessarily representative because each state is missing data from a larger data source that is significant in that state. The results in AZ, CO, NY, OK, and OR are unlikely to be significantly under- or overestimated, given that these states use fee schedules to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in each state were materially different from other data sources included in this study from the same state. For MO, to the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to possible under- or overestimations in the results.

[b] This state had fee schedule changes or updates within 2015 but after June 30, 2015, that are not reflected in the results.

[c] The medians for fee schedule states are based on 22 states. MS, NE, and OR have been excluded from the median calculations because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

Key: FS: fee schedule; n/a: not applicable.

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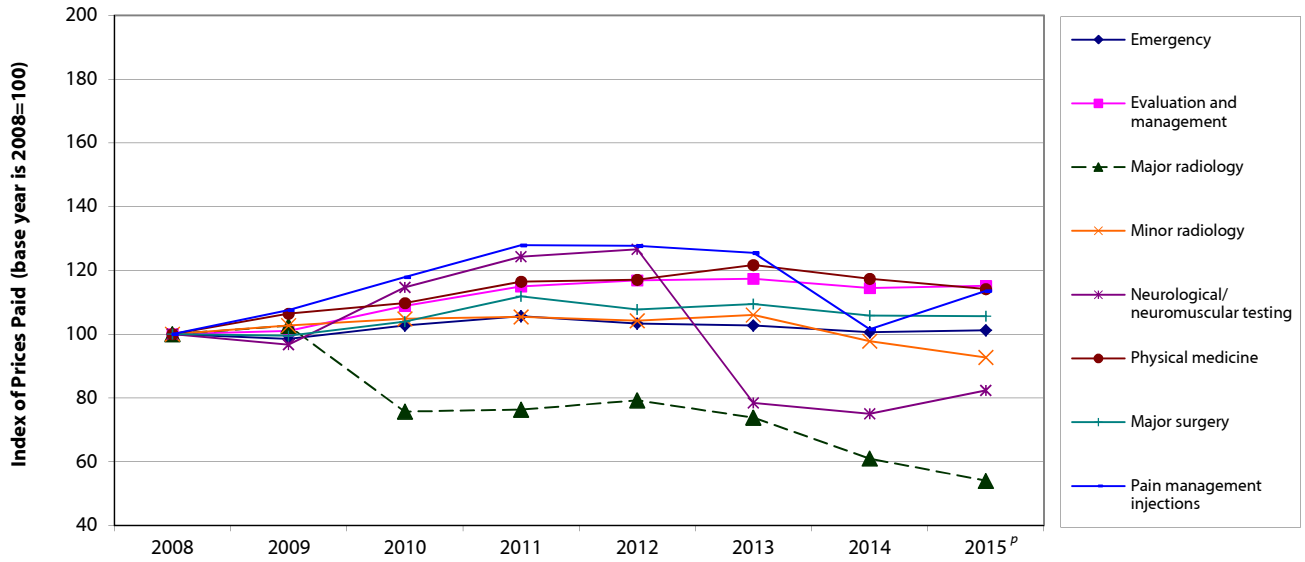
Figure C.1 Arkansas Trend in Professional Prices Paid by Service Group, 2008 to 2015



Arkansas Trend in Professional Prices Paid by Service Group, 2008 to 2015

Professional Services	2008	2009	2010	2011	2012	2013	2014	2015 P
Emergency	100	98	103	106	103	103	101	101
Evaluation and management	100	101	109	115	117	117	114	115
Major radiology	100	103	76	76	79	74	61	54
Minor radiology	100	103	105	105	104	106	98	93
Neurological/neuromuscular testing[a]	100	97	115	124	127	78	75	82
Physical medicine	100	106	110	116	117	122	117	114
Major surgery	100	99	104	112	108	109	106	106
Pain management injections	100	108	118	128	128	125	102	114

Arkansas Annual Change in Professional Prices Paid by Service Group (%)

Professional Services	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 P
Emergency	-2%	4%	3%	-2%	-1%	-2%	1%
Evaluation and management	1%	8%	6%	2%	0%	-2%	1%
Major radiology	3%	-26%	1%	4%	-7%	-17%	-11%
Minor radiology	3%	2%	1%	-1%	2%	-8%	-5%
Neurological/neuromuscular testing[a]	-3%	19%	8%	2%	-38%	-4%	10%
Physical medicine	6%	3%	6%	1%	4%	-4%	-3%
Major surgery	-1%	5%	8%	-4%	2%	-3%	0%
Pain management injections	8%	10%	8%	0%	-2%	-19%	12%

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes: Arkansas' fee schedule for professional services has regular updates on the relative value units tied to the most recent Medicare resource-based relative value scale, with applied state conversion factors adopted in May 2000 for the services included in this study. The most recent update covered in the study period in this report was effective January 1, 2015.

[a] Prices paid for neurological/neuromuscular testing services in most study states decreased starting in 2013. This general trend is related to a fundamental change implemented by the Centers for Medicare & Medicaid Services in the coding system for nerve conduction studies, which are the most commonly billed procedures in the neurological/neuromuscular testing service group. For more details, see "Discussion of Substantial Changes in Prices at Service-Type Level" and "Technical Appendix."

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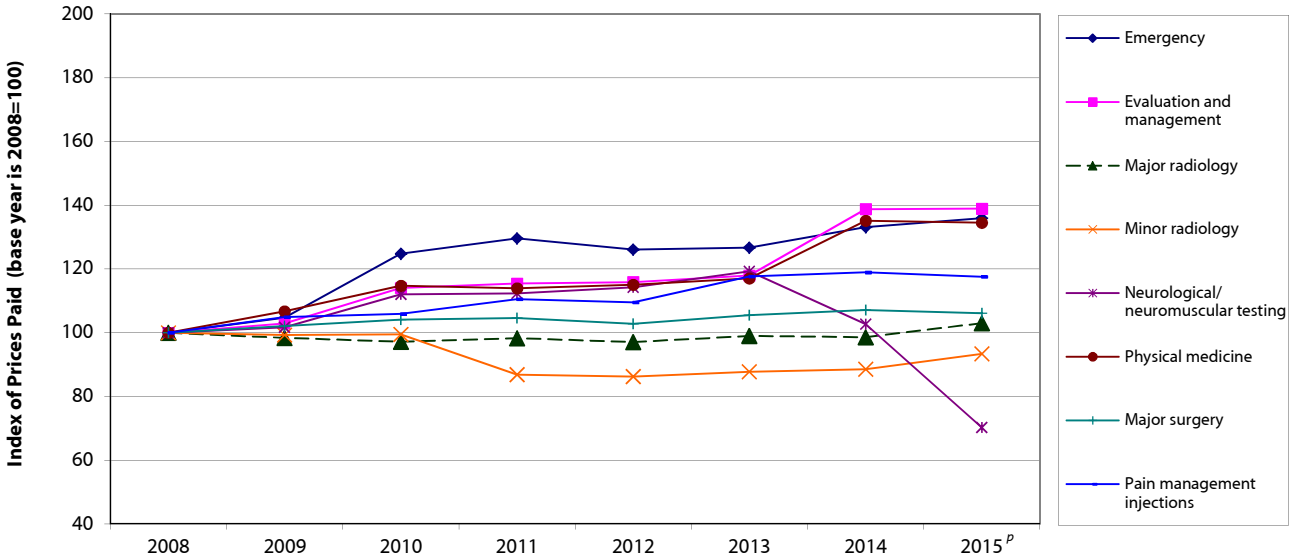
Figure C.2 Arizona Trend in Professional Prices Paid by Service Group, 2008 to 2015



Arizona Trend in Professional Prices Paid by Service Group, 2008 to 2015

Professional Services	2008	2009	2010	2011	2012	2013	2014	2015 P
Emergency	100	105	125	130	126	127	133	136
Evaluation and management	100	103	114	115	116	118	139	139
Major radiology	100	98	97	98	97	99	99	103
Minor radiology	100	99	100	87	86	88	89	93
Neurological/neuromuscular testing[a]	100	102	112	112	114	119	103	70
Physical medicine	100	107	115	114	115	117	135	135
Major surgery	100	102	104	105	103	105	107	106
Pain management injections	100	105	106	111	110	118	119	118

Arizona Annual Change in Professional Prices Paid by Service Group (%)

Professional Services	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 P
Emergency	5%	19%	4%	-3%	0%	5%	2%
Evaluation and management	3%	11%	1%	0%	2%	18%	0%
Major radiology	-2%	-1%	1%	-1%	2%	0%	5%
Minor radiology	-1%	0%	-13%	-1%	2%	1%	5%
Neurological/neuromuscular testing[a]	2%	10%	0%	2%	4%	-14%	-32%
Physical medicine	7%	8%	-1%	1%	2%	15%	0%
Major surgery	2%	2%	0%	-2%	3%	2%	-1%
Pain management injections	5%	1%	4%	-1%	7%	1%	-1%

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes:

The data for Arizona are not necessarily representative because it is missing data from a larger data source that is significant in this state. The results in Arizona are unlikely to be significantly under- or overestimated, given that the state uses a fee schedule to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in Arizona were materially different from other data sources included in this study from the same state.

Arizona publishes its fee schedule annually with effective dates of October 1 through September 30 of the following year. The Commission reviews the fee schedule values annually with a focus each year on one of four specific groups of codes and rotates through these specific groups of codes every four years. To calculate the fee schedule values for the codes under review, the Commission surveys the workers' compensation fee schedules from the states of Colorado, Nevada, New Mexico, North Carolina, Oregon, Utah, and Washington and uses the following methodology: (a) current Arizona values between the 75th and 100th percentile of the states surveyed will not be adjusted; (b) current Arizona values over the 100th percentile of the states surveyed will be reduced to the 100th percentile; and (c) current Arizona values below the 75th percentile will be increased to the 75th percentile subject to the following: Increases shall be capped at 25 percent, unless and except as necessary to bring a current value up to the 50th percentile. In October 2013, Arizona reviewed and adjusted the fee schedule rates for evaluation and management, physical medicine, and surgery codes from 25000 to 39599. This update increased the fee schedule rates for evaluation and management and physical medicine services; the fee schedule rates for many common surgeries remained unchanged or had only small increases. The most recent update covered in the study period in this report was effective October 1, 2014.

[a] Prices paid for neurological/neuromuscular testing services in most study states decreased starting in 2013. This general trend is related to a fundamental change implemented by the Centers for Medicare & Medicaid Services in the coding system for nerve conduction studies, which are the most commonly billed procedures in the neurological/neuromuscular testing service group. For more details, see "Discussion of Substantial Changes in Prices at Service-Type Level" and "Technical Appendix."

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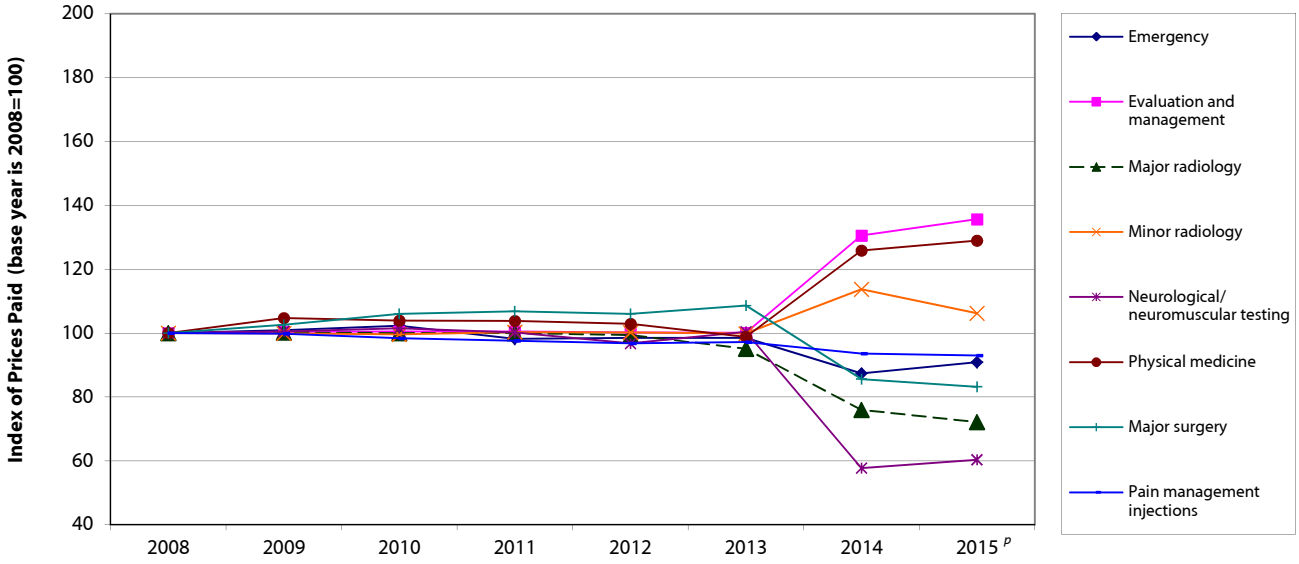
Figure C.3 California Trend in Professional Prices Paid by Service Group, 2008 to 2015



California Trend in Professional Prices Paid by Service Group, 2008 to 2015

Professional Services	2008	2009	2010	2011	2012	2013	2014	2015 P
Emergency	100	101	102	98	98	99	87	91
Evaluation and management	100	100	101	101	100	100	131	136
Major radiology	100	100	100	100	99	95	76	72
Minor radiology	100	100	100	100	100	100	114	106
Neurological/neuromuscular testing[a]	100	101	102	100	97	100	58	60
Physical medicine	100	105	104	104	103	99	126	129
Major surgery	100	103	106	107	106	109	86	83
Pain management injections	100	100	98	98	97	97	94	93

California Annual Change in Professional Prices Paid by Service Group (%)

Professional Services	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015P
Emergency	1%	1%	-4%	0%	0%	-11%	4%
Evaluation and management	0%	0%	0%	0%	0%	30%	4%
Major radiology	0%	0%	0%	-1%	-4%	-20%	-5%
Minor radiology	0%	0%	1%	0%	0%	14%	-7%
Neurological/neuromuscular testing[a]	1%	1%	-1%	-3%	4%	-43%	5%
Physical medicine	5%	-1%	0%	-1%	-4%	27%	2%
Major surgery	3%	3%	1%	-1%	2%	-21%	-3%
Pain management injections	0%	-1%	-1%	-1%	0%	-4%	-1%

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes: Effective January 2014, California transitioned to an RBRVS-based fee schedule. This fee schedule change is a part of the workers' compensation reform legislation outlined in Senate Bill 863. This legislation requires the adoption of Medicare's RBRVS schedule for professional services to be phased in over four years, beginning in 2014, and to remain in effect until the Division of Workers' Compensation adopts an RBRVS schedule that allows no more than 120 percent of the aggregate fees allowed by Medicare. During the four-year transition period, the conversion factors for primary care services increase and the conversion factors for specialty services decrease. The latest update in the conversion factors covered in the study period of this report was in March 2015. Before this change, California used the Official Medical Fee Schedule (OMFS) to regulate the payment of professional services, and the maximum reimbursement rates in the OMFS remained unchanged since 2007.

[a] Prices paid for neurological/neuromuscular testing services in most study states decreased starting in 2013. This general trend is related to a fundamental change implemented by the Centers for Medicare & Medicaid Services in the coding system for nerve conduction studies, which are the most commonly billed procedures in the neurological/neuromuscular testing service group. For more details, see "Discussion of Substantial Changes in Prices at Service-Type Level" and "Technical Appendix."

Key: RBRVS: resource-based relative value scale (Medicare).

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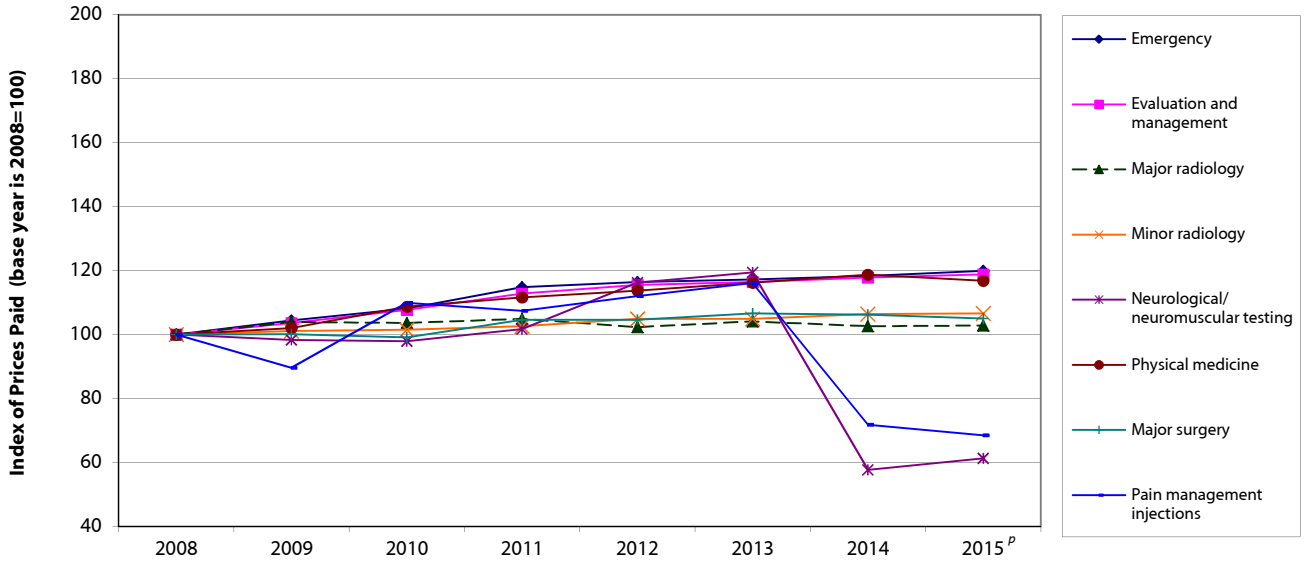
Figure C.4 Colorado Trend in Professional Prices Paid by Service Group, 2008 to 2015



Colorado Trend in Professional Prices Paid by Service Group, 2008 to 2015

Professional Services	2008	2009	2010	2011	2012	2013	2014	2015 P
Emergency	100	104	108	115	116	117	118	120
Evaluation and management	100	104	108	113	115	116	118	119
Major radiology	100	104	104	105	102	104	103	103
Minor radiology	100	101	101	103	105	105	106	107
Neurological/neuromuscular testing[a]	100	98	98	102	116	119	58	61
Physical medicine	100	102	109	112	114	116	119	117
Major surgery	100	100	99	105	105	107	106	105
Pain management injections	100	90	110	107	112	116	72	68

Colorado Annual Change in Professional Prices Paid by Service Group (%)

Professional Services	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 P
Emergency	4%	4%	6%	1%	1%	1%	1%
Evaluation and management	4%	4%	5%	2%	1%	1%	1%
Major radiology	4%	0%	1%	-2%	2%	-1%	0%
Minor radiology	1%	0%	1%	2%	0%	1%	0%
Neurological/neuromuscular testing[a]	-2%	0%	4%	14%	3%	-52%	6%
Physical medicine	2%	7%	3%	2%	2%	2%	-2%
Major surgery	0%	-1%	5%	0%	2%	0%	-1%
Pain management injections	-10%	23%	-2%	4%	4%	-38%	-5%

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes:

The data for Colorado are not necessarily representative because it is missing data from a larger data source that is significant in this state. The results in Colorado are unlikely to be significantly under- or overestimated, given that the state uses a fee schedule to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in Colorado were materially different from other data sources included in this study from the same state.

Colorado usually updates its fee schedule for professional services annually in January. The most recent update covered in the study period in this report was effective January 1, 2015. Note that effective January 2016, Colorado revised the workers' compensation medical fee schedule and incorporated the National Physician Fee Schedule Relative Value Scale file (RBRVS) published by Medicare in January 2015. Previously, Colorado based its fee schedule levels on relative value units (RVUs) from the Relative Values for Physicians, currently published by OPTUM360®. The next edition of this Medical Price Index study series will monitor the price changes after the 2016 fee schedule update.

[a] Prices paid for neurological/neuromuscular testing services in most study states decreased starting in 2013. This general trend is related to a fundamental change implemented by the Centers for Medicare & Medicaid Services in the coding system for nerve conduction studies, which are the most commonly billed procedures in the neurological/neuromuscular testing service group. For more details, see "Discussion of Substantial Changes in Prices at Service-Type Level" and "Technical Appendix."

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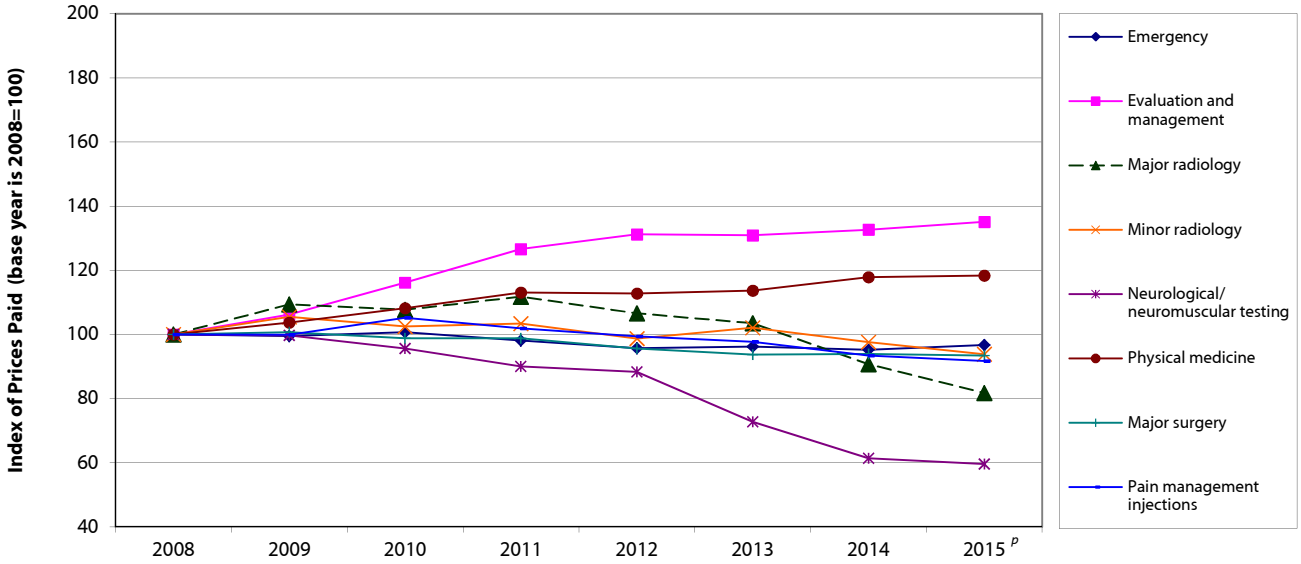
Figure C.5 Connecticut Trend in Professional Prices Paid by Service Group, 2008 to 2015



Connecticut Trend in Professional Prices Paid by Service Group, 2008 to 2015

Professional Services	2008	2009	2010	2011	2012	2013	2014	2015[P]
Emergency	100	99	101	98	96	96	95	97
Evaluation and management	100	106	116	127	131	131	133	135
Major radiology	100	109	108	112	107	103	91	82
Minor radiology	100	105	103	103	99	102	98	94
Neurological/neuromuscular testing[a]	100	100	96	90	88	73	61	60
Physical medicine	100	104	108	113	113	114	118	118
Major surgery	100	101	99	99	96	94	94	93
Pain management injections	100	100	105	102	99	98	93	92

Connecticut Annual Change in Professional Prices Paid by Service Group (%)

Professional Services	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015[P]
Emergency	-1%	1%	-3%	-2%	0%	-1%	2%
Evaluation and management	6%	9%	9%	4%	0%	1%	2%
Major radiology	9%	-2%	4%	-5%	-3%	-12%	-10%
Minor radiology	5%	-3%	1%	-5%	3%	-4%	-4%
Neurological/neuromuscular testing[a]	0%	-4%	-6%	-2%	-18%	-16%	-3%
Physical medicine	4%	4%	5%	0%	1%	4%	0%
Major surgery	1%	-2%	0%	-3%	-2%	0%	0%
Pain management injections	0%	5%	-3%	-2%	-2%	-4%	-2%

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes: Connecticut has updated its fee schedule for professional services annually in July since 2008. The most recent update covered during the study period in this report was the 2015 Official Connecticut Practitioner Fee Schedule in July 2015, with the caveat that the new 2015 Current Procedural Terminology (CPT) codes and fees were retroactive to January 1, 2015.

[a] Prices paid for neurological/neuromuscular testing services in most study states decreased starting in 2013. This general trend is related to a fundamental change implemented by the Centers for Medicare & Medicaid Services in the coding system for nerve conduction studies, which are the most commonly billed procedures in the neurological/neuromuscular testing service group. For more details, see "Discussion of Substantial Changes in Prices at Service-Type Level" and "Technical Appendix."

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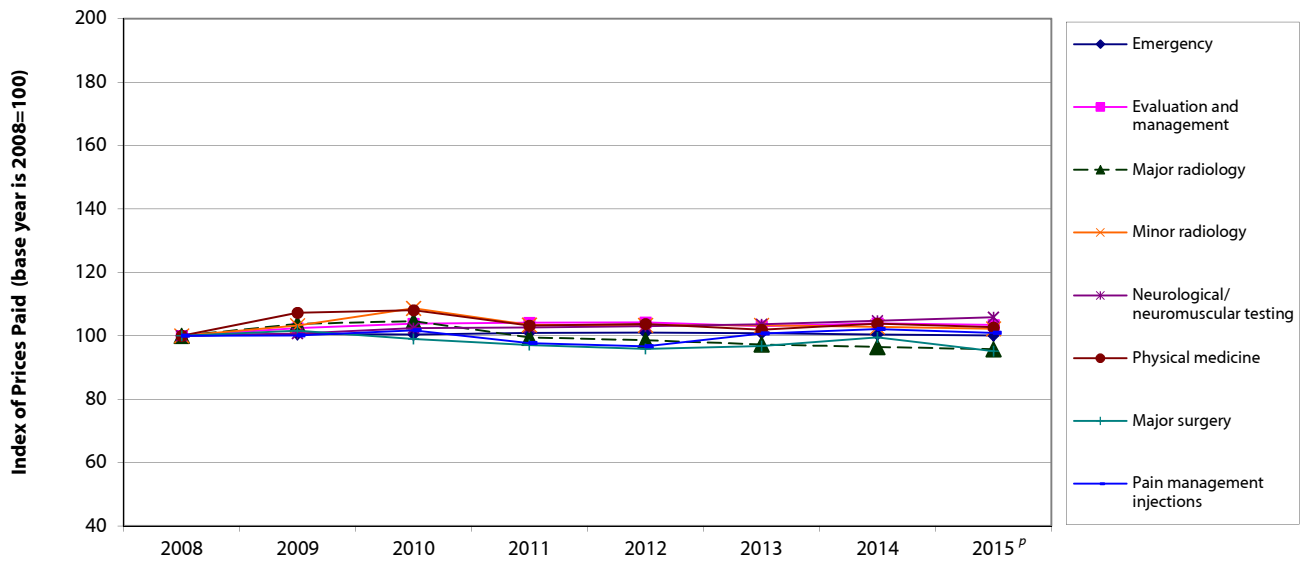
Figure C.6 Florida Trend in Professional Prices Paid by Service Group, 2008 to 2015



Florida Trend in Professional Prices Paid by Service Group, 2008 to 2015

Professional Services	2008	2009	2010	2011	2012	2013	2014	2015[P]
Emergency	100	101	100	101	101	101	100	100
Evaluation and management	100	102	104	104	104	103	104	103
Major radiology	100	104	105	99	99	97	96	96
Minor radiology	100	103	109	103	103	103	103	102
Neurological/neuromuscular testing[a]	100	101	102	103	103	104	105	106
Physical medicine	100	107	108	103	104	102	104	103
Major surgery	100	102	99	97	96	97	99	95
Pain management injections	100	100	102	98	97	101	102	101

Florida Annual Change in Professional Prices Paid by Service Group (%)

Professional Services	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015[P]
Emergency	1%	0%	1%	0%	0%	0%	0%
Evaluation and management	2%	1%	0%	0%	-1%	1%	0%
Major radiology	4%	1%	-5%	-1%	-1%	-1%	-1%
Minor radiology	3%	5%	-5%	0%	0%	0%	-1%
Neurological/neuromuscular testing[a]	1%	2%	0%	0%	1%	1%	1%
Physical medicine	7%	1%	-5%	1%	-2%	2%	-1%
Major surgery	2%	-3%	-2%	-1%	1%	3%	-4%
Pain management injections	0%	2%	-4%	-1%	4%	1%	-1%

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes: The most recent update to the medical fee schedule for professional services in Florida covered in the study period in this report was effective February 4, 2009. Effective July 2016, Florida updated the fee schedule rates to reflect the 2014 Medicare rates in the maximum allowable reimbursement computation; future editions of this Medical Price Index study series will monitor the price changes after this fee schedule update.

[a] Prices paid for neurological/neuromuscular testing services in most study states decreased starting in 2013. This general trend is related to a fundamental change implemented by the Centers for Medicare & Medicaid Services in the coding system for nerve conduction studies, which are the most commonly billed procedures in the neurological/neuromuscular testing service group. For more details, see "Discussion of Substantial Changes in Prices at Service-Type Level" and "Technical Appendix."

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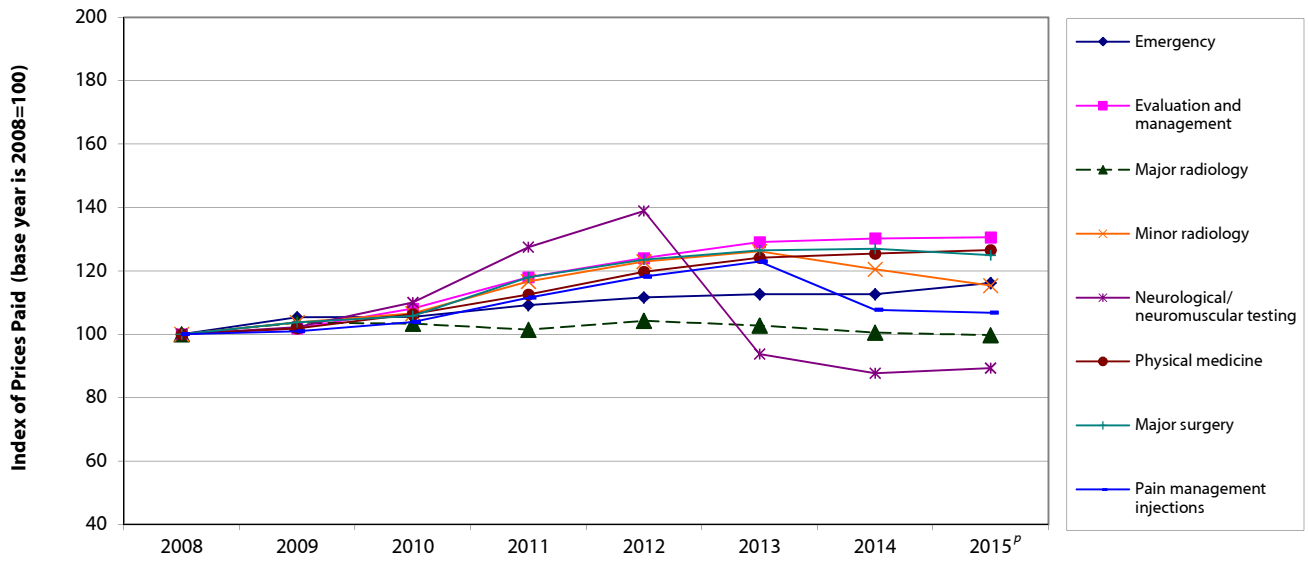
Figure C.7 Georgia Trend in Professional Prices Paid by Service Group, 2008 to 2015



Georgia Trend in Professional Prices Paid by Service Group, 2008 to 2015

Professional Services	2008	2009	2010	2011	2012	2013	2014	2015 ^{P}
Emergency	100	105	105	109	112	113	113	116
Evaluation and management	100	102	108	118	124	129	130	131
Major radiology	100	104	103	101	104	103	100	100
Minor radiology	100	104	107	117	123	126	120	115
Neurological/neuromuscular testing[a]	100	102	110	127	139	94	88	89
Physical medicine	100	102	106	113	120	124	125	127
Major surgery	100	104	106	118	124	127	127	125
Pain management injections	100	101	104	112	118	123	108	107

Georgia Annual Change in Professional Prices Paid by Service Group (%)

Professional Services	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015^{P}
Emergency	5%	0%	4%	2%	1%	0%	3%
Evaluation and management	2%	6%	9%	5%	4%	1%	0%
Major radiology	4%	0%	-2%	3%	-1%	-2%	-1%
Minor radiology	4%	3%	9%	5%	3%	-4%	-4%
Neurological/neuromuscular testing[a]	2%	8%	16%	9%	-32%	-6%	2%
Physical medicine	2%	4%	6%	6%	4%	1%	1%
Major surgery	4%	2%	12%	5%	2%	0%	-2%
Pain management injections	1%	3%	7%	6%	4%	-12%	-1%

Special notation: ^{P} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes: Georgia typically updates its fee schedule for professional services annually in April. The most recent update covered in the study period in this report was effective April 1, 2015.

[a] Prices paid for neurological/neuromuscular testing services in most study states decreased starting in 2013. This general trend is related to a fundamental change implemented by the Centers for Medicare & Medicaid Services in the coding system for nerve conduction studies, which are the most commonly billed procedures in the neurological/neuromuscular testing service group. For more details, see "Discussion of Substantial Changes in Prices at Service-Type Level" and "Technical Appendix."

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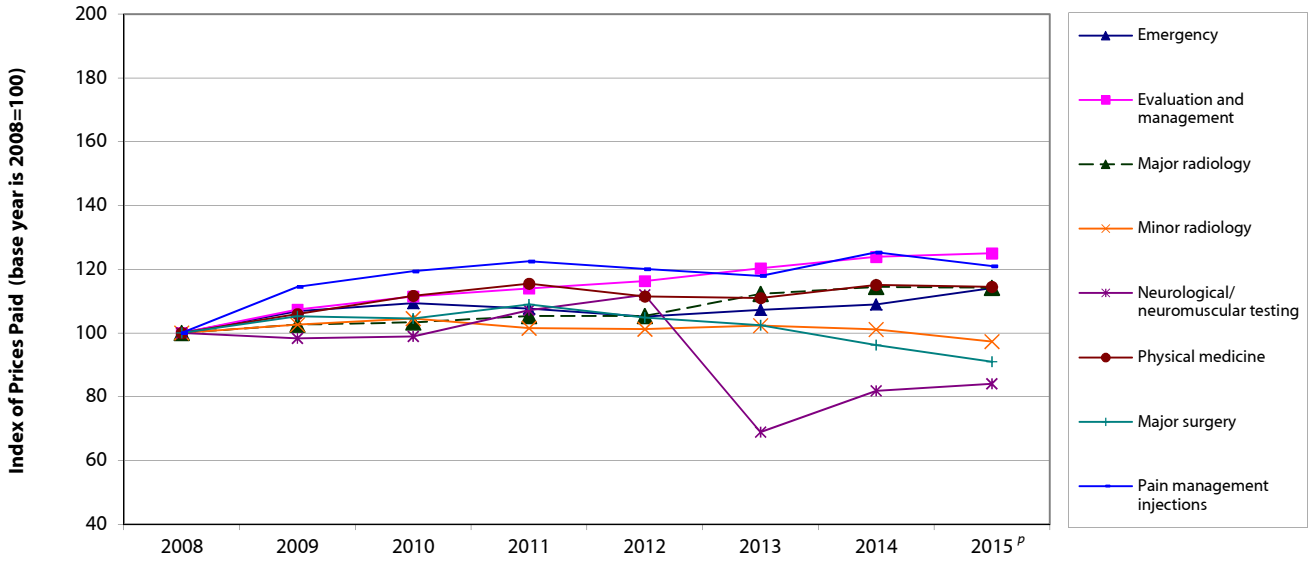
Figure C.8 Iowa Trend in Professional Prices Paid by Service Group, 2008 to 2015



Iowa Trend in Professional Prices Paid by Service Group, 2008 to 2015

Professional Services	2008	2009	2010	2011	2012	2013	2014	2015 P
Emergency	100	107	109	108	105	107	109	114
Evaluation and management	100	107	111	114	116	120	124	125
Major radiology	100	103	103	105	105	112	114	114
Minor radiology	100	103	105	102	101	102	101	97
Neurological/neuromuscular testing[a]	100	98	99	107	112	69	82	84
Physical medicine	100	106	112	115	112	111	115	114
Major surgery	100	105	105	109	105	102	96	91
Pain management injections	100	114	119	123	120	118	125	121

Iowa Annual Change in Professional Prices Paid by Service Group (%)

Professional Services	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 P
Emergency	7%	2%	-1%	-2%	2%	2%	5%
Evaluation and management	7%	4%	2%	2%	3%	3%	1%
Major radiology	3%	1%	2%	0%	7%	2%	0%
Minor radiology	3%	2%	-3%	0%	1%	-1%	-4%
Neurological/neuromuscular testing[a]	-2%	1%	8%	4%	-38%	19%	3%
Physical medicine	6%	5%	3%	-3%	0%	4%	-1%
Major surgery	5%	-1%	4%	-4%	-2%	-6%	-5%
Pain management injections	14%	4%	3%	-2%	-2%	6%	-3%

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Note: Iowa did not have a workers' compensation fee schedule as of 2015.

[a] Prices paid for neurological/neuromuscular testing services in most study states decreased starting in 2013. This general trend is related to a fundamental change implemented by the Centers for Medicare & Medicaid Services in the coding system for nerve conduction studies, which are the most commonly billed procedures in the neurological/neuromuscular testing service group. For more details, see "Discussion of Substantial Changes in Prices at Service-Type Level" and "Technical Appendix."

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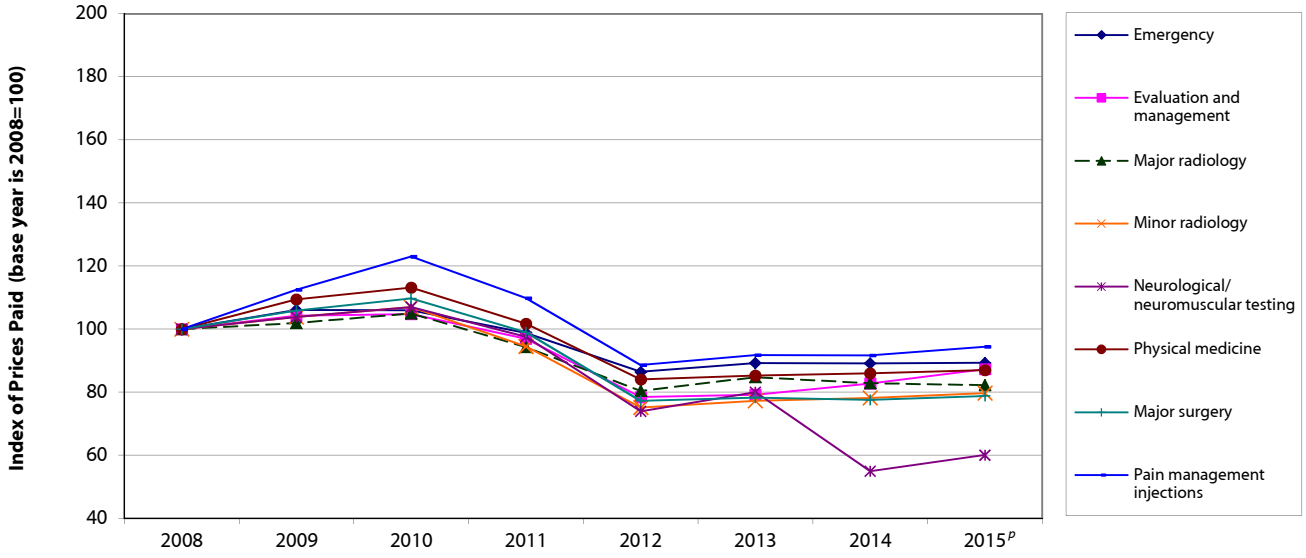
Figure C.9 Illinois Trend in Professional Prices Paid by Service Group, 2008 to 2015



Illinois Trend in Professional Prices Paid by Service Group, 2008 to 2015

Professional Services	2008	2009	2010	2011	2012	2013	2014	2015[p]
Emergency	100	106	106	99	86	89	89	89
Evaluation and management	100	104	105	97	78	79	83	87
Major radiology	100	102	105	94	80	85	83	82
Minor radiology	100	104	107	94	75	77	78	80
Neurological/neuromuscular testing[a]	100	104	107	98	74	80	55	60
Physical medicine	100	109	113	102	84	85	86	87
Major surgery	100	106	110	99	77	78	78	79
Pain management injections	100	112	123	110	89	92	92	94

Illinois Annual Change in Professional Prices Paid by Service Group (%)

Professional Services	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015[p]
Emergency	6%	0%	-7%	-12%	3%	0%	0%
Evaluation and management	4%	1%	-7%	-19%	1%	4%	6%
Major radiology	2%	3%	-10%	-15%	5%	-2%	-1%
Minor radiology	4%	3%	-12%	-20%	3%	1%	2%
Neurological/neuromuscular testing[a]	4%	3%	-9%	-24%	8%	-31%	9%
Physical medicine	9%	3%	-10%	-17%	1%	1%	1%
Major surgery	6%	4%	-10%	-22%	1%	-1%	1%
Pain management injections	12%	9%	-11%	-19%	4%	0%	3%

Special notation: [p] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes:

Illinois implemented a workers' compensation fee schedule in February 2006. This workers' compensation fee schedule for professional services set different maximum reimbursement rates for the same services for each of 29 different areas of the state based on the first three digits of the zip code where the service was delivered. The 29 fee schedules ranged from a low of 115 percent above Medicare to a high of 219 percent above Medicare—a difference of 104 percentage points. This difference might create unintended incentives for providers to control revenue by moving the site of service. Prices in this study represent the aggregate state-level estimation without drilling down to the 29 geozip areas; therefore, the price trends after 2006 could be influenced by the potential behavior changes of the providers. In September 2011, Illinois enacted new legislation that introduced a 30 percent decrease in the fee schedule rates. On January 1, 2012, Illinois discontinued its use of the 29 geozip areas for physicians and other providers in favor of four county-based regions.

After further review, Illinois determined that the 30 percent decrease implemented across all services in September 2011 caused fee schedule rates for certain evaluation and management services to fall below appropriate fee schedule levels, which resulted in more limited access to medical care for injured workers. Effective July 16, 2014, the state adjusted its fee schedule to increase the fee schedule rates for these evaluation and management codes to a level more comparable to Medicare rates. The most recent update covered in the study period in this report was effective January 1, 2015.

[a] Prices paid for neurological/neuromuscular testing services in most study states decreased starting in 2013. This general trend is related to a fundamental change implemented by the Centers for Medicare & Medicaid Services in the coding system for nerve conduction studies, which are the most commonly billed procedures in the neurological/neuromuscular testing service group. For more details, see "Discussion of Substantial Changes in Prices at Service-Type Level" and "Technical Appendix."

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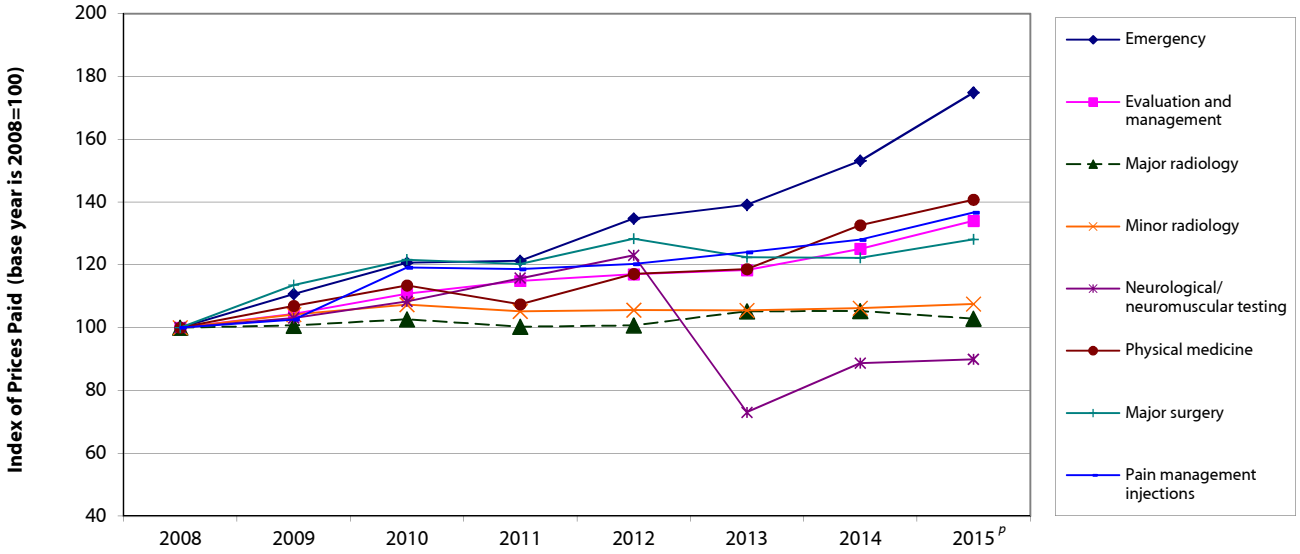
Figure C.10 Indiana Trend in Professional Prices Paid by Service Group, 2008 to 2015



Indiana Trend in Professional Prices Paid by Service Group, 2008 to 2015

Professional Services	2008	2009	2010	2011	2012	2013	2014	2015 P
Emergency	100	111	121	121	135	139	153	175
Evaluation and management	100	104	111	115	117	118	125	134
Major radiology	100	101	103	100	101	105	105	103
Minor radiology	100	104	107	105	106	106	106	108
Neurological/neuromuscular testing[a]	100	103	108	116	123	73	89	90
Physical medicine	100	107	113	107	117	119	133	141
Major surgery	100	114	122	120	128	122	122	128
Pain management injections	100	103	119	119	120	124	128	137

Indiana Annual Change in Professional Prices Paid by Service Group (%)

Professional Services	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 P
Emergency	11%	9%	1%	11%	3%	10%	14%
Evaluation and management	4%	6%	4%	2%	1%	6%	7%
Major radiology	1%	2%	-2%	0%	5%	0%	-2%
Minor radiology	4%	3%	-2%	0%	0%	1%	1%
Neurological/neuromuscular testing[a]	3%	5%	7%	6%	-41%	21%	1%
Physical medicine	7%	6%	-5%	9%	1%	12%	6%
Major surgery	14%	7%	-1%	7%	-5%	0%	5%
Pain management injections	3%	16%	0%	1%	3%	3%	7%

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Note: Indiana did not have a workers' compensation fee schedule as of 2015.

[a] Prices paid for neurological/neuromuscular testing services in most study states decreased starting in 2013. This general trend is related to a fundamental change implemented by the Centers for Medicare & Medicaid Services in the coding system for nerve conduction studies, which are the most commonly billed procedures in the neurological/neuromuscular testing service group. For more details, see "Discussion of Substantial Changes in Prices at Service-Type Level" and "Technical Appendix."

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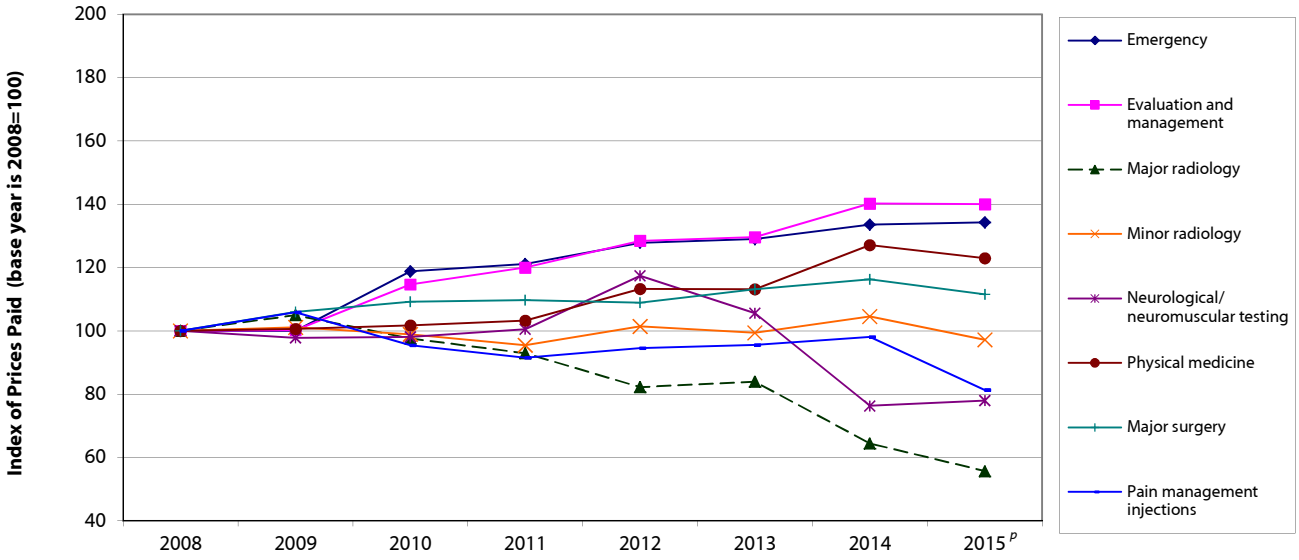
Figure C.11 Kansas Trend in Professional Prices Paid by Service Group, 2008 to 2015



Kansas Trend in Professional Prices Paid by Service Group, 2008 to 2014

Professional Services	2008	2009	2010	2011	2012	2013	2014	2015[P]
Emergency	100	100	119	121	128	129	134	134
Evaluation and management	100	100	115	120	128	130	140	140
Major radiology	100	105	98	93	82	84	64	56
Minor radiology	100	101	99	96	101	99	105	97
Neurological/neuromuscular testing[a]	100	98	98	101	117	106	76	78
Physical medicine	100	101	102	103	113	113	127	123
Major surgery	100	106	109	110	109	113	116	112
Pain management injections	100	106	95	92	95	96	98	81

Kansas Annual Change in Professional Prices Paid by Service Group (%)

Professional Services	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015[P]
Emergency	0%	19%	2%	6%	1%	3%	1%
Evaluation and management	0%	14%	5%	7%	1%	8%	0%
Major radiology	5%	-7%	-5%	-12%	2%	-23%	-14%
Minor radiology	1%	-2%	-3%	6%	-2%	5%	-7%
Neurological/neuromuscular testing[a]	-2%	0%	2%	17%	-10%	-28%	2%
Physical medicine	1%	1%	1%	10%	0%	12%	-3%
Major surgery	6%	3%	0%	-1%	4%	3%	-4%
Pain management injections	6%	-10%	-4%	3%	1%	3%	-17%

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes: Kansas updates its fee schedule for professional services either annually or biennially in January. The most recent update covered in the study period in this report was effective April 1, 2015.

[a] Prices paid for neurological/neuromuscular testing services in most study states decreased starting in 2013. This general trend is related to a fundamental change implemented by the Centers for Medicare & Medicaid Services in the coding system for nerve conduction studies, which are the most commonly billed procedures in the neurological/neuromuscular testing service group. For more details, see "Discussion of Substantial Changes in Prices at Service-Type Level" and "Technical Appendix."

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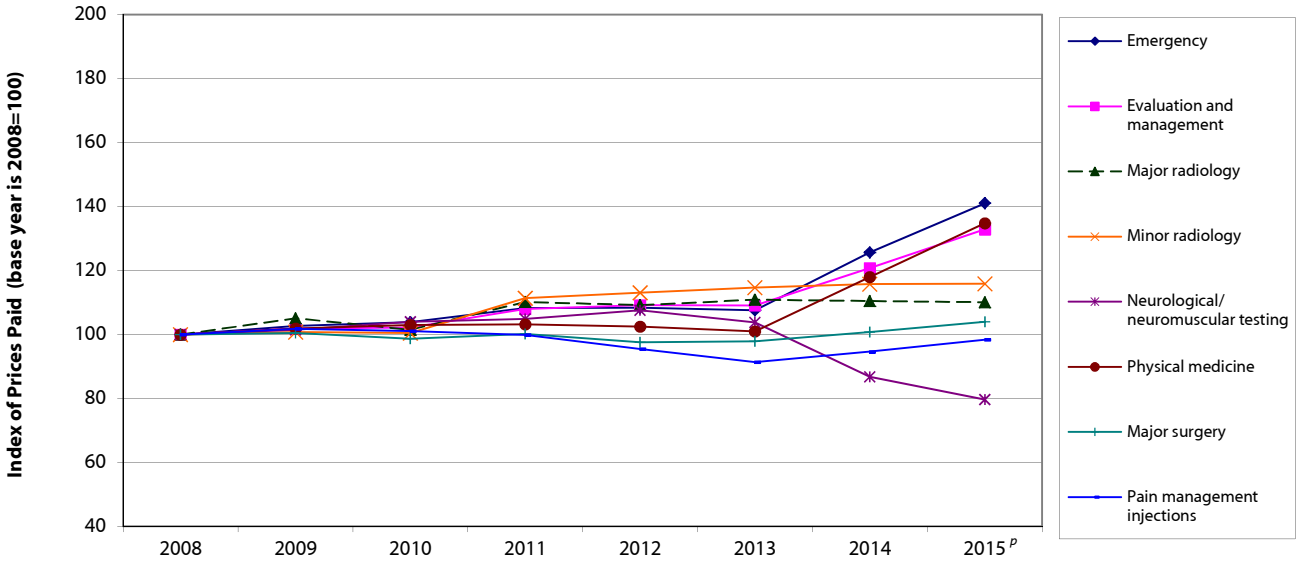
Figure C.12 Kentucky Trend in Professional Prices Paid by Service Group, 2008 to 2015



Kentucky Trend in Professional Prices Paid by Service Group, 2008 to 2015

Professional Services	2008	2009	2010	2011	2012	2013	2014	2015[P]
Emergency	100	103	104	108	108	108	126	141
Evaluation and management	100	102	102	108	109	109	121	133
Major radiology	100	105	101	110	109	111	110	110
Minor radiology	100	101	100	111	113	115	116	116
Neurological/neuromuscular testing[a]	100	101	104	105	108	104	87	80
Physical medicine	100	102	103	103	102	101	118	135
Major surgery	100	100	99	100	98	98	101	104
Pain management injections	100	102	101	100	95	91	95	98

Kentucky Annual Change in Professional Prices Paid by Service Group (%)

Professional Services	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015[P]
Emergency	3%	1%	4%	0%	-1%	17%	12%
Evaluation and management	2%	0%	6%	1%	0%	11%	10%
Major radiology	5%	-3%	9%	-1%	2%	0%	0%
Minor radiology	1%	0%	11%	1%	1%	1%	0%
Neurological/neuromuscular testing[a]	1%	2%	1%	3%	-3%	-16%	-8%
Physical medicine	2%	1%	0%	-1%	-1%	17%	14%
Major surgery	0%	-2%	2%	-3%	0%	3%	3%
Pain management injections	2%	-1%	-1%	-4%	-4%	4%	4%

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes: Kentucky periodically updates its fee schedule for professional services, typically every two to three years. Effective June 6, 2014, Kentucky discontinued the use of relative values from Medicare's resource-based relative value scale (RBRVS) for its professional fee schedule and transitioned to using relative values based on historic data from Fair Health Commercial Database Values.

[a] Prices paid for neurological/neuromuscular testing services in most study states decreased starting in 2013. This general trend is related to a fundamental change implemented by the Centers for Medicare & Medicaid Services in the coding system for nerve conduction studies, which are the most commonly billed procedures in the neurological/neuromuscular testing service group. For more details, see "Discussion of Substantial Changes in Prices at Service-Type Level" and "Technical Appendix."

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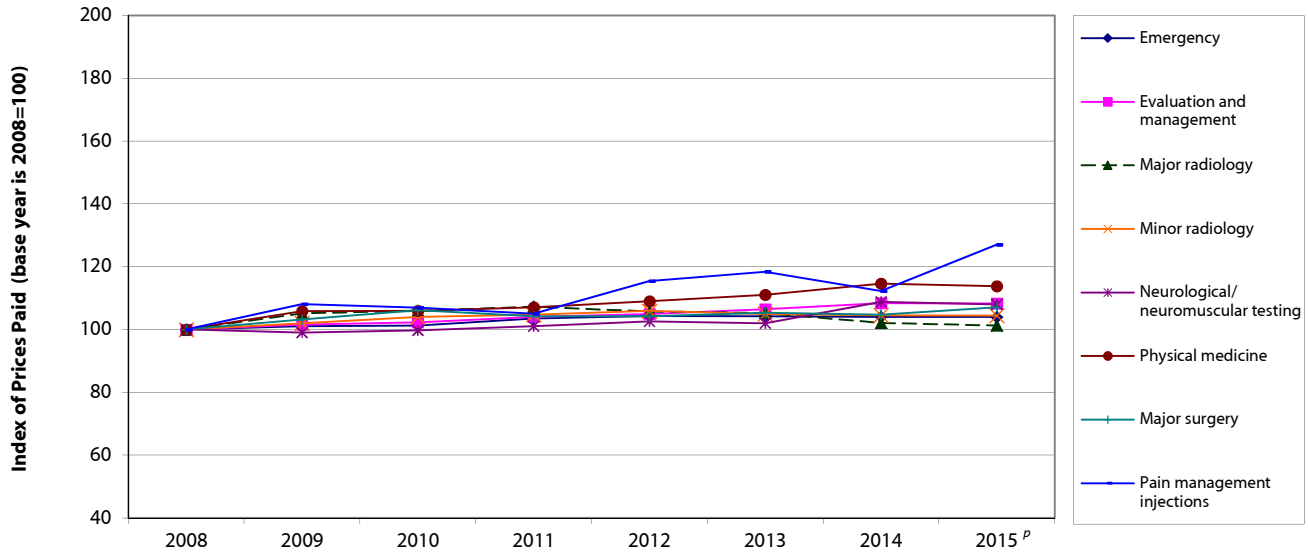
Figure C.13 Louisiana Trend in Professional Prices Paid by Service Group, 2008 to 2015



Louisiana Trend in Professional Prices Paid by Service Group, 2008 to 2015

Professional Services	2008	2009	2010	2011	2012	2013	2014	2015[p]
Emergency	100	101	101	103	104	104	104	104
Evaluation and management	100	102	102	104	105	106	108	108
Major radiology	100	105	106	107	106	105	102	101
Minor radiology	100	102	104	105	106	105	105	104
Neurological/neuromuscular testing[a]	100	99	100	101	103	102	109	108
Physical medicine	100	106	106	107	109	111	115	114
Major surgery	100	103	106	104	104	105	105	107
Pain management injections	100	108	107	105	115	118	112	127

Louisiana Annual Change in Professional Prices Paid by Service Group (%)

Professional Services	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015[p]
Emergency	1%	0%	2%	1%	0%	0%	0%
Evaluation and management	2%	1%	2%	1%	1%	2%	0%
Major radiology	5%	1%	1%	-1%	0%	-3%	-1%
Minor radiology	2%	2%	1%	1%	-1%	0%	0%
Neurological/neuromuscular testing[a]	-1%	1%	1%	1%	-1%	7%	-1%
Physical medicine	6%	0%	1%	2%	2%	3%	-1%
Major surgery	3%	3%	-2%	0%	1%	-1%	2%
Pain management injections	8%	-1%	-2%	10%	2%	-5%	13%

Special notation: [p] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes: Louisiana's fee schedule for professional services uses the 1999 Current Procedural Terminology (CPT) list published by the American Medical Association and the maximum allowable reimbursement rates effective as of March 2001. Effective July 20, 2013, Louisiana updated its fee schedule using the 2012 CPT list. Maximum allowable reimbursement rates were added for new or revised codes; however, the fee schedule rates for the existing codes appeared to remain at the March 2001 rates. The state-specific codes relating to physical and occupational therapies were discontinued in favor of national CPT codes.

[a] Prices paid for neurological/neuromuscular testing services in most study states decreased starting in 2013. This general trend is related to a fundamental change implemented by the Centers for Medicare & Medicaid Services in the coding system for nerve conduction studies, which are the most commonly billed procedures in the neurological/neuromuscular testing service group. For more details, see "Discussion of Substantial Changes in Prices at Service-Type Level" and "Technical Appendix."

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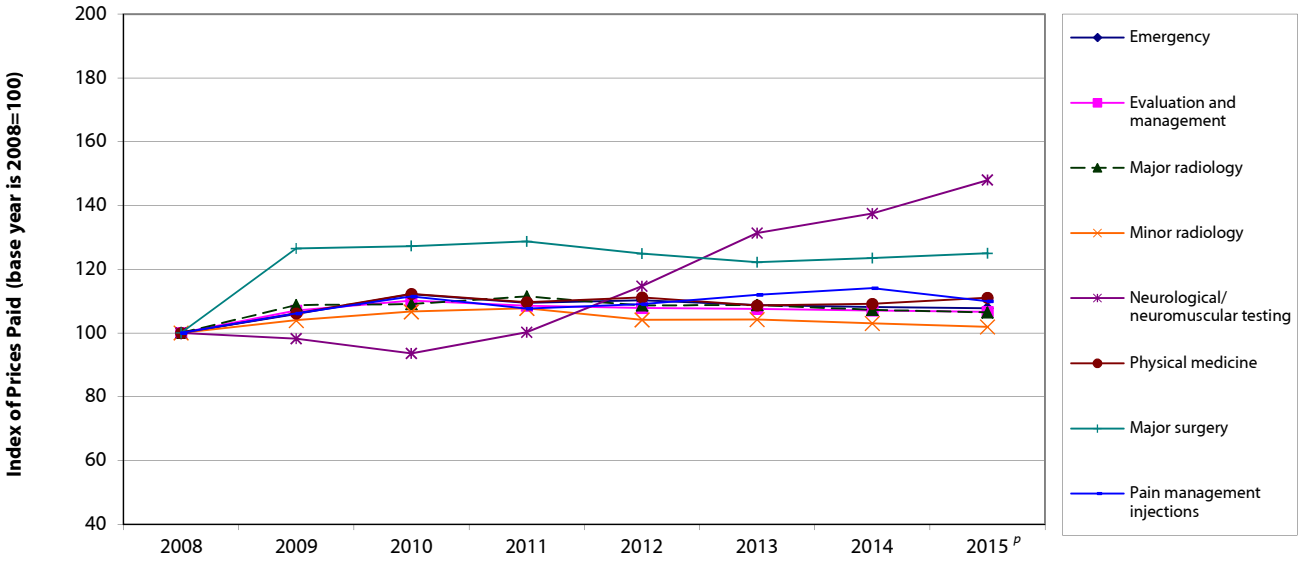
Figure C.14 Massachusetts Trend in Professional Prices Paid by Service Group, 2008 to 2015



Massachusetts Trend in Professional Prices Paid by Service Group, 2008 to 2015

Professional Services	2008	2009	2010	2011	2012	2013	2014	2015 P
Emergency	100	106	112	109	110	109	108	108
Evaluation and management	100	107	110	109	108	108	107	107
Major radiology	100	109	109	111	109	109	107	106
Minor radiology	100	104	107	108	104	104	103	102
Neurological/neuromuscular testing[a]	100	98	94	100	115	131	137	148
Physical medicine	100	106	112	110	111	109	109	111
Major surgery	100	127	127	129	125	122	123	125
Pain management injections	100	106	111	108	109	112	114	110

Massachusetts Annual Change in Professional Prices Paid by Service Group (%)

Professional Services	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 P
Emergency	6%	6%	-2%	1%	-1%	-1%	0%
Evaluation and management	7%	3%	-2%	-1%	0%	-1%	0%
Major radiology	9%	0%	2%	-2%	0%	-1%	-1%
Minor radiology	4%	3%	1%	-3%	0%	-1%	-1%
Neurological/neuromuscular testing[a]	-2%	-5%	7%	14%	15%	5%	8%
Physical medicine	6%	6%	-2%	1%	-2%	0%	2%
Major surgery	27%	1%	1%	-3%	-2%	1%	1%
Pain management injections	6%	5%	-3%	1%	3%	2%	-4%

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes: Massachusetts increased the fee schedule rates for many professional services, effective April 2009. The fee schedule increases for major surgeries were especially significant; the rates for some surgeries increased to two to three times the previous rates to be more in line with the median prices paid. Prior to that, the fee schedule for professional services had not been updated since September 2004. A WCRI study showed that major surgeries were often paid above the fee schedule rates (Eccleston, 2006). This study found that for many of these surgeries, it was not uncommon for the median prices paid to be two or three times the fee schedule amount. Typically, 50–60 percent of these surgical procedures were paid above the fee schedule rate. System participants indicated that payors in the state were willing to negotiate with surgeons because injured workers had better outcomes and return to work was faster (Radeva, 2014b).

[a] Prices paid for neurological/neuromuscular testing services in most study states decreased starting in 2013. This general trend is related to a fundamental change implemented by the Centers for Medicare & Medicaid Services in the coding system for nerve conduction studies, which are the most commonly billed procedures in the neurological/neuromuscular testing service group. For more details, see "Discussion of Substantial Changes in Prices at Service-Type Level" and "Technical Appendix."

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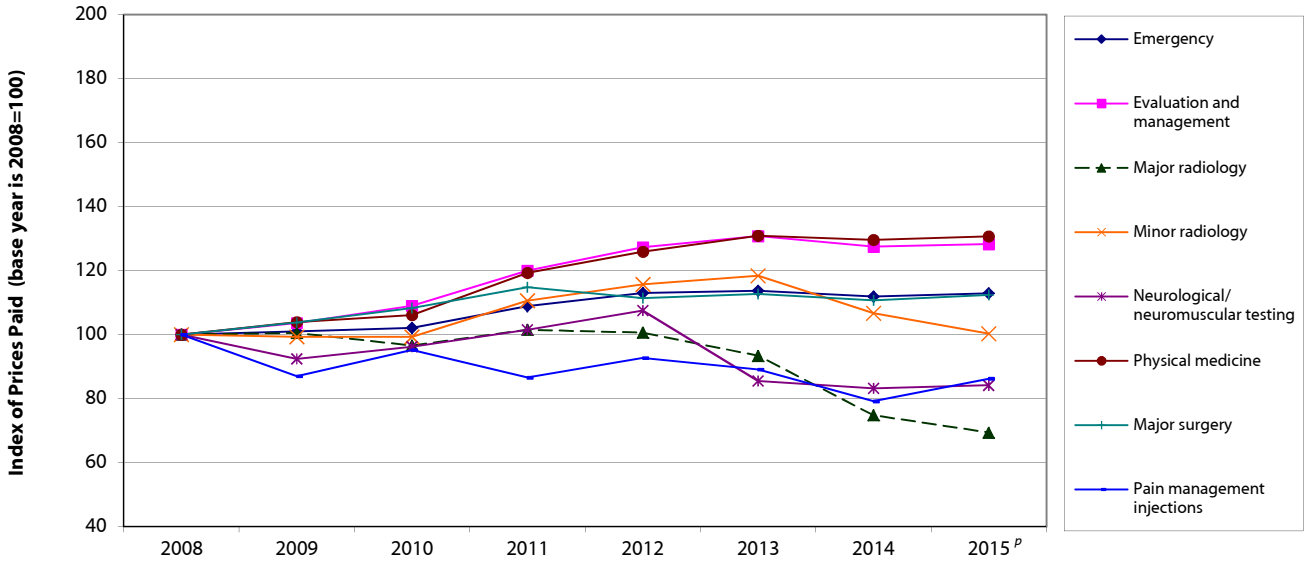
Figure C.15 Maryland Trend in Professional Prices Paid by Service Group, 2008 to 2015



Maryland Trend in Professional Prices Paid by Service Group, 2008 to 2015

Professional Services	2008	2009	2010	2011	2012	2013	2014	2015[P]
Emergency	100	101	102	109	113	114	112	113
Evaluation and management	100	104	109	120	127	131	127	128
Major radiology	100	100	97	102	101	93	75	69
Minor radiology	100	99	99	111	116	118	107	100
Neurological/neuromuscular testing[a]	100	92	96	101	107	86	83	84
Physical medicine	100	104	106	119	126	131	130	131
Major surgery	100	104	108	115	111	113	111	112
Pain management injections	100	87	95	87	93	89	79	86

Maryland Annual Change in Professional Prices Paid by Service Group (%)

Professional Services	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015[P]
Emergency	1%	1%	7%	4%	1%	-2%	1%
Evaluation and management	4%	5%	10%	6%	3%	-3%	1%
Major radiology	0%	-4%	5%	-1%	-7%	-20%	-7%
Minor radiology	-1%	0%	11%	5%	2%	-10%	-6%
Neurological/neuromuscular testing[a]	-8%	4%	5%	6%	-20%	-3%	1%
Physical medicine	4%	2%	12%	6%	4%	-1%	1%
Major surgery	4%	4%	6%	-3%	1%	-2%	2%
Pain management injections	-13%	9%	-9%	7%	-4%	-11%	9%

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes: Starting in March 2008, Maryland implemented annual increases to its fee schedule rates for professional services based on changes in the Medicare Economic Index. The most recent update covered in the study period in this report was effective June 15, 2015.

[a] Prices paid for neurological/neuromuscular testing services in most study states decreased starting in 2013. This general trend is related to a fundamental change implemented by the Centers for Medicare & Medicaid Services in the coding system for nerve conduction studies, which are the most commonly billed procedures in the neurological/neuromuscular testing service group. For more details, see "Discussion of Substantial Changes in Prices at Service-Type Level" and "Technical Appendix."

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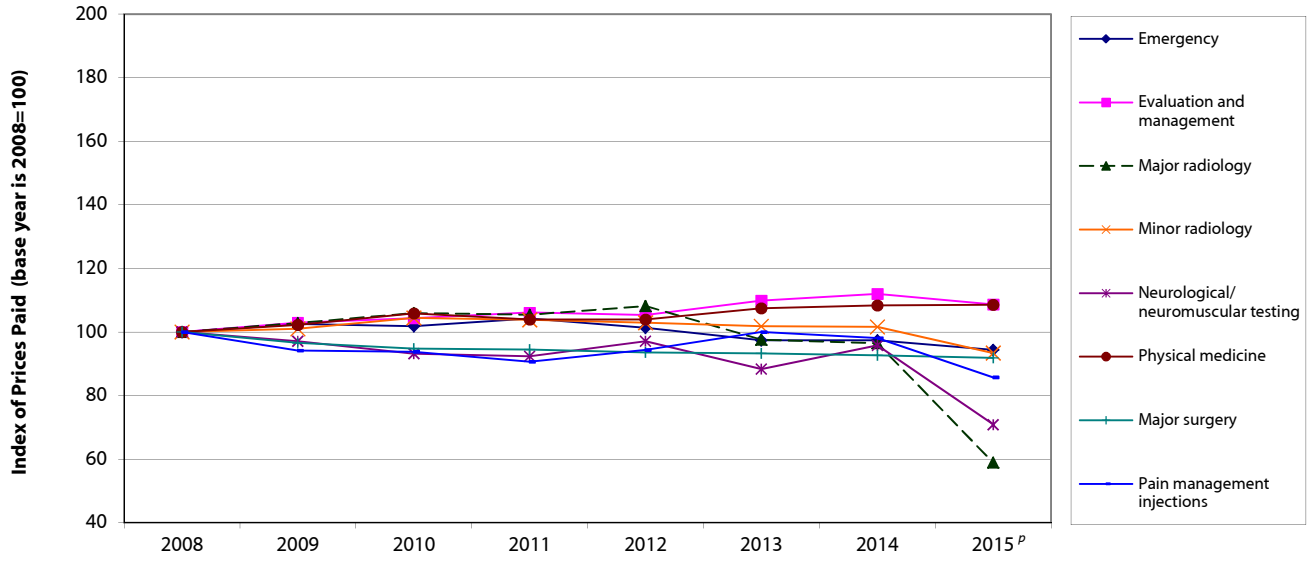
Figure C.16 Michigan Trend in Professional Prices Paid by Service Group, 2008 to 2015



Michigan Trend in Professional Prices Paid by Service Group, 2008 to 2015

Professional Services	2008	2009	2010	2011	2012	2013	2014	2015 P
Emergency	100	103	102	104	101	97	97	94
Evaluation and management	100	103	104	106	105	110	112	109
Major radiology	100	103	106	105	108	98	96	59
Minor radiology	100	101	104	104	103	102	102	93
Neurological/neuromuscular testing[a]	100	97	93	92	97	88	96	71
Physical medicine	100	102	106	104	104	108	108	109
Major surgery	100	97	95	94	94	93	93	92
Pain management injections	100	94	94	91	94	100	98	86

Michigan Annual Change in Professional Prices Paid by Service Group (%)

Professional Services	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 P
Emergency	3%	-1%	2%	-3%	-4%	0%	-3%
Evaluation and management	3%	1%	2%	-1%	4%	2%	-3%
Major radiology	3%	3%	-1%	3%	-10%	-1%	-39%
Minor radiology	1%	3%	-1%	-1%	-1%	0%	-8%
Neurological/neuromuscular testing[a]	-3%	-4%	-1%	5%	-9%	8%	-26%
Physical medicine	2%	3%	-2%	0%	3%	1%	0%
Major surgery	-3%	-2%	0%	-1%	0%	-1%	-1%
Pain management injections	-6%	0%	-3%	4%	6%	-2%	-13%

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes: Michigan updates its fee schedule for professional services annually. The most recent update covered in the study period in this report was effective December 26, 2014.

[a] Prices paid for neurological/neuromuscular testing services in most study states decreased starting in 2013. This general trend is related to a fundamental change implemented by the Centers for Medicare & Medicaid Services in the coding system for nerve conduction studies, which are the most commonly billed procedures in the neurological/neuromuscular testing service group. For more details, see "Discussion of Substantial Changes in Prices at Service-Type Level" and "Technical Appendix."

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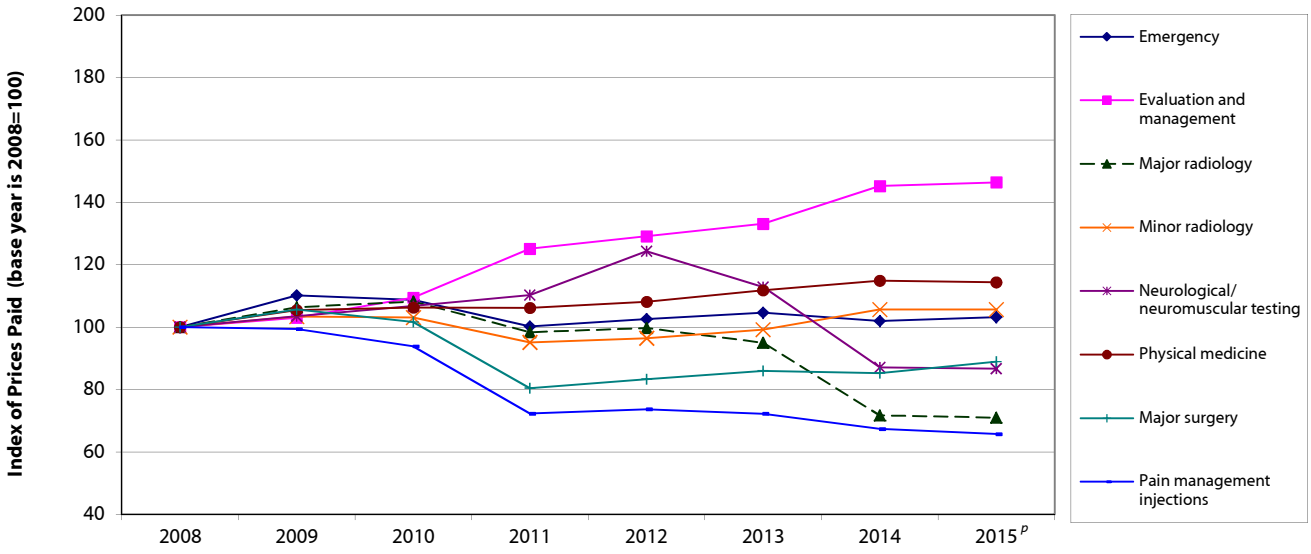
Figure C.17 Minnesota Trend in Professional Prices Paid by Service Group, 2008 to 2015



Minnesota Trend in Professional Prices Paid by Service Group, 2008 to 2015

Professional Services	2008	2009	2010	2011	2012	2013	2014	2015 P
Emergency	100	110	109	100	103	105	102	103
Evaluation and management	100	103	109	125	129	133	145	146
Major radiology	100	106	108	98	100	95	72	71
Minor radiology	100	103	103	95	96	99	106	106
Neurological/neuromuscular testing[a]	100	104	107	110	124	113	87	87
Physical medicine	100	106	106	106	108	112	115	114
Major surgery	100	106	102	80	83	86	85	89
Pain management injections	100	99	94	72	74	72	67	66

Minnesota Annual Change in Professional Prices Paid by Service Group (%)

Professional Services	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 P
Emergency	10%	-1%	-8%	2%	2%	-3%	1%
Evaluation and management	3%	6%	14%	3%	3%	9%	1%
Major radiology	6%	2%	-9%	1%	-5%	-24%	-1%
Minor radiology	3%	0%	-8%	1%	3%	6%	0%
Neurological/neuromuscular testing[a]	4%	3%	3%	13%	-9%	-23%	0%
Physical medicine	6%	1%	0%	2%	3%	3%	0%
Major surgery	6%	-4%	-21%	4%	3%	-1%	4%
Pain management injections	-1%	-6%	-23%	2%	-2%	-7%	-2%

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes: Minnesota's fee schedule for professional services from 2002 to September 2010 was based on 1998 Medicare relative value units (RVUs), with annual updates in the conversion factor. Effective October 1, 2010, Minnesota updated its fee schedule by using 2009 Medicare RVUs and decreasing the state conversion factor. The most recent update covered in the study period in this report was effective October 1, 2014, and is based on 2013 Medicare RVUs .

[a] Prices paid for neurological/neuromuscular testing services in most study states decreased starting in 2013. This general trend is related to a fundamental change implemented by the Centers for Medicare & Medicaid Services in the coding system for nerve conduction studies, which are the most commonly billed procedures in the neurological/neuromuscular testing service group. For more details, see "Discussion of Substantial Changes in Prices at Service-Type Level" and "Technical Appendix."

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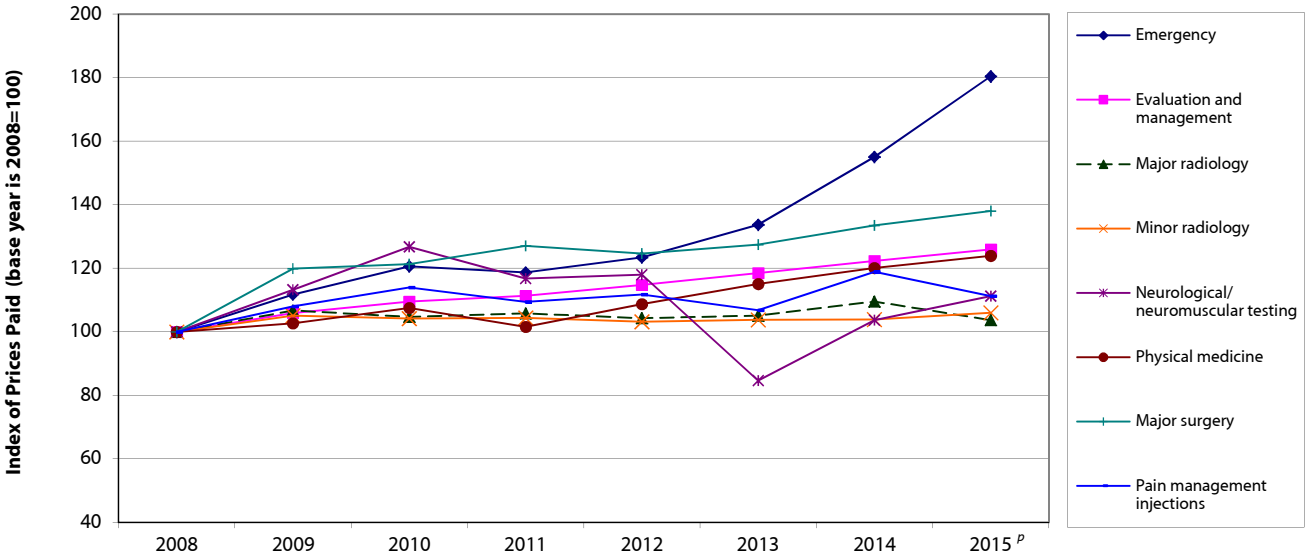
Figure C.18 Missouri Trend in Professional Prices Paid by Service Group, 2008 to 2015



Missouri Trend in Professional Prices Paid by Service Group, 2008 to 2015

Professional Services	2008	2009	2010	2011	2012	2013	2014	2015 P
Emergency	100	112	121	119	123	134	155	180
Evaluation and management	100	106	110	111	115	118	122	126
Major radiology	100	107	105	106	104	105	109	104
Minor radiology	100	105	104	104	103	104	104	106
Neurological/neuromuscular testing[a]	100	113	127	117	118	85	104	111
Physical medicine	100	103	108	102	109	115	120	124
Major surgery	100	120	121	127	125	127	133	138
Pain management injections	100	108	114	109	112	107	119	111

Missouri Annual Change in Professional Prices Paid by Service Group (%)

Professional Services	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 P
Emergency	12%	8%	-2%	4%	8%	16%	16%
Evaluation and management	6%	4%	2%	3%	3%	3%	3%
Major radiology	7%	-2%	1%	-1%	1%	4%	-5%
Minor radiology	5%	-1%	0%	-1%	1%	0%	2%
Neurological/neuromuscular testing[a]	13%	12%	-8%	1%	-28%	22%	7%
Physical medicine	3%	5%	-6%	7%	6%	4%	3%
Major surgery	20%	1%	5%	-2%	2%	5%	3%
Pain management injections	8%	5%	-4%	2%	-4%	11%	-6%

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes:

The data for Missouri are not necessarily representative because the state is missing data from a larger data source that is significant in the state. To the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to under- or overestimations in the results.

Missouri did not have a workers' compensation fee schedule as of 2015.

[a] Prices paid for neurological/neuromuscular testing services in most study states decreased starting in 2013. This general trend is related to a fundamental change implemented by the Centers for Medicare & Medicaid Services in the coding system for nerve conduction studies, which are the most commonly billed procedures in the neurological/neuromuscular testing service group. For more details, see "Discussion of Substantial Changes in Prices at Service-Type Level" and "Technical Appendix."

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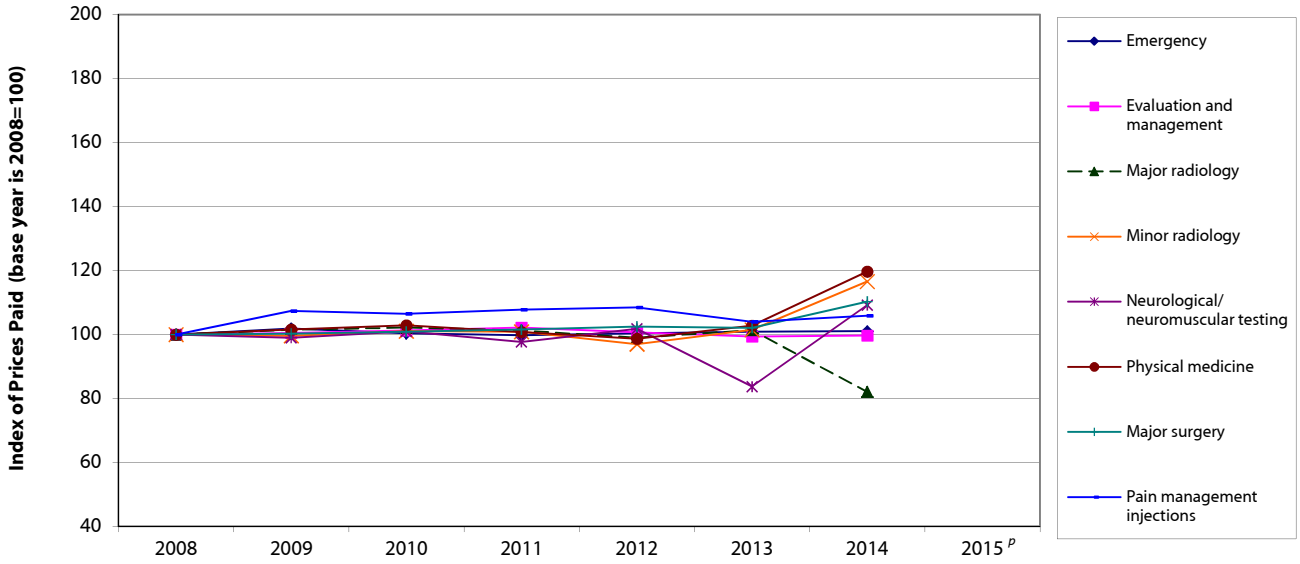
Figure C.19 Mississippi Trend in Professional Prices Paid by Service Group, 2008 to 2015



Mississippi Trend in Professional Prices Paid by Service Group, 2002 to 2015

Professional Services	2008	2009	2010	2011	2012	2013	2014	2015[p]
Emergency	100	102	100	100	100	101	101	n/a
Evaluation and management	100	101	101	102	101	99	100	n/a
Major radiology	100	101	102	101	99	101	82	n/a
Minor radiology	100	100	101	101	97	101	117	n/a
Neurological/neuromuscular testing[a]	100	99	101	98	102	84	109	n/a
Physical medicine	100	102	103	101	99	103	120	n/a
Major surgery	100	100	101	102	103	102	110	n/a
Pain management injections	100	107	107	108	108	104	106	n/a

Mississippi Annual Change in Professional Prices Paid by Service Group (%)

Professional Services	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015[p]
Emergency	2%	-2%	-1%	1%	0%	0%	n/a
Evaluation and management	1%	1%	1%	-1%	-1%	0%	n/a
Major radiology	1%	1%	-1%	-2%	2%	-19%	n/a
Minor radiology	0%	1%	0%	-4%	5%	15%	n/a
Neurological/neuromuscular testing[a]	-1%	2%	-3%	4%	-18%	30%	n/a
Physical medicine	2%	1%	-2%	-2%	4%	16%	n/a
Major surgery	0%	1%	1%	1%	0%	8%	n/a
Pain management injections	7%	-1%	1%	1%	-4%	2%	n/a

Special notation: [p] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes:

The prices paid for professional services in Mississippi are not reported for 2015. Mississippi was excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

Mississippi updates its fee schedule for professional services periodically every few years. The most recent full revision to the fee schedule covered in the study period in this report occurred on November 1, 2013, and was amended with an update effective June 19, 2015. This most recent update was made to account for new and discontinued Current Procedural Terminology (CPT) codes published by the American Medical Association for 2015.

[a] Prices paid for neurological/neuromuscular testing services in most study states decreased starting in 2013. This general trend is related to a fundamental change implemented by the Centers for Medicare & Medicaid Services in the coding system for nerve conduction studies, which are the most commonly billed procedures in the neurological/neuromuscular testing service group. For more details, see "Discussion of Substantial Changes in Prices at Service-Type Level" and "Technical Appendix."

Key: n/a: not applicable.

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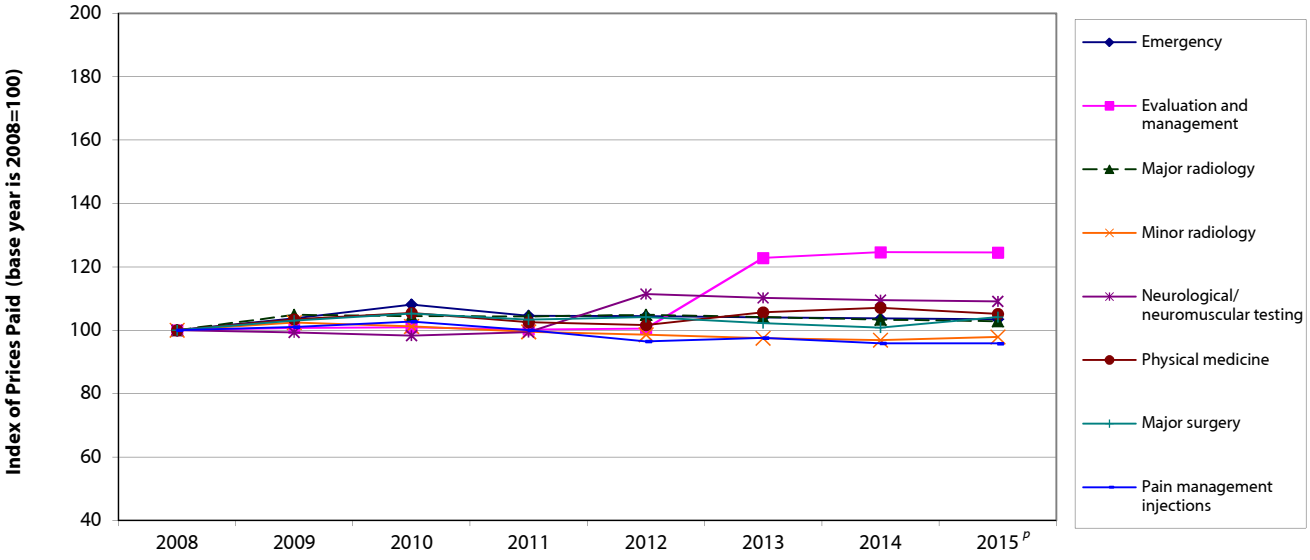
Figure C.20 North Carolina Trend in Professional Prices Paid by Service Group, 2008 to 2015



North Carolina Trend in Professional Prices Paid by Service Group, 2008 to 2015

Professional Services	2008	2009	2010	2011	2012	2013	2014	2015[p]
Emergency	100	104	108	105	104	104	104	103
Evaluation and management	100	101	101	100	101	123	125	125
Major radiology	100	105	104	104	105	104	103	103
Minor radiology	100	102	101	99	99	97	97	98
Neurological/neuromuscular testing[a]	100	99	98	99	111	110	110	109
Physical medicine	100	103	105	103	102	106	107	105
Major surgery	100	103	105	103	104	102	101	104
Pain management injections	100	101	103	100	96	98	96	96

North Carolina Annual Change in Professional Prices Paid by Service Group (%)

Professional Services	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015[p]
Emergency	4%	4%	-3%	0%	0%	0%	0%
Evaluation and management	1%	0%	-1%	0%	22%	1%	0%
Major radiology	5%	0%	0%	0%	-1%	-1%	0%
Minor radiology	2%	-1%	-2%	-1%	-1%	-1%	1%
Neurological/neuromuscular testing[a]	-1%	-1%	1%	12%	-1%	-1%	0%
Physical medicine	3%	2%	-3%	-1%	4%	1%	-2%
Major surgery	3%	2%	-2%	1%	-2%	-1%	3%
Pain management injections	1%	2%	-3%	-4%	1%	-2%	0%

Special notation: [p] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes: Maximum reimbursement amounts in the North Carolina fee schedule for professional services are based on those adopted by the North Carolina Industrial Commission effective January 1996, which was based on the 1995 Medicare values. North Carolina updates its fee schedule annually in January to account for new and discontinued Current Procedural Terminology (CPT) codes published by the American Medical Association. In 2013, the fee schedule rates for office visits increased in North Carolina. Effective July 1, 2015, North Carolina updated the professional fee schedules to be based on the current year Medicare fees for North Carolina. Starting in 2016, and each year thereafter, North Carolina will publish a fee schedule table that will be effective January 1. The next edition of this Medical Price Index study series will monitor the price changes after the July 2015 fee schedule change and the 2016 update.

[a] Prices paid for neurological/neuromuscular testing services in most study states decreased starting in 2013. This general trend is related to a fundamental change implemented by the Centers for Medicare & Medicaid Services in the coding system for nerve conduction studies, which are the most commonly billed procedures in the neurological/neuromuscular testing service group. For more details, see "Discussion of Substantial Changes in Prices at Service-Type Level" and "Technical Appendix."

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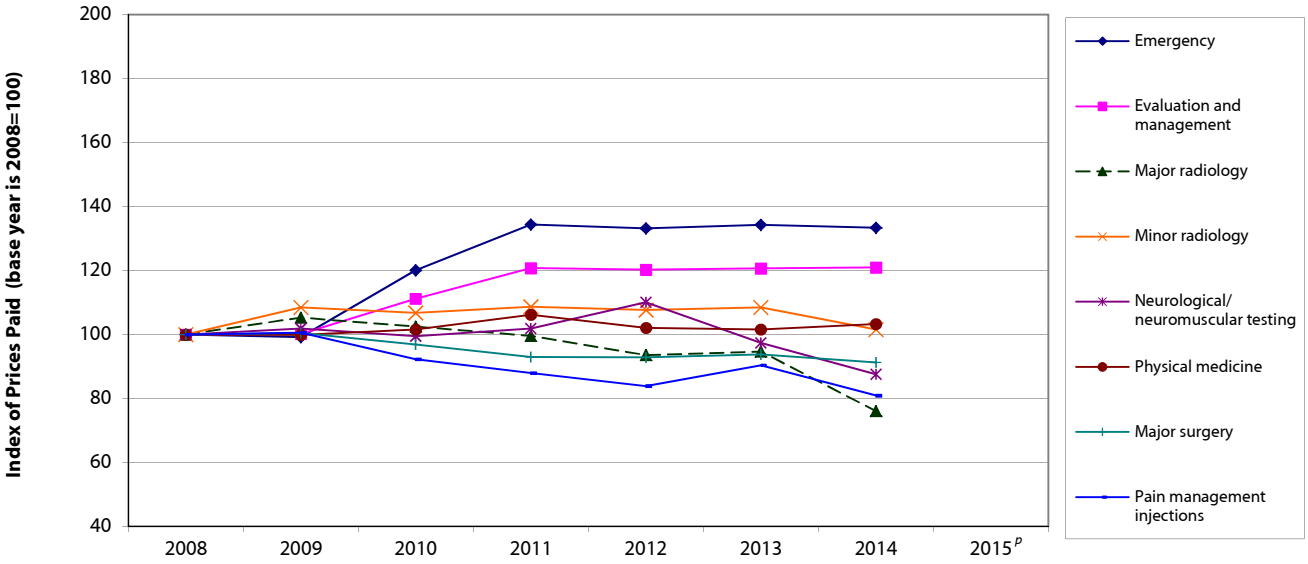
Figure C.21 Nebraska Trend in Professional Prices Paid by Service Group, 2008 to 2015



Nebraska Trend in Professional Prices Paid by Service Group, 2008 to 2015

Professional Services	2008	2009	2010	2011	2012	2013	2014	2015[p]
Emergency	100	99	120	134	133	134	133	n/a
Evaluation and management	100	100	111	121	120	121	121	n/a
Major radiology	100	105	102	100	94	95	76	n/a
Minor radiology	100	108	107	109	108	108	102	n/a
Neurological/neuromuscular testing[a]	100	102	99	102	110	97	88	n/a
Physical medicine	100	100	102	106	102	102	103	n/a
Major surgery	100	100	97	93	93	94	91	n/a
Pain management injections	100	101	92	88	84	90	81	n/a

Nebraska Annual Change in Professional Prices Paid by Service Group (%)

Professional Services	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015[p]
Emergency	-1%	21%	12%	-1%	1%	-1%	n/a
Evaluation and management	0%	11%	9%	0%	0%	0%	n/a
Major radiology	5%	-3%	-3%	-6%	1%	-20%	n/a
Minor radiology	8%	-2%	2%	-1%	1%	-6%	n/a
Neurological/neuromuscular testing[a]	2%	-2%	2%	8%	-11%	-10%	n/a
Physical medicine	0%	2%	5%	-4%	-1%	2%	n/a
Major surgery	0%	-4%	-4%	0%	1%	-3%	n/a
Pain management injections	1%	-8%	-5%	-5%	8%	-10%	n/a

Special notation: [p] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes:

The prices paid for professional services in Nebraska are not reported for 2015. Nebraska was excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

Nebraska has updated its fee schedule for professional services biennially in June since 2008. The most recent update covered in the study period in this report was effective June 1, 2014.

[a] Prices paid for neurological/neuromuscular testing services in most study states decreased starting in 2013. This general trend is related to a fundamental change implemented by the Centers for Medicare & Medicaid Services in the coding system for nerve conduction studies, which are the most commonly billed procedures in the neurological/neuromuscular testing service group. For more details, see "Discussion of Substantial Changes in Prices at Service-Type Level" and "Technical Appendix."

Key: n/a: not applicable.

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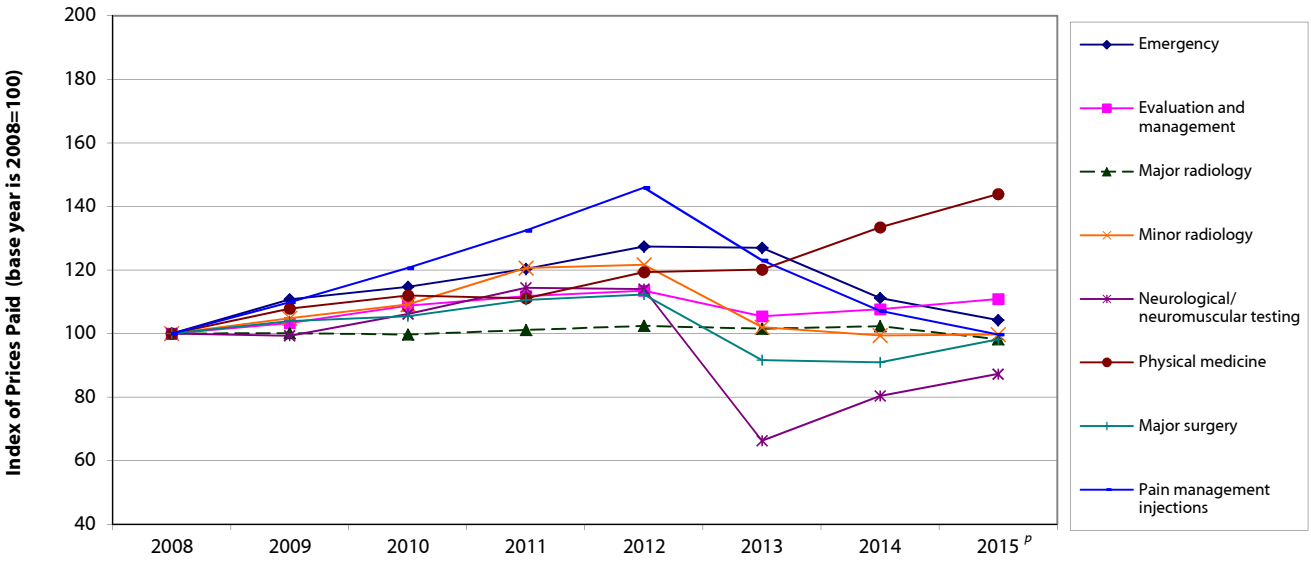
Figure C.22 New Jersey Trend in Professional Prices Paid by Service Group, 2008 to 2015



New Jersey Trend in Professional Prices Paid by Service Group, 2008 to 2015

Professional Services	2008	2009	2010	2011	2012	2013	2014	2015[p]
Emergency	100	111	115	120	127	127	111	104
Evaluation and management	100	103	109	112	114	105	108	111
Major radiology	100	100	100	101	102	102	102	98
Minor radiology	100	105	109	121	122	102	99	100
Neurological/neuromuscular testing[a]	100	99	106	114	114	66	80	87
Physical medicine	100	108	112	111	119	120	133	144
Major surgery	100	104	105	111	112	92	91	98
Pain management injections	100	110	121	132	146	123	107	100

New Jersey Annual Change in Professional Prices Paid by Service Group (%)

Professional Services	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015[p]
Emergency	11%	3%	5%	6%	0%	-12%	-6%
Evaluation and management	3%	5%	3%	2%	-7%	2%	3%
Major radiology	0%	0%	1%	1%	-1%	1%	-4%
Minor radiology	5%	4%	11%	1%	-16%	-3%	0%
Neurological/neuromuscular testing[a]	-1%	7%	8%	0%	-42%	21%	9%
Physical medicine	8%	4%	-1%	7%	1%	11%	8%
Major surgery	4%	1%	5%	1%	-18%	-1%	8%
Pain management injections	10%	10%	10%	10%	-16%	-13%	-7%

Special notation: [p] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes: New Jersey did not have a workers' compensation fee schedule as of 2015. Note that in 2013, New Jersey experienced decreases in prices paid for multiple types of professional services. More prevalent network participation and bigger discounts in the negotiated prices under network agreements were the main factors underlying this unusual trend among the states with no fee schedules.

[a] Prices paid for neurological/neuromuscular testing services in most study states decreased starting in 2013. This general trend is related to a fundamental change implemented by the Centers for Medicare & Medicaid Services in the coding system for nerve conduction studies, which are the most commonly billed procedures in the neurological/neuromuscular testing service group. For more details, see "Discussion of Substantial Changes in Prices at Service-Type Level" and "Technical Appendix."

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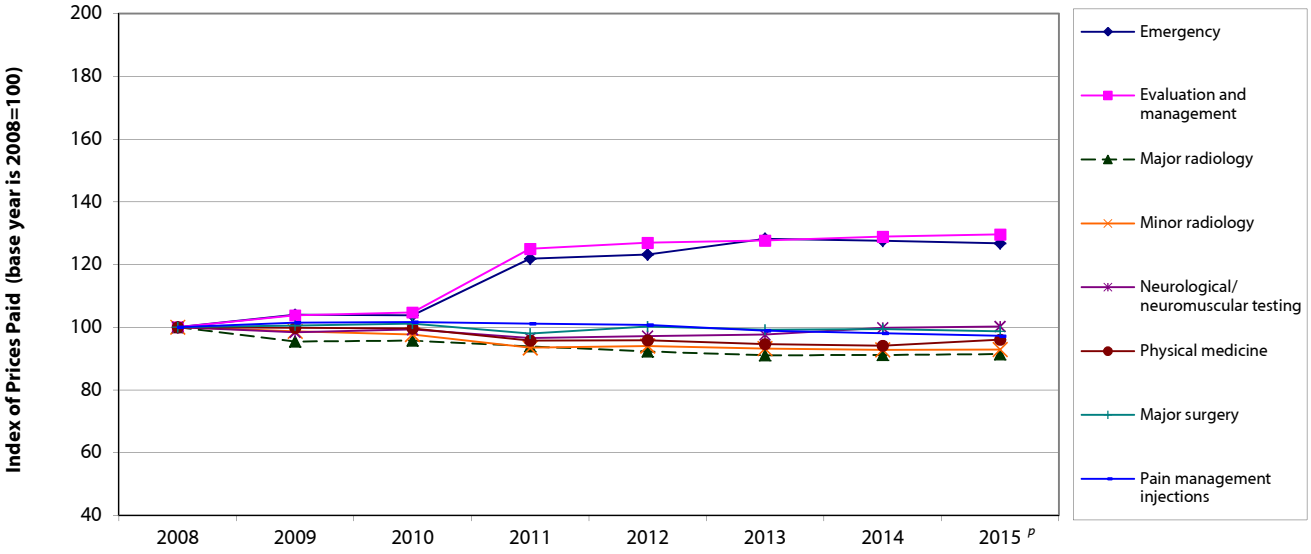
Figure C.23 New York Trend in Professional Prices Paid by Service Group, 2008 to 2015



New York Trend in Professional Prices Paid by Service Group, 2008 to 2015

Professional Services	2008	2009	2010	2011	2012	2013	2014	2015 P
Emergency	100	104	104	122	123	128	128	127
Evaluation and management	100	104	105	125	127	128	129	130
Major radiology	100	95	96	94	92	91	91	91
Minor radiology	100	99	98	93	94	93	93	93
Neurological/neuromuscular testing[a]	100	98	99	97	97	98	100	100
Physical medicine	100	100	100	96	96	95	94	96
Major surgery	100	101	101	98	100	99	99	99
Pain management injections	100	101	102	101	101	99	98	97

New York Annual Change in Professional Prices Paid by Service Group (%)

Professional Services	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 P
Emergency	4%	0%	17%	1%	4%	-1%	-1%
Evaluation and management	4%	1%	19%	2%	1%	1%	1%
Major radiology	-5%	0%	-2%	-2%	-1%	0%	0%
Minor radiology	-1%	-1%	-4%	1%	-1%	0%	0%
Neurological/neuromuscular testing[a]	-2%	1%	-3%	1%	0%	2%	0%
Physical medicine	0%	0%	-4%	0%	-1%	-1%	2%
Major surgery	1%	1%	-3%	2%	-1%	0%	-1%
Pain management injections	1%	0%	0%	0%	-2%	-1%	-1%

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes:

The data for New York are not necessarily representative because it is missing data from a larger data source that is significant in this state. The results in New York are unlikely to be significantly under- or overestimated, given that the state uses a fee schedule to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in New York were materially different from other data sources included in this study from the same state.

New York periodically updates its fee schedule for professional services; however, the maximum allowable reimbursement rates for most services covered in this report did not change from 2002 to November 2010. Effective December 1, 2010, the fee schedule rates in New York increased for evaluation and management services and emergency services. The most recent update covered in the study period in this report was effective June 1, 2015.

[a] Prices paid for neurological/neuromuscular testing services in most study states decreased starting in 2013. This general trend is related to a fundamental change implemented by the Centers for Medicare & Medicaid Services in the coding system for nerve conduction studies, which are the most commonly billed procedures in the neurological/neuromuscular testing service group. For more details, see "Discussion of Substantial Changes in Prices at Service-Type Level" and "Technical Appendix."

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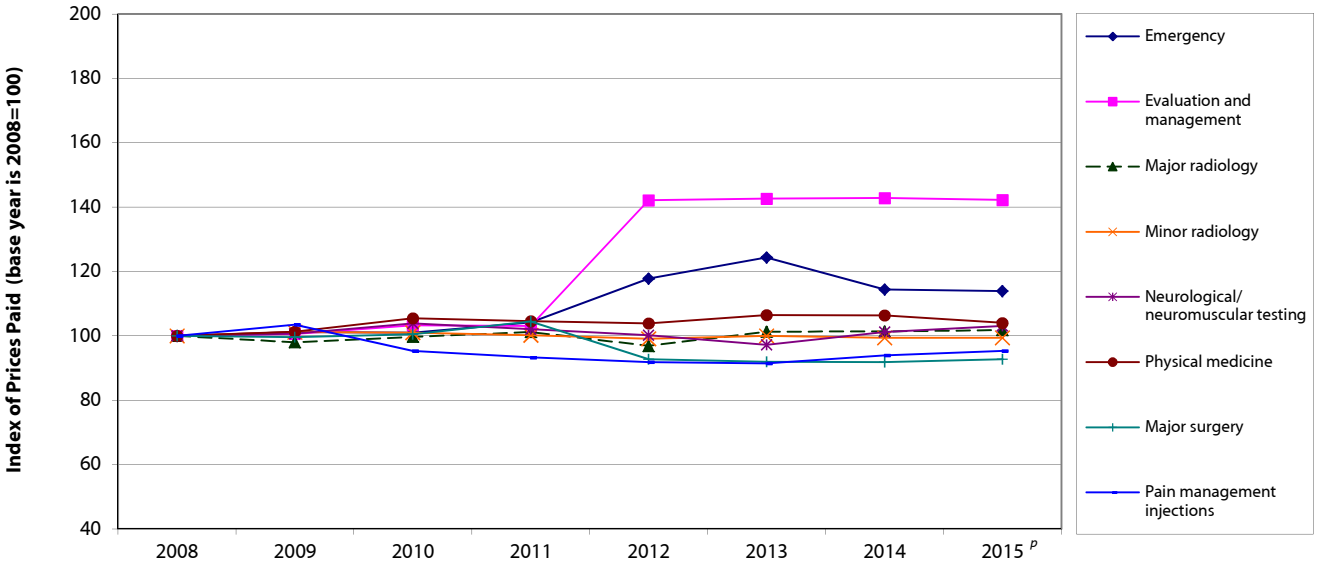
Figure C.24 Oklahoma Trend in Professional Prices Paid by Service Group, 2008 to 2015



Oklahoma Trend in Professional Prices Paid by Service Group, 2008 to 2015

Professional Services	2008	2009	2010	2011	2012	2013	2014	2015 P
Emergency	100	101	101	104	118	124	114	114
Evaluation and management	100	101	103	103	142	143	143	142
Major radiology	100	98	100	101	97	101	101	102
Minor radiology	100	101	101	100	99	100	99	99
Neurological/neuromuscular testing[a]	100	101	104	102	100	97	101	103
Physical medicine	100	101	105	105	104	106	106	104
Major surgery	100	100	100	105	93	92	92	93
Pain management injections	100	104	95	93	92	91	94	95

Oklahoma Annual Change in Professional Prices Paid by Service Group (%)

Professional Services	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015P
Emergency	1%	0%	3%	13%	6%	-8%	0%
Evaluation and management	1%	3%	0%	38%	0%	0%	0%
Major radiology	-2%	2%	2%	-4%	5%	0%	0%
Minor radiology	1%	0%	-1%	-1%	1%	-1%	0%
Neurological/neuromuscular testing[a]	1%	3%	-2%	-2%	-3%	4%	2%
Physical medicine	1%	4%	-1%	-1%	2%	0%	-2%
Major surgery	0%	1%	4%	-11%	-1%	0%	1%
Pain management injections	4%	-8%	-2%	-2%	0%	3%	1%

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes:

The data for Oklahoma are not necessarily representative because it is missing data from a larger data source that is significant in this state. The results in Oklahoma are unlikely to be significantly under- or overestimated, given that the state uses a fee schedule to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in Oklahoma were materially different from other data sources included in this study from the same state.

Oklahoma regularly updated its fee schedule for professional services over the study period. The most recent update during the period covered by this study was effective January 1, 2015. Note that the fee schedule rates for office visits increased materially in 2012. For the most frequently billed office visits for low to moderate severity for established patients (Current Procedural Terminology [CPT] 99213), the fee schedule rate increased 51 percent in that year.

[a] Prices paid for neurological/neuromuscular testing services in most study states decreased starting in 2013. This general trend is related to a fundamental change implemented by the Centers for Medicare & Medicaid Services in the coding system for nerve conduction studies, which are the most commonly billed procedures in the neurological/neuromuscular testing service group. For more details, see "Discussion of Substantial Changes in Prices at Service-Type Level" and "Technical Appendix."

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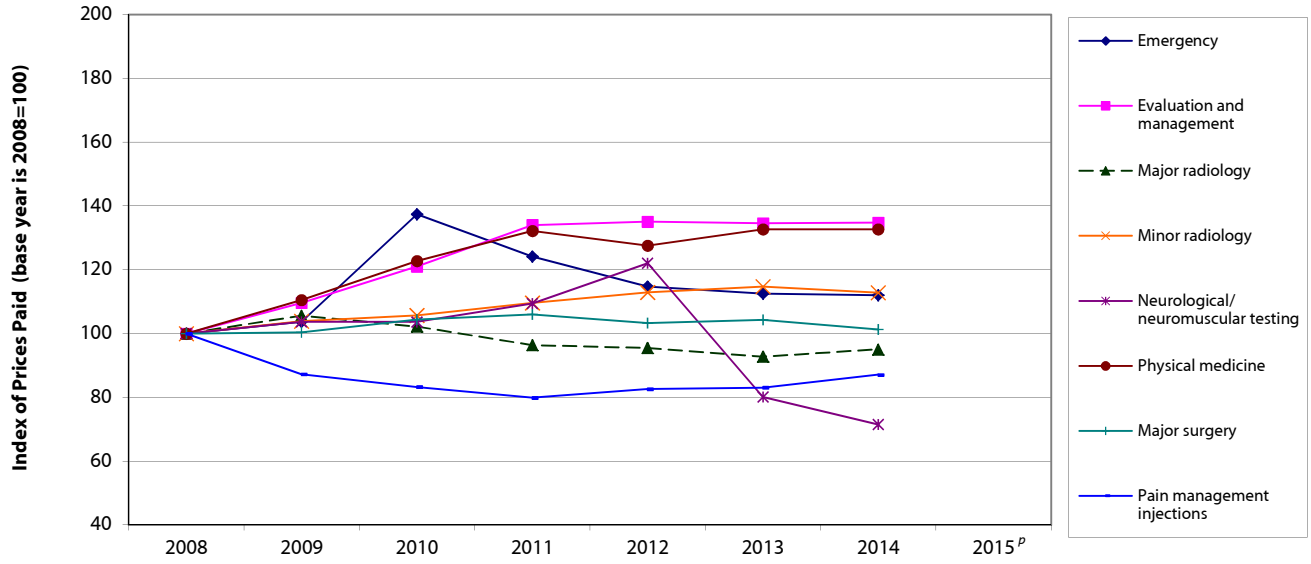
Figure C.25 Oregon Trend in Professional Prices Paid by Service Group, 2008 to 2015



Oregon Trend in Professional Prices Paid by Service Group, 2008 to 2015

Professional Services	2008	2009	2010	2011	2012	2013	2014	2015^{p}
Emergency	100	104	137	124	115	113	112	n/a
Evaluation and management	100	110	121	134	135	135	135	n/a
Major radiology	100	106	102	96	95	93	95	n/a
Minor radiology	100	104	106	110	113	115	113	n/a
Neurological/neuromuscular testing[a]	100	104	104	109	122	80	72	n/a
Physical medicine	100	111	123	132	128	133	133	n/a
Major surgery	100	100	104	106	103	104	101	n/a
Pain management injections	100	87	83	80	83	83	87	n/a

Oregon Annual Change in Professional Prices Paid by Service Group (%)

Professional Services	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015^{p}
Emergency	4%	32%	-10%	-8%	-2%	0%	n/a
Evaluation and management	10%	10%	11%	1%	0%	0%	n/a
Major radiology	6%	-3%	-6%	-1%	-3%	2%	n/a
Minor radiology	4%	2%	4%	3%	2%	-2%	n/a
Neurological/neuromuscular testing[a]	4%	0%	6%	12%	-34%	-11%	n/a
Physical medicine	11%	11%	8%	-3%	4%	0%	n/a
Major surgery	0%	4%	2%	-3%	1%	-3%	n/a
Pain management injections	-13%	-5%	-4%	3%	1%	5%	n/a

Special notation: ^{p} We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes:

The prices paid for professional services in Oregon are not reported for 2015. Oregon was excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis.

The data for Oregon are not necessarily representative because it is missing data from a larger data source that is significant in this state. The results in Oregon are unlikely to be significantly under- or overestimated, given that the state uses a fee schedule to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in Oregon were materially different from other data sources included in this study from the same state.

In July 2010, Oregon moved away from referencing the Federal RBRVS values in their fee schedule regulation. Instead, the state established the maximum allowable payment (MAP) amounts published by the Oregon Workers' Compensation Division to make it easier for payors and providers to find the correct fee schedule MAP. The underlying values of the Oregon MAP amounts reported in Appendix B of the Oregon Medical Fee and Payment Rules (Oregon Administrative Rules, Chapter 436, Division 009) are based on Medicare RVU values. Oregon typically updates its fee schedule annually. The most recent update covered in the study period in this report was effective April 1, 2015.

[a] Prices paid for neurological/neuromuscular testing services in most study states decreased starting in 2013. This general trend is related to a fundamental change implemented by the Centers for Medicare & Medicaid Services in the coding system for nerve conduction studies, which are the most commonly billed procedures in the neurological/neuromuscular testing service group. For more details, see "Discussion of Substantial Changes in Prices at Service-Type Level" and "Technical Appendix."

Key: n/a: not applicable; RBRVS: resource-based relative value scale (Medicare); RVU: relative value unit.

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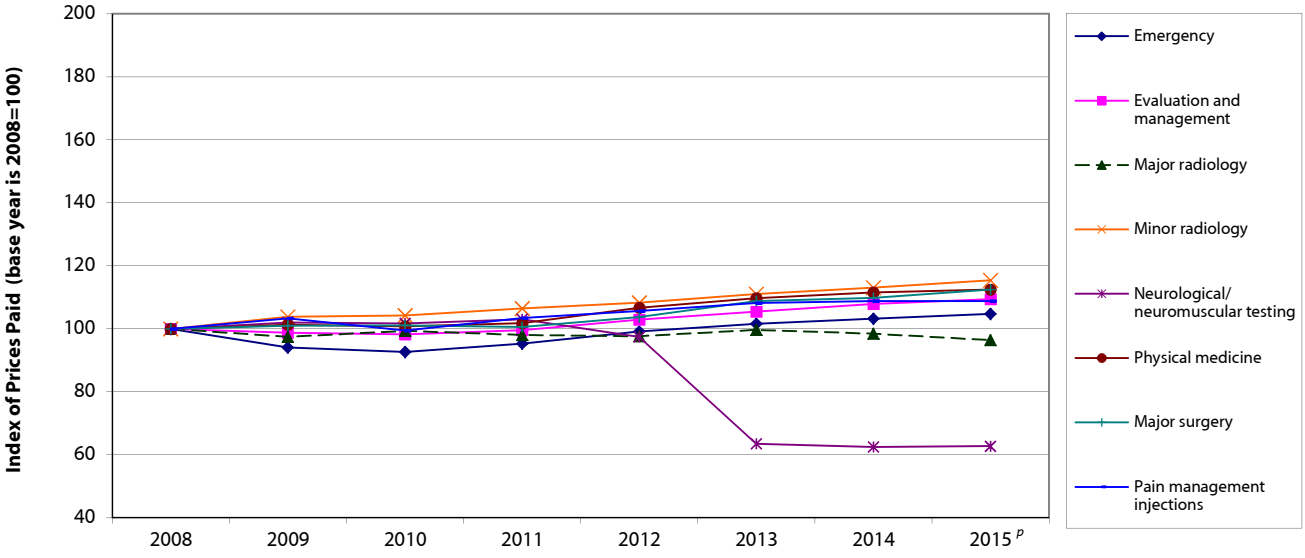
Figure C.26 Pennsylvania Trend in Professional Prices Paid by Service Group, 2008 to 2015



Pennsylvania Trend in Professional Prices Paid by Service Group, 2008 to 2015

Professional Services	2008	2009	2010	2011	2012	2013	2014	2015[P]
Emergency	100	94	93	95	99	102	103	105
Evaluation and management	100	99	98	100	103	105	108	109
Major radiology	100	97	99	98	98	100	98	96
Minor radiology	100	104	104	106	108	111	113	115
Neurological/neuromuscular testing[a]	100	102	102	103	97	64	62	63
Physical medicine	100	101	101	102	107	110	112	112
Major surgery	100	101	101	101	104	109	110	112
Pain management injections	100	103	99	103	106	108	109	109

Pennsylvania Annual Change in Professional Prices Paid by Service Group (%)

Professional Services	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015[P]
Emergency	-6%	-1%	3%	4%	2%	2%	2%
Evaluation and management	-1%	-1%	1%	3%	3%	2%	1%
Major radiology	-3%	2%	-1%	0%	2%	-1%	-2%
Minor radiology	4%	0%	2%	2%	3%	2%	2%
Neurological/neuromuscular testing[a]	2%	0%	1%	-5%	-35%	-2%	0%
Physical medicine	1%	-1%	1%	5%	3%	2%	1%
Major surgery	1%	0%	0%	3%	5%	1%	2%
Pain management injections	3%	-4%	4%	2%	2%	1%	0%

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes: Pennsylvania updates its fee schedule for professional services annually, based on the percentage change in the statewide average weekly wage. For 2015, this percentage change was 2.0 percent and applies to all services rendered on or after January 1, 2015.

[a] Prices paid for neurological/neuromuscular testing services in most study states decreased starting in 2013. This general trend is related to a fundamental change implemented by the Centers for Medicare & Medicaid Services in the coding system for nerve conduction studies, which are the most commonly billed procedures in the neurological/neuromuscular testing service group. For more details, see "Discussion of Substantial Changes in Prices at Service-Type Level" and "Technical Appendix."

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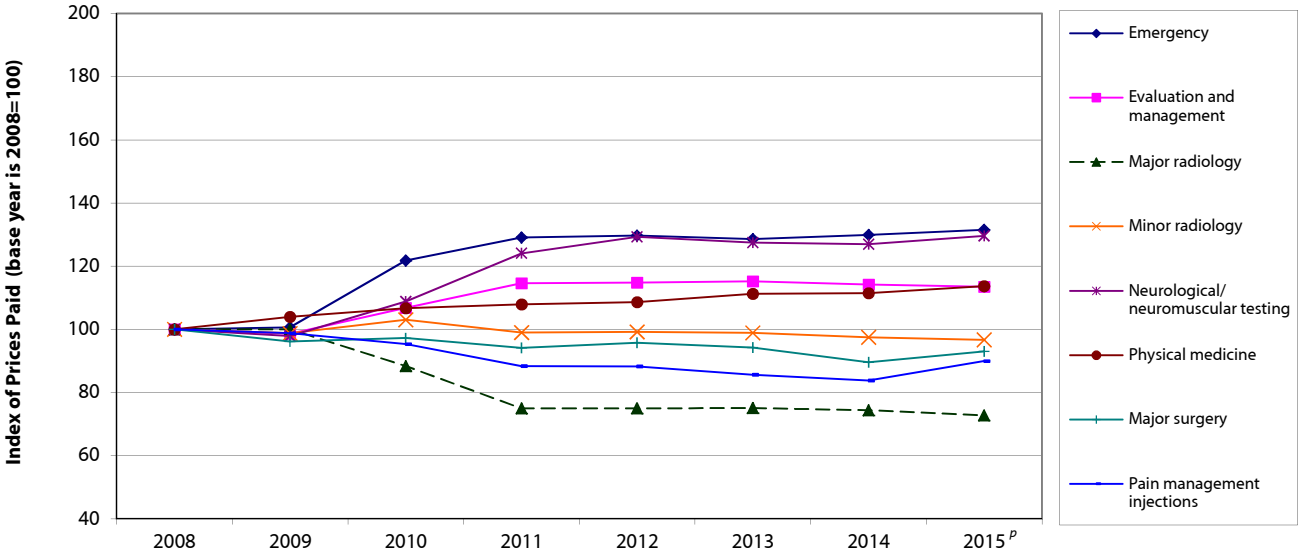
Figure C.27 South Carolina Trend in Professional Prices Paid by Service Group, 2008 to 2015



South Carolina Trend in Professional Prices Paid by Service Group, 2008 to 2015

Professional Services	2008	2009	2010	2011	2012	2013	2014	2015 P
Emergency	100	101	122	129	130	129	130	131
Evaluation and management	100	99	107	115	115	115	114	113
Major radiology	100	100	88	75	75	75	74	73
Minor radiology	100	99	103	99	99	99	98	97
Neurological/neuromuscular testing[a]	100	98	109	124	129	128	127	130
Physical medicine	100	104	107	108	109	111	111	114
Major surgery	100	96	97	94	96	94	90	93
Pain management injections	100	99	95	88	88	86	84	90

South Carolina Annual Change in Professional Prices Paid by Service Group (%)

Professional Services	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 P
Emergency	1%	21%	6%	1%	-1%	1%	1%
Evaluation and management	-1%	8%	7%	0%	0%	-1%	-1%
Major radiology	0%	-12%	-15%	0%	0%	-1%	-2%
Minor radiology	-1%	4%	-4%	0%	0%	-1%	-1%
Neurological/neuromuscular testing[a]	-2%	11%	14%	4%	-1%	0%	2%
Physical medicine	4%	3%	1%	1%	3%	0%	2%
Major surgery	-4%	1%	-3%	2%	-2%	-5%	4%
Pain management injections	-1%	-3%	-7%	0%	-3%	-2%	7%

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes: South Carolina's fee schedule for professional services remained unchanged (after the update in January 2003) until 2009. Effective July 1, 2010, South Carolina had another update to its fee schedule, which increased the fee schedule rates for many professional services (such as evaluation and management, emergency, etc.) and decreased the rates for others (such as pain management injections, radiology services, etc.). The most recent revision to the 2010 fee schedule covered in the study period in this report was effective April 1, 2015.

[a] Prices paid for neurological/neuromuscular testing services in most study states decreased starting in 2013. This general trend is related to a fundamental change implemented by the Centers for Medicare & Medicaid Services in the coding system for nerve conduction studies, which are the most commonly billed procedures in the neurological/neuromuscular testing service group. For more details, see "Discussion of Substantial Changes in Prices at Service-Type Level" and "Technical Appendix."

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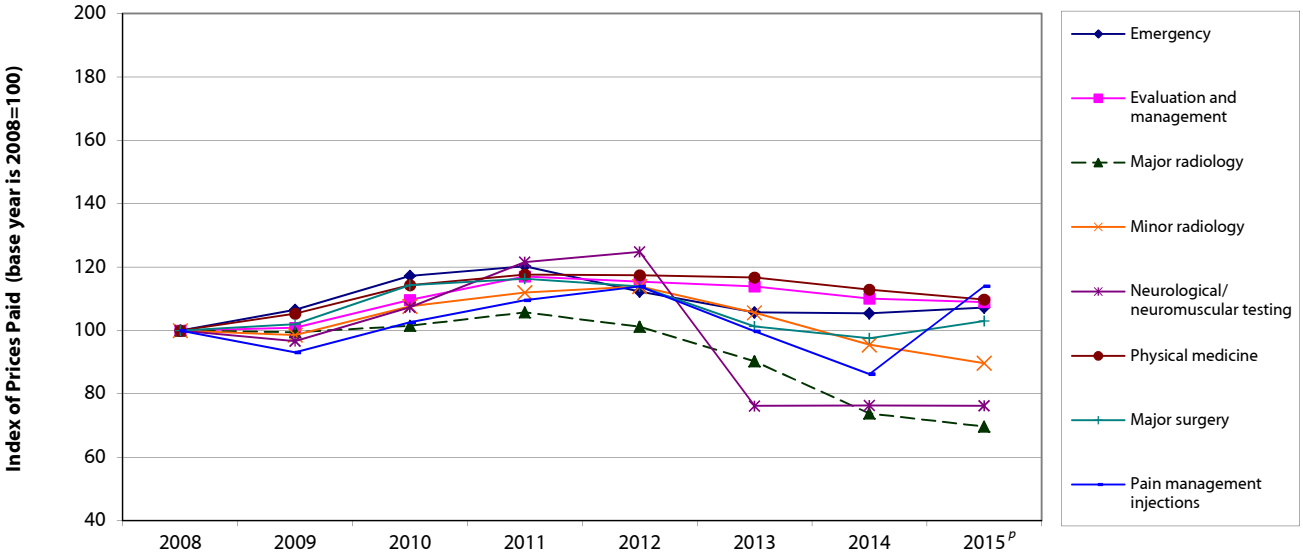
Figure C.28 Tennessee Trend in Professional Prices Paid by Service Group, 2008 to 2015



Tennessee Trend in Professional Prices Paid by Service Group, 2008 to 2015

Professional Services	2008	2009	2010	2011	2012	2013	2014	2015 P
Emergency	100	106	117	120	112	106	105	107
Evaluation and management	100	101	110	117	115	114	110	109
Major radiology	100	99	101	106	101	90	74	70
Minor radiology	100	99	108	112	114	106	95	90
Neurological/neuromuscular testing[a]	100	97	107	122	125	76	76	76
Physical medicine	100	105	114	118	117	117	113	110
Major surgery	100	102	114	116	114	101	98	103
Pain management injections	100	93	103	110	114	100	86	114

Tennessee Annual Change in Professional Prices Paid by Service Group (%)

Professional Services	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 P
Emergency	6%	10%	3%	-7%	-6%	0%	2%
Evaluation and management	1%	9%	7%	-1%	-1%	-3%	-1%
Major radiology	-1%	2%	4%	-4%	-11%	-18%	-6%
Minor radiology	-1%	9%	4%	2%	-7%	-10%	-6%
Neurological/neuromuscular testing[a]	-3%	11%	13%	3%	-39%	0%	0%
Physical medicine	5%	8%	3%	0%	-1%	-3%	-3%
Major surgery	2%	12%	2%	-2%	-11%	-4%	6%
Pain management injections	-7%	10%	7%	4%	-12%	-14%	32%

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Note: Tennessee implemented an RBRVS-based fee schedule in July 2005 and had regular updates in the following years. For instance, the fee schedule rates decreased across service groups in 2013.

[a] Prices paid for neurological/neuromuscular testing services in most study states decreased starting in 2013. This general trend is related to a fundamental change implemented by the Centers for Medicare & Medicaid Services in the coding system for nerve conduction studies, which are the most commonly billed procedures in the neurological/neuromuscular testing service group. For more details, see "Discussion of Substantial Changes in Prices at Service-Type Level" and "Technical Appendix."

Key: RBRVS: resource-based relative value scale (Medicare).

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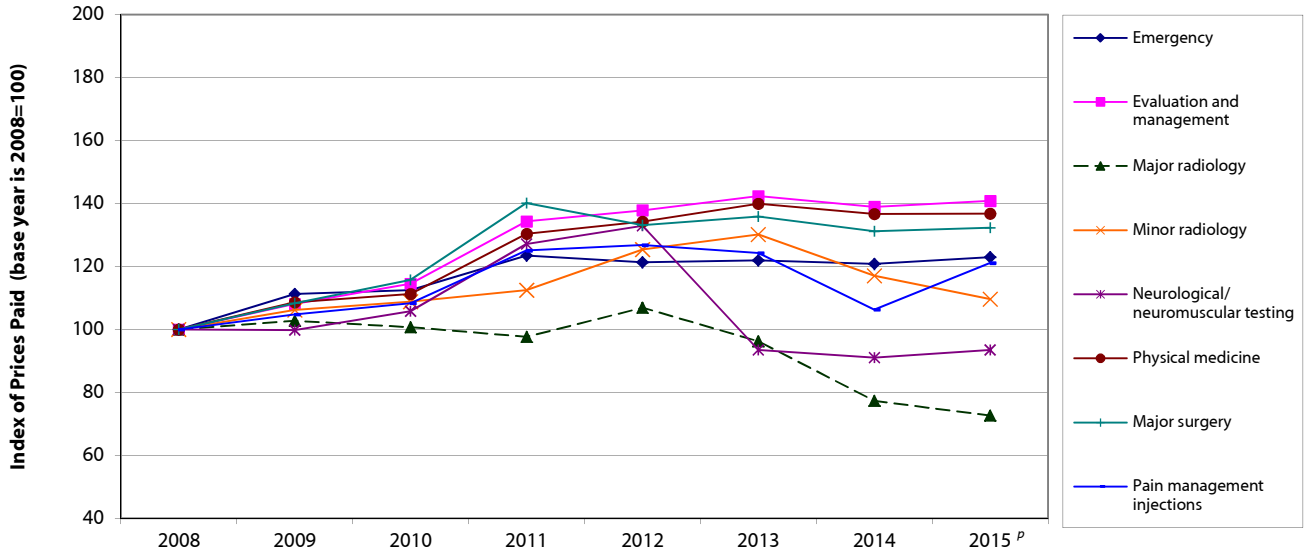
Figure C.29 Texas Trend in Professional Prices Paid by Service Group, 2008 to 2015



Texas Trend in Professional Prices Paid by Service Group, 2008 to 2015

Professional Services	2008	2009	2010	2011	2012	2013	2014	2015 P
Emergency	100	111	113	123	121	122	121	123
Evaluation and management	100	108	114	134	138	142	139	141
Major radiology	100	103	101	98	107	96	77	73
Minor radiology	100	106	109	112	125	130	117	110
Neurological/neuromuscular testing[a]	100	100	106	127	133	93	91	94
Physical medicine	100	109	111	130	134	140	137	137
Major surgery	100	108	116	140	133	136	131	132
Pain management injections	100	105	108	125	127	124	106	121

Texas Annual Change in Professional Prices Paid by Service Group (%)

Professional Services	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 P
Emergency	11%	1%	10%	-2%	0%	-1%	2%
Evaluation and management	8%	6%	17%	3%	3%	-2%	1%
Major radiology	3%	-2%	-3%	9%	-10%	-20%	-6%
Minor radiology	6%	2%	3%	12%	4%	-10%	-6%
Neurological/neuromuscular testing[a]	0%	6%	20%	5%	-30%	-3%	3%
Physical medicine	9%	2%	17%	3%	4%	-2%	0%
Major surgery	8%	7%	21%	-5%	2%	-3%	1%
Pain management injections	5%	3%	15%	1%	-2%	-14%	14%

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes: In March 2008, Texas increased fee schedule rates for professional services, especially for surgeries, and allowed annual increases based on changes in the Medicare Economic Index. In 2011, the fee schedule rates in Texas increased for most professional services following the Medicare updates. The most recent update covered in the study period in this report was effective April 1, 2015.

[a] Prices paid for neurological/neuromuscular testing services in most study states decreased starting in 2013. This general trend is related to a fundamental change implemented by the Centers for Medicare & Medicaid Services in the coding system for nerve conduction studies, which are the most commonly billed procedures in the neurological/neuromuscular testing service group. For more details, see "Discussion of Substantial Changes in Prices at Service-Type Level" and "Technical Appendix."

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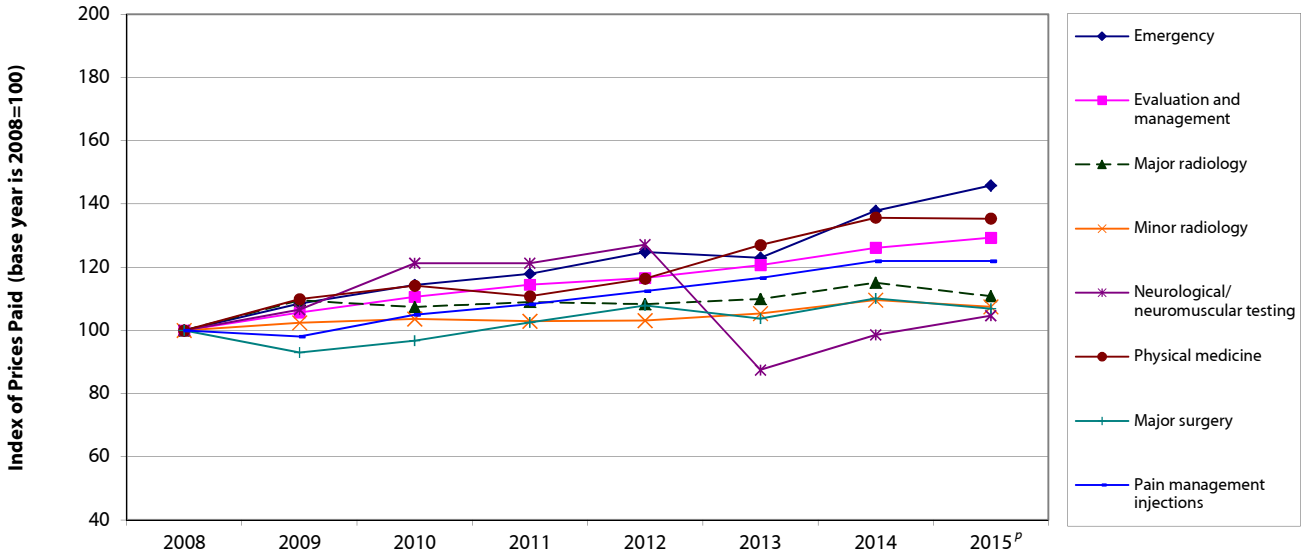
Figure C.30 Virginia Trend in Professional Prices Paid by Service Group, 2008 to 2015



Virginia Trend in Professional Prices Paid by Service Group, 2008 to 2015

Professional Services	2008	2009	2010	2011	2012	2013	2014	2015 P
Emergency	100	108	114	118	125	123	138	146
Evaluation and management	100	106	111	115	117	121	126	129
Major radiology	100	110	107	109	108	110	115	111
Minor radiology	100	102	104	103	103	105	110	107
Neurological/neuromuscular testing[a]	100	107	121	121	127	87	99	105
Physical medicine	100	110	114	111	116	127	136	135
Major surgery	100	93	97	103	108	104	110	107
Pain management injections	100	98	105	108	112	117	122	122

Virginia Annual Change in Professional Prices Paid by Service Group (%)

Professional Services	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 P
Emergency	8%	5%	3%	6%	-1%	12%	6%
Evaluation and management	6%	5%	3%	2%	3%	5%	3%
Major radiology	10%	-2%	2%	-1%	2%	5%	-4%
Minor radiology	2%	1%	-1%	0%	2%	4%	-2%
Neurological/neuromuscular testing[a]	7%	14%	0%	5%	-31%	13%	6%
Physical medicine	10%	4%	-3%	5%	9%	7%	0%
Major surgery	-7%	4%	6%	5%	-4%	6%	-3%
Pain management injections	-2%	7%	3%	4%	4%	5%	0%

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Note: Virginia did not have a workers' compensation fee schedule as of 2015.

[a] Prices paid for neurological/neuromuscular testing services in most study states decreased starting in 2013. This general trend is related to a fundamental change implemented by the Centers for Medicare & Medicaid Services in the coding system for nerve conduction studies, which are the most commonly billed procedures in the neurological/neuromuscular testing service group. For more details, see "Discussion of Substantial Changes in Prices at Service-Type Level" and "Technical Appendix."

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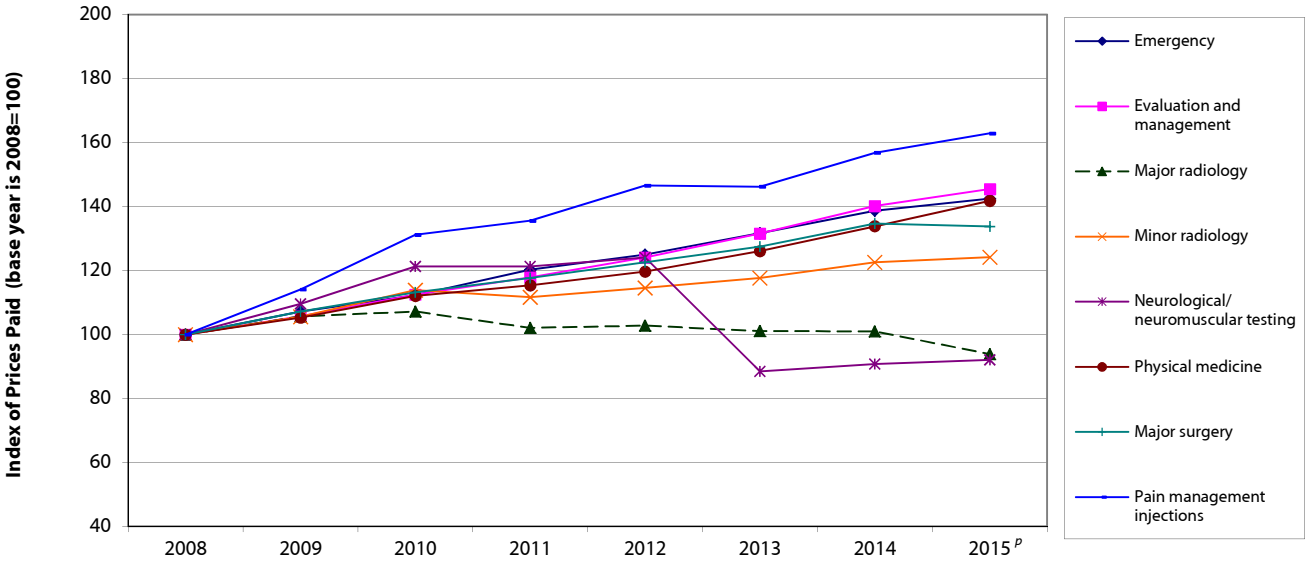
Figure C.31 Wisconsin Trend in Professional Prices Paid by Service Group, 2008 to 2015



Wisconsin Trend in Professional Prices Paid by Service Group, 2008 to 2015

Professional Services	2008	2009	2010	2011	2012	2013	2014	2015 P
Emergency	100	107	112	120	125	132	139	142
Evaluation and management	100	106	112	118	124	132	140	146
Major radiology	100	106	107	102	103	101	101	94
Minor radiology	100	106	114	112	115	118	123	124
Neurological/neuromuscular testing[a]	100	110	121	121	124	88	91	92
Physical medicine	100	105	112	115	120	126	134	142
Major surgery	100	107	113	118	123	127	135	134
Pain management injections	100	114	131	136	147	146	157	163

Wisconsin Annual Change in Professional Prices Paid by Service Group (%)

Professional Services	2008 to 2009	2009 to 2010	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015 P
Emergency	7%	5%	7%	4%	5%	5%	3%
Evaluation and management	6%	6%	5%	5%	6%	6%	4%
Major radiology	6%	1%	-5%	1%	-2%	0%	-7%
Minor radiology	6%	8%	-2%	3%	3%	4%	1%
Neurological/neuromuscular testing[a]	10%	11%	0%	2%	-29%	3%	1%
Physical medicine	5%	6%	3%	4%	5%	6%	6%
Major surgery	7%	6%	4%	4%	4%	6%	-1%
Pain management injections	14%	15%	3%	8%	0%	7%	4%

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Note: Wisconsin did not have a conventional workers' compensation fee schedule as of 2015.

[a] Prices paid for neurological/neuromuscular testing services in most study states decreased starting in 2013. This general trend is related to a fundamental change implemented by the Centers for Medicare & Medicaid Services in the coding system for nerve conduction studies, which are the most commonly billed procedures in the neurological/neuromuscular testing service group. For more details, see "Discussion of Substantial Changes in Prices at Service-Type Level" and "Technical Appendix."

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Figure D.1 Trends in Consumer Price Index for Medical Care (CPI-M), Professional Services, 2008 to 2015, for Urban Wage Earners and Clerical Workers, Not Seasonally Adjusted

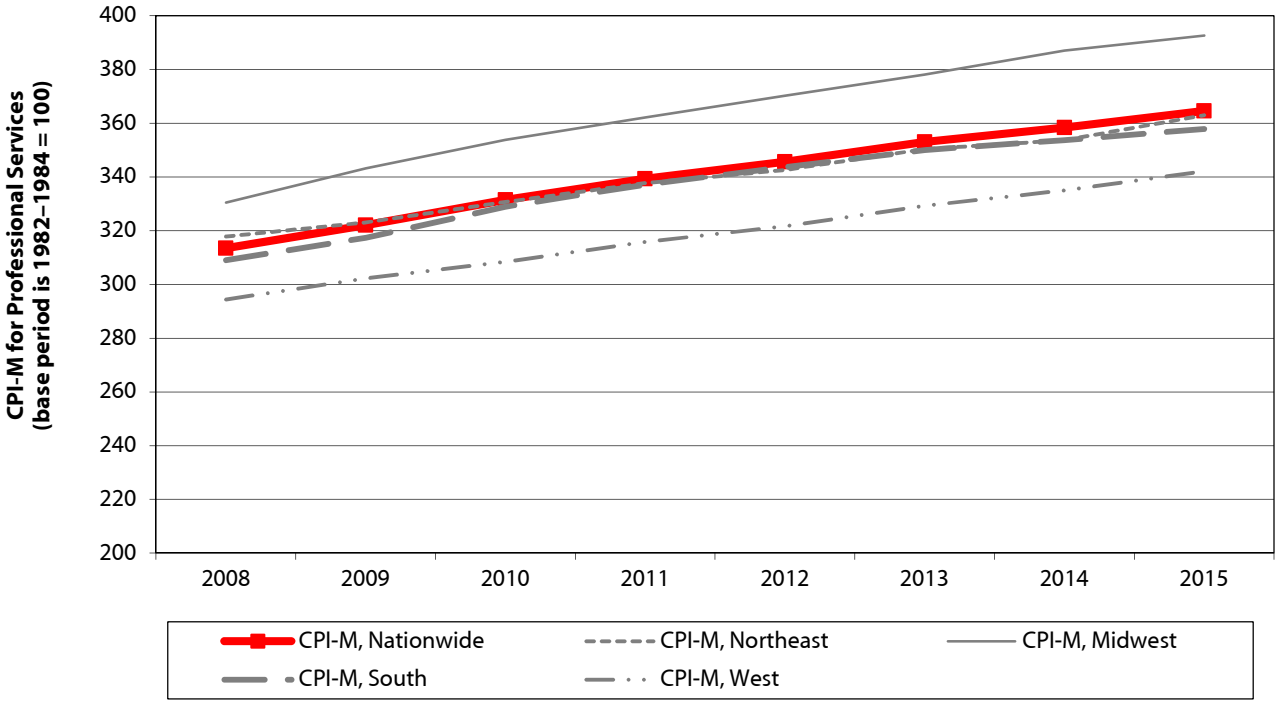

Table for Figure D.1: Consumer Price Index for Medical Care (CPI-M), Professional Services, 2008 to 2015, for Urban Wage Earners and Clerical Workers, Not Seasonally Adjusted

	2008	2009	2010	2011	2012	2013	2014	2015
CPI-M, Nationwide	313	322	331	339	346	353	358	365
By region								
CPI-M, Northeast	318	323	331	338	343	350	354	363
CPI-M, Midwest	330	343	354	362	370	378	387	393
CPI-M, South	309	317	329	337	344	350	354	358
CPI-M, West	294	302	308	316	322	329	335	342

Note: The base period is 1982–1984, which is equal to 100 in the index.

Source: U.S. Bureau of Labor Statistics, not seasonally adjusted. Consumer Price Index - Urban Wage Earners and Clerical Workers, Series ID CWUR0000SEMC, CUUR0000SEMC located at http://www.bls.gov/cpi.

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Table D.1 Medicare Physician Fee Schedule Geographic Practice Cost Indices (GPCIs), April 2015

Locality Name[a]	PE GPCI	Work GPCI	MP GPCI
Alabama	0.886	1.000	0.611
Alaska	1.107	1.500	0.712
Arizona	1.000	1.000	0.877
Arkansas	0.867	1.000	0.534
Anaheim/Santa Ana, CA	1.216	1.035	0.908
Los Angeles, CA	1.161	1.047	0.908
Marin/Napa/Solano, CA	1.286	1.059	0.496
Oakland/Berkeley, CA	1.260	1.061	0.457
San Francisco, CA	1.388	1.079	0.457
San Mateo, CA	1.372	1.079	0.416
Santa Clara, CA	1.347	1.088	0.416
Ventura, CA	1.180	1.030	0.834
Rest of California	1.083	1.027	0.658
Colorado	1.011	1.000	1.090
Connecticut	1.121	1.024	1.232
DC + MD/VA Suburbs	1.205	1.051	1.280
Delaware	1.031	1.012	1.083
Fort Lauderdale, FL	1.030	1.000	1.715
Miami, FL	1.033	1.000	2.490
Rest of Florida	0.960	1.000	1.315
Atlanta, GA	1.005	1.000	0.943
Rest of Georgia	0.899	1.000	0.904
Hawaii/Guam	1.162	1.003	0.618
Idaho	0.898	1.000	0.508
Chicago, IL	1.037	1.016	2.019
East St. Louis, IL	0.934	1.000	1.885
Suburban Chicago, IL	1.057	1.012	1.636
Rest of Illinois	0.909	1.000	1.253
Indiana	0.921	1.000	0.617
Iowa	0.896	1.000	0.493
Kansas	0.903	1.000	0.662
Kentucky	0.872	1.000	0.795
New Orleans, LA	0.983	1.000	1.390
Rest of Louisiana	0.887	1.000	1.205
Southern Maine	1.007	1.000	0.642
Rest of Maine	0.918	1.000	0.642
Baltimore/Surr. Cntys, MD	1.097	1.023	1.181
Rest of Maryland	1.036	1.015	0.971
Metropolitan Boston	1.163	1.017	0.617
Rest of Massachusetts	1.066	1.017	0.617

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Table D.1 Medicare Physician Fee Schedule Geographic Practice Cost Indices (GPCIs), April 2015 (continued)

Locality Name[a]	PE GPCI	Work GPCI	MP GPCI
Detroit, MI	0.994	1.000	1.328
Rest of Michigan	0.920	1.000	0.954
Minnesota	1.020	1.000	0.319
Mississippi	0.864	1.000	0.613
Metropolitan Kansas City, MO	0.952	1.000	1.025
Metropolitan St Louis, MO	0.955	1.000	1.025
Rest of Missouri	0.848	1.000	0.946
Montana	1.000	1.000	1.226
Nebraska	0.908	1.000	0.362
Nevada	1.051	1.005	0.982
New Hampshire	1.058	1.000	0.873
Northern NJ	1.182	1.040	1.090
Rest of New Jersey	1.125	1.025	1.090
New Mexico	0.919	1.000	1.161
Manhattan, NY	1.168	1.052	1.764
NYC Suburbs/Long I., NY	1.209	1.046	2.215
Poughkpsie/N NYC Suburbs, NY	1.074	1.010	1.484
Queens, NY	1.199	1.052	2.181
Rest of New York	0.945	1.000	0.760
North Carolina	0.930	1.000	0.768
North Dakota	1.000	1.000	0.554
Ohio	0.918	1.000	0.993
Oklahoma	0.872	1.000	0.845
Portland, OR	1.049	1.005	0.708
Rest of Oregon	0.967	1.000	0.708
Metropolitan Philadelphia, PA	1.087	1.021	1.264
Rest of Pennsylvania	0.929	1.000	0.987
Puerto Rico	0.705	1.000	0.293
Rhode Island	1.053	1.022	0.759
South Carolina	0.912	1.000	0.715
South Dakota	1.000	1.000	0.400
Tennessee	0.898	1.000	0.524
Austin, TX	1.019	1.000	0.766
Beaumont, TX	0.902	1.000	0.955
Brazoria, TX	0.990	1.019	0.955
Dallas, TX	1.009	1.018	0.772
Fort Worth, TX	0.995	1.005	0.772
Galveston, TX	1.013	1.019	0.955
Houston, TX	1.006	1.019	0.955
Rest of Texas	0.920	1.000	0.822

continued

Table D.1 Medicare Physician Fee Schedule Geographic Practice Cost Indices (GPCIs), April 2015 (continued)

Locality Name[a]	PE GPCI	Work GPCI	MP GPCI
Utah	0.922	1.000	1.169
Vermont	1.004	1.000	0.682
Virginia	0.983	1.000	0.824
Virgin Islands	0.960	1.000	0.996
Seattle (King Cnty), WA	1.155	1.025	0.495
Rest of Washington	1.015	1.000	0.475
West Virginia	0.836	1.000	1.282
Wisconsin	0.955	1.000	0.566
Wyoming	1.000	1.000	1.219

Notes:

The national physician fee schedule (PFS) specifies a set of allowable procedures and is used to determine the Medicare payment to the medical professional for each service. Each procedure is assessed to be comprised of a combination of three components or inputs: (1) physician work (wages), (2) practice-related expenses (including staff wages; office rent; cost of contracted services, such as accounting, legal, and advertising; and expenses relating to equipment and supplies), and (3) costs related to malpractice insurance coverage. The blend of these underlying components is evaluated and relative value units (RVUs) are assigned to each component for each service at a national level.

The Medicare PFS payment amounts are further adjusted to account for the variation in practice costs from area to area using geographic practice cost indices or GPCIs. Paralleling the RVU structure, GPCIs are split into three parts: physician work (Work), practice expense (PE), and malpractice insurance (MP). The GPCI values reflect the estimated component cost in a specified locality divided by the national average component cost. GPCIs greater than 1.000 indicate that a locality has costs estimated to be above the national average while GPCIs of less than 1.000 point toward practice costs that fall below the national average.

Medicare fee schedule payment amounts for services are monetized by multiplying the RVU for each component by the GPCI for that component and then applying a conversion factor.

[a] Developed and implemented in 1997, CMS currently calculates GPCIs for 89 separate geographic areas referred to as Medicare payment localities for use with the Physician Fee Schedule. Localities in the states covered in this study are indicated above in **bold** font.

Key: CMS: Centers for Medicare & Medicaid Services; GPCI: geographic practice cost index; MP: malpractice insurance; PE: practice expense; PFS: physician fee schedule, RVU: relative value unit; Work: physician wages.

Source: Centers for Medicare & Medicaid Services. April 2015. Physician Fee Schedule - PFS Relative Value Files, RVU15B.zip, CY2015_GPCIs located at https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeeSched/PFS-Relative-Value-Files-Items/RVU15B.html.

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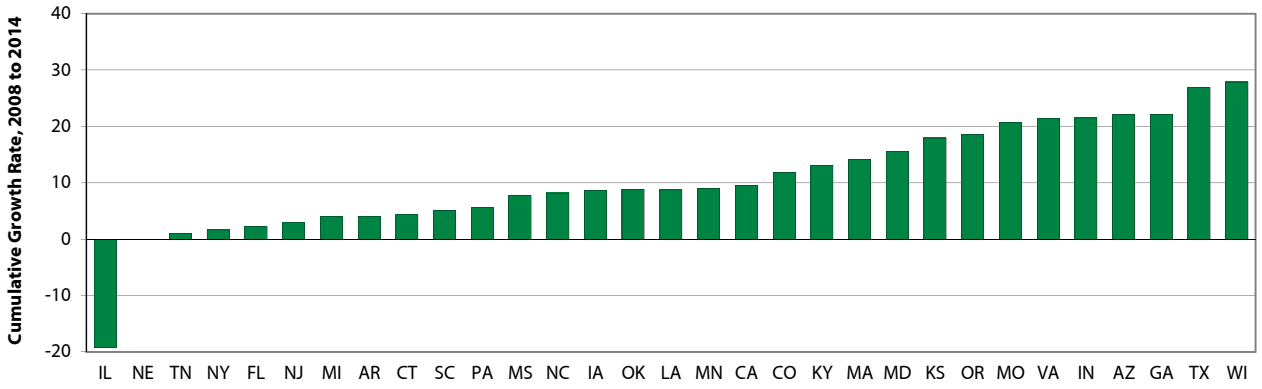
This statistical appendix for the MPI-WC provides the following supplemental figures and tables:

- Figure SA.1 shows a comparison of the cumulative growth rate in prices paid for professional services across the 31 study states from 2008 to 2014. In the "Discussion of Key Lessons," we focused on the trend analysis from 2008 to 2015. Three states (Mississippi, Nebraska, and Oregon) were excluded because of insufficient cell sizes in 2015 (half-year) to support this trend analysis. This statistical appendix figure includes all 31 states between 2008 and 2014 and shows that the results observed here are similar to the 28-state discussion in "Discussion of Key Lessons."
- Table SA.1 provides longer-term trends of prices paid for overall professional services as well as by each service group from 2002 to 2015 for the 25 states covered in the earlier editions of this study series.

Figure SA.1 Comparison of Cumulative Growth Rate in Prices Paid for Professional Services across 31 Study States, 2008 to 2014



	IL	NE	TN	NY	FL	NJ	MI	AR	CT	SC	PA	MS	NC	IA	OK	LA	MN	CA	CO	KY	MA	MD	KS	OR	MO	VA	IN	AZ	GA	TX	WI
Growth rate in prices paid for professional services	-19	0	1	2	2	3	4	4	4	5	6	8	8	9	9	9	9	10	12	13	14	16	18	19	21	21	22	22	22	27	28

Notes: AZ, CO, MO, NY, OK, OR: The data for each of these states are not necessarily representative because each state is missing data from a larger data source that is significant in that state. The results for AZ, CO, NY, OK, and OR are unlikely to be significantly under- or overestimated, given that these states use fee schedules to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in each state were materially different from other data sources included in this study from the same state. For MO, to the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to possible under- or overestimations in the results.

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Table SA.1 Trends in Professional Prices Paid by Service Group across 25 Study States, 2002 to 2015

Arkansas

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015[P]
Overall price index	100	104	104	105	106	108	107	110	112	119	119	117	111	110
Price indices by service group														
Emergency	100	103	105	104	103	113	119	117	122	125	123	122	120	120
Evaluation and management	100	101	103	103	104	113	115	116	125	132	134	135	132	132
Major radiology	100	104	105	104	110	108	106	109	81	81	84	79	65	57
Minor radiology	100	102	102	101	103	103	104	107	109	110	109	111	102	97
Neurological/ neuromuscular testing	100	112	126	131	134	119	120	116	138	149	152	94	90	99
Physical medicine	100	110	109	112	111	113	109	116	120	127	128	133	129	125
Major surgery	100	97	95	94	96	93	93	92	96	104	100	101	98	98
Pain management injections	100	98	100	109	114	82	83	89	97	106	105	104	84	94

Arizona

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015[P]
Overall price index	100	101	103	105	108	111	109	112	119	119	119	122	133	132
Price indices by service group														
Emergency	100	101	103	115	117	121	119	125	149	155	151	151	159	162
Evaluation and management	100	100	102	110	115	121	121	124	138	140	140	142	168	168
Major radiology	100	102	117	121	115	117	101	99	98	99	98	100	99	104
Minor radiology	100	100	105	105	102	101	96	96	96	84	83	84	85	90
Neurological/ neuromuscular testing	100	91	93	87	87	90	104	106	117	117	119	125	107	73
Physical medicine	100	107	109	113	127	124	122	130	140	139	141	143	165	164
Major surgery	100	99	97	95	93	98	97	99	101	101	100	102	104	103
Pain management injections	100	112	106	101	105	104	102	107	108	113	112	120	121	120

California

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015[P]
Overall price index	100	100	97	99	97	100	102	104	105	105	104	104	112	113
Price indices by service group														
Emergency	100	100	95	95	94	94	98	99	101	96	97	97	86	89
Evaluation and management	100	101	100	100	99	112	115	116	116	116	116	115	151	156
Major radiology	100	101	97	97	96	96	95	95	95	95	95	90	72	69
Minor radiology	100	100	94	94	93	93	91	91	90	91	91	91	103	96
Neurological/ neuromuscular testing	100	88	83	79	76	74	84	84	85	84	81	84	48	50
Physical medicine	100	103	96	103	102	102	104	109	108	108	107	103	131	134
Major surgery	100	99	104	106	102	103	103	105	109	110	109	112	88	85
Pain management injections	100	102	100	100	101	102	102	102	101	100	99	99	96	95

continued

Table SA.1 Trends in Professional Prices Paid by Service Group across 25 Study States, 2002 to 2015 (continued)

Connecticut

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015[P]
Overall price index	100	101	102	103	103	104	104	108	110	112	111	109	109	108
Price indices by service group														
Emergency	100	102	104	106	99	96	93	93	94	91	89	90	89	90
Evaluation and management	100	102	106	108	108	114	121	128	140	153	158	158	160	163
Major radiology	100	109	113	115	115	109	114	124	122	127	121	118	103	93
Minor radiology	100	97	97	97	93	95	96	102	99	100	95	98	94	90
Neurological/ neuromuscular testing	100	101	98	98	101	98	100	99	95	90	88	72	61	59
Physical medicine	100	99	100	103	102	103	101	105	109	114	114	115	119	119
Major surgery	100	100	99	100	99	100	99	99	98	98	94	93	93	92
Pain management injections	100	95	96	100	98	102	98	98	103	100	97	96	91	90

Florida

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015[P]
Overall price index	100	100	115	123	123	121	118	123	123	120	120	119	121	119
Price indices by service group														
Emergency	100	101	121	123	124	123	129	130	130	130	130	130	130	129
Evaluation and management	100	104	155	162	160	158	164	168	170	171	171	169	170	170
Major radiology	100	98	103	104	103	103	99	103	104	99	98	97	96	95
Minor radiology	100	101	112	114	115	115	110	114	120	114	114	114	113	112
Neurological/ neuromuscular testing	100	101	150	152	145	139	153	154	156	157	157	158	160	162
Physical medicine	100	97	100	119	124	122	113	121	122	116	117	115	117	116
Major surgery	100	99	98	102	98	94	90	92	89	87	86	87	90	86
Pain management injections	100	96	132	137	138	136	125	125	127	122	120	126	127	126

Georgia

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015[P]
Overall price index	100	101	100	101	104	107	108	110	115	124	131	131	131	131
Price indices by service group														
Emergency	100	101	102	75	67	74	83	87	87	91	93	93	93	96
Evaluation and management	100	100	101	117	127	137	143	145	154	168	177	184	186	186
Major radiology	100	99	98	100	104	104	99	102	102	100	103	101	99	98
Minor radiology	100	100	99	91	90	90	90	93	96	105	111	114	108	104
Neurological/ neuromuscular testing	100	100	102	85	87	90	91	93	100	116	127	86	80	82
Physical medicine	100	98	93	104	108	112	110	112	117	123	131	136	138	139
Major surgery	100	104	105	96	95	95	96	100	102	113	119	122	122	120
Pain management injections	100	102	103	95	99	95	86	87	89	96	102	106	93	92

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Table SA.1 Trends in Professional Prices Paid by Service Group across 25 Study States, 2002 to 2015 (continued)

Illinois

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015[P]
Overall price index	100	105	111	120	118	123	126	134	138	125	100	102	102	104
Price indices by service group														
Emergency	100	108	109	111	108	111	110	117	117	109	96	99	99	99
Evaluation and management	100	107	113	120	118	124	126	131	132	122	99	100	104	110
Major radiology	100	103	108	113	109	107	109	111	115	103	88	93	91	90
Minor radiology	100	103	106	109	93	97	99	103	106	93	74	76	77	79
Neurological/ neuromuscular testing	100	96	105	111	106	114	122	126	130	119	90	97	67	73
Physical medicine	100	105	109	117	116	121	119	130	134	121	100	101	102	103
Major surgery	100	107	115	130	132	141	148	157	163	147	115	116	115	117
Pain management injections	100	101	110	120	115	120	122	137	150	134	108	112	112	115

Indiana

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015[P]
Overall price index	100	103	105	106	109	113	116	124	132	131	138	133	141	148
Price indices by service group														
Emergency	100	103	109	112	115	119	115	127	139	140	155	160	176	201
Evaluation and management	100	103	109	116	124	129	131	137	146	151	154	156	164	176
Major radiology	100	102	100	97	93	97	93	94	96	94	94	98	98	96
Minor radiology	100	102	104	108	110	115	117	122	125	123	123	123	124	126
Neurological/ neuromuscular testing	100	105	105	107	118	123	125	129	136	145	154	91	111	113
Physical medicine	100	99	103	103	105	109	113	121	128	121	132	134	150	159
Major surgery	100	107	106	105	108	112	117	133	142	140	150	143	143	150
Pain management injections	100	106	110	116	124	123	131	135	156	156	158	163	168	179

Iowa

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015[P]
Overall price index	100	105	107	108	110	114	115	121	124	128	126	123	125	123
Price indices by service group														
Emergency	100	109	114	117	125	126	142	152	155	153	150	153	155	162
Evaluation and management	100	107	111	113	117	123	135	145	150	153	157	162	167	168
Major radiology	100	103	104	103	103	106	101	104	105	107	107	114	116	116
Minor radiology	100	102	106	107	106	109	110	112	115	111	111	112	111	107
Neurological/ neuromuscular testing	100	101	104	111	110	127	126	124	124	135	141	87	103	106
Physical medicine	100	109	108	111	113	114	117	124	131	135	130	130	135	134
Major surgery	100	101	103	104	105	106	100	105	104	109	105	102	96	91
Pain management injections	100	102	108	112	111	117	115	132	138	142	139	136	145	140

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Louisiana

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015[P]
Overall price index	100	101	100	100	101	101	102	106	107	107	108	109	111	111
Price indices by service group														
Emergency	100	102	102	102	101	102	102	103	103	105	106	106	106	106
Evaluation and management	100	101	100	102	103	105	106	108	109	111	112	113	115	115
Major radiology	100	100	102	100	98	97	96	101	102	103	102	101	98	98
Minor radiology	100	100	98	98	97	97	97	99	101	102	103	102	102	102
Neurological/ neuromuscular testing	100	97	97	99	98	96	103	102	102	104	105	105	112	111
Physical medicine	100	101	99	100	100	101	101	107	107	108	110	112	116	115
Major surgery	100	101	98	98	104	102	102	105	108	106	106	108	107	109
Pain management injections	100	106	110	112	114	117	125	136	134	132	145	149	141	159

Maryland

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015[P]
Overall price index	100	100	98	102	106	106	109	112	115	125	130	130	126	127
Price indices by service group														
Emergency	100	98	92	74	72	72	82	83	84	90	93	94	92	93
Evaluation and management	100	99	107	126	126	126	133	138	145	160	170	175	170	171
Major radiology	100	99	96	92	91	92	88	88	85	89	89	82	66	61
Minor radiology	100	98	96	95	94	94	98	97	97	108	113	116	104	98
Neurological/ neuromuscular testing	100	92	99	103	103	106	113	105	109	115	122	97	94	95
Physical medicine	100	105	112	136	140	139	137	143	146	164	173	180	178	179
Major surgery	100	100	79	59	70	71	76	79	82	87	85	86	84	86
Pain management injections	100	97	94	93	91	94	78	68	75	68	73	70	62	67

Massachusetts

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015[P]
Overall price index	100	112	113	121	118	123	123	139	141	141	141	140	141	142
Price indices by service group														
Emergency	100	134	138	138	139	141	140	149	158	154	155	153	152	151
Evaluation and management	100	130	133	141	143	144	144	154	158	156	155	154	154	153
Major radiology	100	107	112	115	114	116	114	124	124	127	123	124	122	121
Minor radiology	100	105	108	109	109	114	111	116	119	120	116	116	115	114
Neurological/ neuromuscular testing	100	99	112	128	131	129	134	132	126	134	154	176	184	198
Physical medicine	100	100	108	113	112	113	112	119	126	123	125	122	122	125
Major surgery	100	115	106	117	106	119	122	154	155	156	152	148	150	152
Pain management injections	100	80	83	90	86	91	89	94	99	96	97	100	101	98

continued

Table SA.1 Trends in Professional Prices Paid by Service Group across 25 Study States, 2002 to 2015 (continued)

Michigan

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015[P]
Overall price index	100	104	108	112	113	114	120	121	123	122	123	124	125	118
Price indices by service group														
Emergency	100	99	99	102	102	104	114	117	116	118	115	111	111	107
Evaluation and management	100	109	114	119	121	123	133	137	139	141	140	146	149	145
Major radiology	100	95	98	100	102	104	104	107	110	109	112	101	100	61
Minor radiology	100	97	99	100	102	103	105	106	109	109	108	106	106	98
Neurological/ neuromuscular testing	100	94	110	113	117	113	128	124	119	118	124	113	122	90
Physical medicine	100	106	112	118	117	118	124	127	131	129	129	133	135	135
Major surgery	100	104	100	100	102	104	106	103	101	100	100	99	99	98
Pain management injections	100	105	112	115	101	98	92	87	86	84	87	92	90	79

Minnesota

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015[P]
Overall price index	100	104	106	107	108	110	111	117	118	115	118	120	121	122
Price indices by service group														
Emergency	100	103	105	106	107	108	112	124	122	112	115	117	114	116
Evaluation and management	100	104	107	110	110	112	115	118	125	143	148	153	166	168
Major radiology	100	103	103	105	105	103	103	109	111	101	102	98	74	73
Minor radiology	100	103	104	106	108	111	113	117	116	107	109	112	119	119
Neurological/ neuromuscular testing	100	100	100	99	97	99	105	109	112	116	130	118	91	91
Physical medicine	100	103	105	106	109	112	113	119	120	120	122	126	129	129
Major surgery	100	109	108	109	110	109	111	117	112	89	92	95	94	98
Pain management injections	100	110	122	131	130	135	140	139	131	101	103	101	94	92

Missouri

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015[P]
Overall price index	100	101	104	107	107	111	114	125	129	128	130	131	138	142
Price indices by service group														
Emergency	100	105	110	114	116	121	124	138	149	147	153	165	192	223
Evaluation and management	100	104	110	118	126	133	139	147	152	154	159	164	170	175
Major radiology	100	98	100	101	97	98	92	98	96	97	96	97	101	95
Minor radiology	100	103	105	107	109	112	117	123	122	122	121	121	122	124
Neurological/ neuromuscular testing	100	98	110	108	109	113	120	136	152	140	142	102	125	134
Physical medicine	100	98	99	104	105	108	113	116	122	115	123	130	136	140
Major surgery	100	103	106	103	98	103	104	125	126	132	130	133	139	144
Pain management injections	100	94	97	104	111	118	122	132	139	134	137	131	145	136

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Table SA.1 Trends in Professional Prices Paid by Service Group across 25 Study States, 2002 to 2015 (continued)

New Jersey

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015[P]
Overall price index	100	107	109	115	114	116	117	123	127	132	135	118	121	127
Price indices by service group														
Emergency	100	109	118	125	126	128	139	154	159	167	177	176	154	145
Evaluation and management	100	104	107	112	115	120	123	127	134	138	140	130	133	137
Major radiology	100	100	103	103	96	95	94	94	93	95	96	95	96	92
Minor radiology	100	99	99	100	96	99	105	110	115	127	128	107	104	105
Neurological/ neuromuscular testing	100	105	108	108	107	99	109	109	116	125	125	73	88	95
Physical medicine	100	102	100	103	103	109	103	111	116	115	123	124	138	149
Major surgery	100	116	117	129	128	128	130	135	137	144	146	119	119	128
Pain management injections	100	114	127	132	131	135	130	143	157	173	190	160	140	130

New York

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015[P]
Overall price index	100	101	101	102	101	102	102	102	102	103	104	103	103	104
Price indices by service group														
Emergency	100	101	104	105	104	103	100	104	104	122	123	128	127	126
Evaluation and management	100	101	101	102	103	103	99	103	103	123	125	126	127	128
Major radiology	100	100	100	99	101	102	104	100	100	98	96	95	95	95
Minor radiology	100	100	100	101	101	101	102	100	99	95	95	95	94	94
Neurological/ neuromuscular testing	100	100	103	100	99	100	108	107	108	105	105	106	108	109
Physical medicine	100	101	102	102	102	103	102	102	102	98	98	97	96	98
Major surgery	100	100	100	102	101	101	100	100	101	98	100	99	99	98
Pain management injections	100	100	103	104	108	109	108	110	110	110	109	107	106	105

North Carolina

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015[P]
Overall price index	100	102	101	101	100	99	99	101	103	101	102	107	107	107
Price indices by service group														
Emergency	100	101	101	98	99	98	96	100	104	101	101	100	100	100
Evaluation and management	100	101	101	101	101	102	101	102	102	102	102	125	126	126
Major radiology	100	101	100	102	102	103	100	105	104	104	105	104	103	103
Minor radiology	100	101	100	100	99	99	98	101	100	98	97	96	95	96
Neurological/ neuromuscular testing	100	101	102	100	100	100	105	104	103	104	117	115	115	114
Physical medicine	100	100	99	100	99	99	100	103	105	102	101	106	107	105
Major surgery	100	105	104	104	98	95	94	97	99	97	98	96	95	98
Pain management injections	100	100	95	98	94	92	90	91	92	90	87	87	86	86

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Table SA.1 Trends in Professional Prices Paid by Service Group across 25 Study States, 2002 to 2015 (continued)

Oklahoma

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015[P]
Overall price index	100	103	105	104	100	98	96	97	99	100	104	105	105	104
Price indices by service group														
Emergency	100	101	100	107	97	99	97	98	98	101	114	121	111	110
Evaluation and management	100	108	110	114	112	111	118	119	122	122	168	169	169	168
Major radiology	100	103	103	102	90	89	80	78	80	81	77	81	81	81
Minor radiology	100	100	100	100	91	90	89	90	90	89	88	89	88	88
Neurological/ neuromuscular testing	100	94	97	84	78	81	85	85	88	87	85	83	86	87
Physical medicine	100	100	104	105	113	107	105	106	111	110	109	112	111	109
Major surgery	100	106	107	105	92	88	84	83	84	87	77	77	77	78
Pain management injections	100	97	96	97	159	159	162	168	155	151	149	148	152	155

Pennsylvania

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015[P]
Overall price index	100	104	106	109	112	115	118	118	118	118	122	122	124	125
Price indices by service group														
Emergency	100	101	103	109	111	125	131	123	122	125	130	133	135	137
Evaluation and management	100	103	105	109	112	116	121	119	119	120	124	128	130	132
Major radiology	100	103	105	104	103	105	105	102	104	103	102	104	103	101
Minor radiology	100	103	106	109	110	113	114	118	119	121	123	126	129	131
Neurological/ neuromuscular testing	100	101	107	104	106	110	118	120	120	121	115	75	74	74
Physical medicine	100	104	108	113	117	116	116	118	117	118	124	127	130	131
Major surgery	100	107	104	107	111	119	123	124	124	124	127	134	135	138
Pain management injections	100	99	102	106	106	100	101	104	100	104	107	109	110	110

South Carolina

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015[P]
Overall price index	100	104	103	104	104	104	101	101	105	106	107	108	107	108
Price indices by service group														
Emergency	100	89	90	89	86	88	85	86	104	110	111	110	111	112
Evaluation and management	100	112	114	116	116	117	116	114	124	133	133	134	133	132
Major radiology	100	95	96	96	95	96	94	94	83	71	71	71	70	68
Minor radiology	100	93	93	93	93	94	91	90	94	90	91	90	89	88
Neurological/ neuromuscular testing	100	98	95	97	95	97	100	98	109	125	130	128	128	130
Physical medicine	100	104	102	104	103	101	96	100	103	104	104	107	107	109
Major surgery	100	104	100	98	100	101	100	96	97	94	96	94	90	93
Pain management injections	100	122	120	122	115	117	114	113	109	101	101	98	96	103

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Table SA.1 Trends in Professional Prices Paid by Service Group across 25 Study States, 2002 to 2015 (continued)

Tennessee

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015[P]
Overall price index	100	102	104	101	97	98	92	94	103	107	106	98	93	93
Price indices by service group														
Emergency	100	105	108	101	87	95	90	96	106	109	101	96	95	97
Evaluation and management	100	106	110	122	134	142	137	139	150	161	158	156	151	150
Major radiology	100	98	99	104	105	110	100	100	102	106	102	91	74	70
Minor radiology	100	101	103	93	71	71	65	64	70	73	74	69	62	59
Neurological/ neuromuscular testing	100	102	106	99	89	86	80	78	86	98	100	61	61	61
Physical medicine	100	101	101	98	89	87	83	87	95	98	97	97	94	91
Major surgery	100	102	104	90	86	87	78	80	90	91	89	79	76	81
Pain management injections	100	103	114	108	96	84	71	66	72	77	81	71	61	81

Texas

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015[P]
Overall price index	100	94	93	95	93	91	96	103	107	125	127	127	122	122
Price indices by service group														
Emergency	100	100	105	106	107	115	123	137	138	152	149	150	149	151
Evaluation and management	100	113	139	142	142	149	154	167	177	207	213	220	214	217
Major radiology	100	91	78	78	77	66	72	74	73	71	77	70	56	53
Minor radiology	100	87	68	69	68	69	73	78	79	82	92	95	85	80
Neurological/ neuromuscular testing	100	92	102	98	98	93	102	102	108	130	136	95	93	95
Physical medicine	100	98	100	100	96	91	94	102	105	123	126	132	129	129
Major surgery	100	76	58	62	60	59	67	73	78	94	89	91	88	89
Pain management injections	100	109	123	106	98	91	97	101	105	121	123	120	103	117

Virginia

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015[P]
Overall price index	100	103	105	107	110	114	115	120	125	127	132	132	139	139
Price indices by service group														
Emergency	100	103	103	111	118	120	127	137	145	149	158	156	175	185
Evaluation and management	100	104	107	113	122	132	140	148	155	161	164	169	177	182
Major radiology	100	98	100	100	101	103	103	113	111	113	112	114	119	115
Minor radiology	100	100	99	99	100	106	109	112	113	112	113	115	120	117
Neurological/ neuromuscular testing	100	102	102	105	108	101	98	104	118	118	124	85	96	102
Physical medicine	100	106	107	112	115	115	114	125	130	127	133	145	155	154
Major surgery	100	104	107	100	101	107	107	99	103	109	115	111	117	114
Pain management injections	100	104	102	104	106	110	102	100	107	111	115	119	125	125

continued

Table SA.1 Trends in Professional Prices Paid by Service Group across 25 Study States, 2002 to 2015 (continued)

Wisconsin

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015[P]
Overall price index	100	106	111	114	119	125	130	138	147	151	156	158	166	169
Price indices by service group														
Emergency	100	108	114	117	122	129	137	147	154	165	172	181	190	196
Evaluation and management	100	106	110	115	122	129	136	143	152	160	168	178	190	197
Major radiology	100	105	107	109	106	106	106	112	114	109	109	107	107	100
Minor radiology	100	103	106	108	114	118	121	128	138	136	139	143	149	151
Neurological/ neuromuscular testing	100	105	109	116	121	138	149	163	181	181	185	132	135	137
Physical medicine	100	106	111	112	115	120	125	131	140	144	149	157	167	177
Major surgery	100	107	115	118	125	131	136	146	154	160	166	173	183	182
Pain management injections	100	101	104	110	123	130	141	161	185	192	207	207	222	230

Special notation: [P] We use the notation *p* to indicate that the 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

Notes:

This table provides longer-term trends of prices paid for overall professional services as well as by each service group from 2002 to 2015 for the 25 states covered in the earlier editions of this study series.

AZ, MO, NY, OK: The data for each of these states are not necessarily representative because each state is missing data from a larger data source that is significant in that state. The results in AZ, NY, and OK are unlikely to be significantly under- or overestimated, given that these states use fee schedules to regulate the payment for professional services, and it is unlikely that the prices paid for the missing data source in each state were materially different from other data sources included in this study from the same state. For MO, to the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to possible under- or overestimations in the results.

Prices paid for neurological/neuromuscular testing services in most study states decreased starting in 2013. This general trend is related to a fundamental change implemented by the Centers for Medicare & Medicaid Services in the coding system for nerve conduction studies, which are the most commonly billed procedures in the neurological/neuromuscular testing service group. For more details, see "Discussion of Substantial Changes in Prices at Service-Type Level" and "Technical Appendix."

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This technical appendix for the MPI-WC contains two major sections: the first section, "Study Scope," lays out the conceptual structure of the WCRI medical price index and describes the covered providers and services. The second section, "Data and Methods," discusses the representativeness of the data, creation of the price indices, data cleaning methods, and regression analysis of aggregate price levels and growth rates.

STUDY SCOPE

The WCRI Medical Price Index for Workers' Compensation focuses on professional services provided by physicians, chiropractors, and physical or occupational therapists to injured workers with workers' compensation claims. Professional services typically make up 42 percent of total workers' compensation medical expenditures in workers' compensation in a given state (Belton et al., 2016b). The rest include payments for hospital inpatient and outpatient services, ambulatory surgery centers, and pharmaceuticals and supplies. The price indices are computed for the most common groups of medical professional services: emergency, evaluation and management, physical medicine, both major and minor radiology, neurological and neuromuscular testing, major surgery, and pain management injections. Together, these eight groups typically comprise 81 percent of total medical payments for professional services across states (Belton et al., 2016b). Table TA.1 provides a brief description of these service groups. Detailed definitions of the specific CPT codes included under each group can be found in Table TA.2.

This study reports prices paid for each of the eight types of services provided by any nonhospital provider; it does not break out specific provider types (such as physicians, chiropractors, and physical/occupational therapists). Thirty-one states are included in this study: Arizona, Arkansas, California, Colorado, Connecticut, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New York, North Carolina, Oklahoma, Oregon, Pennsylvania, South Carolina, Tennessee, Texas, Virginia, and Wisconsin. We provide snapshots of interstate comparisons on prices paid for professional services in the two most recent study years, 2014 and 2015.[1] Also, we monitor price trends from calendar year 2008 through June 2015.

DATA AND METHODS

THE DATA

The data in this MPI-WC study are from the medical transaction information in WCRI's DBE database. In this study, we pooled the medical transaction data from the study states together to establish the marketbasket and the frequency weights on services in the marketbasket. After that, for each individual study state, we obtained prices for each marketbasket service and constructed price indices using the marketbasket weights.

In this study, prices were collected for services rendered from 2008 through June 2015 in the 31 study states. We obtained the actual amount paid for each medical bill line item for each of the services included in the marketbasket. The DBE database included approximately 37 to 79 percent of the workers' compensation

[1] 2015 numbers are preliminary results based on half-year price data through June 30, 2015.

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claims across most of the study states.[2] The data are from several large insurers, self-insurers, state funds, and third-party administrators in the 31 states. In most study states, our data are reasonably representative of the state systems; however, in a few states the data may not be necessarily representative because they are missing data from a larger data source that is significant in the state. These states include Arizona, Colorado, Missouri, New York, Oklahoma, and Oregon, as noted throughout the figures and tables. The results for Arizona, Colorado, New York, Oklahoma, and Oregon are unlikely to be significantly under- or overestimated, given that these states use fee schedules to regulate the payment for professional services; therefore, it is unlikely that the prices for the missing data source were materially different from other data sources included in this study from the same state. For Missouri, to the extent that prices paid may differ for the missing data source compared with other data sources in the state, this may lead to possible under- or overestimations in the results.

CREATING THE PRICE INDICES

SELECTING THE MARKETBASKET

The price index is the weighted average of prices paid for a collection of the most common medical services provided to injured workers. This collection is called a marketbasket. See Table TA.2 for a list of CPT codes in the marketbasket. This marketbasket is based on the medical transaction data of the 31 study states in 2013 and 2014. In selecting the marketbasket services, we used eight service groups to characterize the professional services. Each of these groups represents a price index component. We reviewed the top procedure codes ranked by frequency for each of these groups. We then sequentially chose codes within each service group until the majority of expenditures in each service group were represented by the selected codes. Table TA.4 shows that the marketbasket codes captured at least 90 percent of total expenditures for emergency services, evaluation and management, major radiology, and physical medicine. For minor radiology, neurological/neuromuscular testing, and pain management injections, codes in the marketbasket represented 76 to 79 percent of total expenditures. The only exception is major surgery, where the codes in the marketbasket captured 44 percent of total expenditures. Service groups with lower representation by the marketbasket have a broader list of codes in each of them, and adding additional codes added only a small percentage of payments each time. Also, the analysis of additional procedures would not be supported by the observed number of services in smaller states.

In the major surgery service group, we used two sets of codes to represent arthroscopic shoulder surgeries, depending on the billing rules followed in the state. One set included CPT code 29826, while the other did not. CPT 29826 is used for reporting shoulder arthroscopy; decompression of subacromial space with partial acromioplasty, with or without coracoacromial release. The *CPT 2012* book changed it from a standalone code to an add-on code. However, not every state followed this change. Fifteen study states followed this coding change and reimbursed CPT 29826 only as a non-primary or add-on procedure. For these states, the marketbasket consisting of primary surgical procedures did not include CPT 29826. On the contrary, for the study states that still reimbursed CPT 29826 as a primary surgical procedure (Arizona, Florida, Illinois, Indiana, Iowa, Kentucky, Louisiana, Massachusetts, Missouri, New Jersey, Oklahoma, Oregon, Pennsylvania, South Carolina, Virginia, and Wisconsin), CPT 29826 was included in the marketbasket. See Table TA.3 for the list of arthroscopic shoulder surgery codes with and without 29826.

[2] In Colorado, New York, and Oregon, the data represented a lower percentage of the population claims in each state, because our sample is missing data from a larger data source that is significant in each state.

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We used a single marketbasket of procedure codes across all states to hold utilization constant so that we are able to report pure price changes across states and provide more meaningful interstate comparisons. However, the marketbasket may represent a smaller percentage of the total expenditures in some states when state-specific codes are used. In most cases, we have been able to map these unique codes to the standard codes in the marketbasket, though some state-specific codes do not have a standard alternative. In states where this was common, the marketbasket may represent a smaller percentage of the total dollars spent. Also, if a state had very different utilization patterns than is seen overall in the marketbasket states, the results for that state could be less representative. The sensitivity test, shown in Table TA.5, illustrates that the procedures in the marketbasket do represent the majority of the total expenditures for all study states for most service groups. For emergency procedures, the marketbasket captures 87 percent or more of total expenditures in all states except Florida.[3] For evaluation and management procedures, the marketbasket represents 91 percent or more of total expenditures in all states. For major radiology services, the marketbasket represents 86 percent or more of total expenditures in all states. For physical medicine services, the analyzed procedures capture 79 percent or more of total expenditures in all states. The selected procedures account for 67 to 83 percent of total expenditures for minor radiology services and 69 to 86 percent of total expenditures for pain management injection services across study states. The analysis covers at least 51 percent of total expenditures for neurological/neuromuscular testing services in all states. The only exception is major surgery—the procedures in the marketbasket represent 33 to 51 percent of total expenditures in all study states. Lower representation by the marketbasket in this service group was mainly due to a broader list of surgical procedures, and adding additional codes added only a small percentage of payments each time.

The data underlying this entire study series covers a long time span from 2002 to 2015. To account for potential changes in the utilization patterns over this long period, three marketbaskets were established. Each marketbasket is based on the medical transaction data covering a 24-month period. The most recent marketbasket is based on data in 2013 and 2014, and used to compute the price indices from 2014 to 2015 (see the beginning of this section for a detailed description of this marketbasket). The other two marketbaskets were employed for the earlier years: the 2008–2009 based marketbasket was used for computing the price indices from 2009 to 2013, and the 2005–2006 based marketbasket was used for calculating the price indices from 2002 to 2008. Then, we used a standard chained-index method to chain the price indices across all years based on the three marketbaskets together. In this way, we maintained continuity of the price index across different editions of this study series and, meanwhile, adjusted for potential changes in utilization patterns over a long period. The chained-index method we employed in this report is commonly used in creating price index trends. For example, the trends in the CPI-M, published by the BLS, rely on essentially the same chained-index approach.[4] In this study, we used calendar year 2009 and 2013 as the two transitioning years between the three series of price indices. The price indices in the latest series from 2014 to 2015 were chained back to the base year 2002 of the earliest series via the transitioning years 2009 and 2013 (see the following formula):

[3] For emergency services, the marketbasket captures 70 percent of total expenditures in Florida. CPT code S9088 captures nearly 30 percent of total expenditures. CPT S9088 is an add-on code to report services provided in an urgent care center (listed in addition to the code for service). The Florida workers' compensation fee schedule rate for this code is by report.

[4] For more information on concepts, statistical procedures, and estimation methods used by the BLS to compile the Chained CPI-U, refer to *Introducing the Chained Consumer Price Index* (Cage, Greelees, and Jackman, 2003).

$$I'^{yr}_s = \frac{P'^{yr}_s}{P'^{13}_s} \times \frac{P^{13}_s}{P'^{09}_s} \times \frac{P^{09}_s}{P^{02}_s}$$

where I'^{yr}_s is the price-trend index for a year in the latest series for a state *s* (2014 to 2015),
P'^{yr}_s is the price in a year in the latest series based on the 2013–2014 marketbasket for a state *s*,
P'^{13}_s is the price in 2013 based on the 2013–2014 marketbasket for a state *s*,
P^{13}_s is the price in 2013 based on the 2008–2009 marketbasket for a state *s*,
P'^{09}_s is the price in 2009 based on the 2008–2009 marketbasket for a state *s*,
P^{09}_s is the price in 2009 based on the 2005–2006 marketbasket for a state *s*, and
P^{02}_s is the price in 2002 based on the 2005–2006 marketbasket for a state *s*.

The price indices in the later series from 2009 to 2013 were chained back to the base year 2002 of the earliest series via the transitioning years 2009 (see the following formula):

$$I'^{yr}_s = \frac{P'^{yr}_s}{P'^{09}_s} \times \frac{P^{09}_s}{P^{02}_s}$$

where I'^{yr}_s is the price-trend index for a year in the later series for a state *s* (2009 to 2013),
P'^{yr}_s is the price in a year in the later series based on the 2008–2009 marketbasket for a state *s*,
P'^{09}_s is the price in 2009 based on the 2008–2009 marketbasket for a state *s*,
P^{09}_s is the price in 2009 based on the 2005–2006 marketbasket for a state *s*, and
P^{02}_s is the price in 2002 based on the 2005–2006 marketbasket for a state *s*.

In this eighth edition of this annual study series, we focus the analysis and presentations of medical price indices on an eight-year time span from 2008 to 2015. In the "Statistical Appendix," we also provide supplemental information on price trends during a longer-term period from 2002 to 2015 for the 25 states covered in the earlier editions of this study series (see Table SA.1).

COMPUTING THE PRICE INDEX

A key feature of the price index is to isolate the changes in price from the changes in utilization, which requires holding utilization constant across the states. To accomplish this, we created two sets of weights. The procedure-level frequency weight for a marketbasket code was used to average procedure-level prices to the service group level. It was calculated as the total number of services with the code divided by the total number of services across all marketbasket codes within the service group. The frequency weight for a service group, which was used to further aggregate service group prices to the overall state level, was computed as the percentage of the total number of services associated with this service group divided by the total number of all professional services.[5] The frequency weights at a service group level were not restricted to services captured

[5] Note that in this study we compute the price index (MPI-WC) based on frequency weights. This approach is mathematically equivalent to the one used by the BLS in computation of the Consumer Price Index (CPI). The BLS measures the CPI as the weighted average of changes in prices for goods between two time periods, where the weight for a good is an expenditure share. This is equivalent to a calculation of the expenditure on a fixed marketbasket of goods in any given time period relative to a "base" period, where the same basket of goods (defined by physical quantities or

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by the marketbasket. Even though the marketbasket captured the majority of services for most service groups, the major surgery marketbasket codes represented a smaller fraction of all professional services within the group. Therefore, by computing service group weights for all professional services within each service group, the service group weights reflect the relative frequency of services associated with each service group as it was observed in the data.

The procedure-level frequency weight can be expressed as the following:

$$v_{ij} = \frac{NS_{ij}}{\sum_{j=1}^{M_i} NS_{ij}}$$

where v_{ij} is the procedure-level frequency weight for procedure j in service group i,
NS_{ij} is the number of services for procedure j in the marketbasket for service group i, and
M_i is the total number of procedures in the marketbasket for service group i.

The frequency weight for a service group can be expressed as the following:

$$w_i = \frac{\sum_{j=1}^{M'_i} NS'_{ij}}{\sum_{i=1}^{8} \sum_{j=1}^{M'_i} NS'_{ij}}$$

where w_i is the frequency weight for service group i,
NS'_{ij} is the number of services for procedure j observed in the data for service group i,
M'_i is the total number of procedures observed in the data for service group i, and
$i = 1 \ldots 8$ and 8 is the total number of service groups.

Because we selected the marketbasket from the pooled dataset of 31 states, one may be concerned that the distribution of service frequencies in relatively larger states (such as California and Texas) might dominate the whole distribution in the pooled data, and as a result, the marketbasket may be less representative of other states. To prevent this, we adjusted for the differences in claim shares across the states in the pooled data. To make sure that each state has essentially the same influence, the adjustment factor was applied when selecting the marketbasket and computing the frequency weights based on the mix of services in the state-pooled data.

Based on the established marketbasket, we computed unit prices and price indices by the following steps:

1. Compute the price for each procedure code in the marketbasket by averaging amounts paid for individual procedures using all occurrences with an identical procedure code.
2. Aggregate prices across marketbasket codes to the service group level using the procedure-level frequency weights.

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frequency weights) is purchased in both time periods, but where prices reflect actual prices in the two time periods. We follow the latter approach in this study.

3. Aggregate prices across service groups to the overall level using the service group level frequency weights.
4. For interstate comparisons, calculate price indices against the prices in the median study state at both service group and overall state levels for each state.
5. For trends, calculate price indices in the later years against the prices in calendar year 2008.

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Step 2 can be expressed as the following:

$$P_{is} = \sum_{j=1}^{A_i} v_{ij} * P_{ijs}$$

where P_{is} is the aggregated price for service group i in a state s,
P_{ijs} is the estimated price for procedure j in service group i in a state s,
v_{ij} is the procedure-level frequency weight for procedure j in service group i, and
$j = 1 \ldots A_i$ and A_i is the total number of procedures in service group i.

Step 3 can be expressed as the following:

$$P_s = \sum_{i=1}^{8} w_i * P_{is}$$

where P_s is the aggregate price for overall professional services in a state s,
P_{is} is the aggregate price for service group i in a state s,
w_i is the service group level frequency weight for service group i, and
$i = 1 \ldots 8$ and 8 is the total number of service groups.

Steps 4 and 5 can be expressed as the following:

$$I_s = \frac{P_s}{P^{mdn}}$$

$$I_s^{yr} = \frac{P_s^{yr}}{P_s^{08}}$$

where I_s is the price index for a state s,
I_s^{yr} is the price-trend index for a year yr from 2008 to 2014 and a state s,
P_s is the price (either for a service group or overall) in a state s,
P^{mdn} is the price (either for a service group or overall) in the median study state,
P_s^{yr} is the price (either for a service group or overall) in a year yr from 2008 to 2014 in a state s,
P_s^{08} is the price (either for a service group or overall) in 2008 in a state s.

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DATA CLEANING

Over the years, WCRI has developed algorithms to adjust for known limitations in the data. Some of these limitations include outlier payments for individual services, lines representing multiple services, and missing procedure modifier information. To maintain continuity for capturing prices paid for nerve conduction studies facing the fundamental coding change in 2013, we also implemented a visit-level approach that combines all payments associated with nerve conduction studies under a single visit-level measure.

TRIMMING OUTLIER VALUES

A small proportion of the lines in the data had unusually large or small values in medical payments. Also due to a skewed distribution of medical payments, these extreme values contributed disproportionately to the average. In particular, since distribution of payments is bounded at zero, the distribution is skewed to the right, and large positive values are not offset by large negative values. To mitigate the influence of the extreme values on the average medical payments and ensure meaningful results, we applied a *price data cleaning* technique to trim the *outlier* values at both extremes of the distribution of the paid amounts across all services with the same procedure code.

To remove outliers for marketbasket services associated with all service groups, except major surgery, pain management injections, and minor and major radiology, we excluded 5 percent of the services at the low and upper end of the price distribution for each procedure, year, and state. The data cleaning methods for minor and major radiology, major surgery, and pain management injections are described in the "Identifying Modified Services for Radiology," "Identifying Modified Services for Surgery," and "Identifying Modified Services for Pain Management Injections" subsections.

MULTIPLE UNITS OF SERVICE

Some physical medicine modalities and procedures may be billed in multiple units. For example, therapeutic exercise (CPT 97110) is normally billed for every 15 minutes of treatment. Sometimes there were no accurate indications of how many units of service were provided. Hence, it was necessary to adjust the data for these multiple unit billings.

To identify the multiple units of service, we first looked at the units of service field provided in each data source file. If the units of service field was populated with a value greater than one (default value), we treated that number as the number of services for which the payments were paid in a given line. The number of services provided by data sources, however, is not always accurate and is sometimes missing. For physical medicine procedures (which are commonly billed in multiple units) where the units of service field was missing or equal to one, we did a further check on multiple units of service using *prevailing prices*. Prevailing price, by definition, is one or more of the most frequently paid prices for each procedure code picked from a data source within a calendar year. Once prevailing prices for each procedure code were picked, we then checked line items with that procedure against the respective prevailing prices. If the paid amount in a line item was a whole multiple of any of the prevailing prices for this procedure, we assumed that line indicated that multiple of services at that prevailing price, and the number of services was reset to the whole multiple. We performed the units of service adjustment for each procedure code in each year for each data source.

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IDENTIFYING MODIFIED SERVICES FOR RADIOLOGY

Major and minor radiology procedure codes often have modifiers to distinguish the technical component (e.g., using the radiology machine/devices) from the professional component (e.g., reviewing the results) of the whole procedure. The professional component is typically identified with the modifier code 26, and the technical component is usually identified with the modifier code 27. For the same procedure, these components are paid at different levels—usually 20 to 30 percent of the price for the whole procedure is paid for the professional component, and 70 to 80 percent of the price for the whole procedure is paid for the technical component. However, the modifier codes are missing for many services in the data. Without a modifier, a paid amount can be for one of the following three things: the professional component, the technical component, or the whole procedure.

In this study, we developed an algorithm to identify radiology services that are billed and paid as the professional component separately from those billed and paid as the whole procedure. First, for each radiology procedure in the marketbasket, we captured the services that had only a single service billed on a day. These services accounted for more than 95 percent of all the services for each procedure, indicating that the vast majority of the radiology services in the data are likely one of the following two types of services: (1) professional components that were billed by nonhospital providers, or (2) whole procedures that were billed by nonhospital providers. In the first case, the radiology services were likely done in a hospital setting and the technical components paired with the professional components of these services were billed by hospitals. Note that hospital billed services are beyond the scope of this study and they are subject to different fee schedule regulations than the services billed by nonhospital providers. In the second case, both the professional and the technical components of the radiology services were provided and billed by nonhospital providers.

Second, we estimated a threshold of the maximum price for the professional component for each radiology procedure code in a state and identified all the payments below this threshold as prices paid for the professional component. Since the professional component of radiology services are commonly reimbursed at 20 to 30 percent of the fee schedule rate for the whole procedure, and to accommodate the potential deviation of the actual prices paid from the fee schedule rates, the threshold of the maximum price for the professional component was computed as 1.4 times the professional-component fee schedule rate for a particular procedure in a fee schedule state.[6] For non-fee schedule states, since a fee schedule rate was not available, we relied on the price distribution observed in the services with modifier code 26 specified, and captured the amount paid at the 90th percentile of this distribution for each procedure code. We then multiplied this amount paid by 1.4 to arrive at the threshold of the maximum price for the professional component for a particular procedure in a non-fee schedule state.[7] Payments below the threshold of the maximum price for the professional component were identified as prices paid for the professional component, and payments

[6] This method takes into consideration potential negotiated prices for the professional component above the fee schedule rate and the potential negotiated prices for the whole procedure below the fee schedule rate. Using the multiplier of 1.4 allows an up to 40 percent mark-up above the fee schedule rate to be paid for the professional component, and will not result in the whole-procedure prices being misidentified as the professional-component prices, even if the actual prices paid for the whole procedure reflected a 50 percent discount of the fee schedule rate.

[7] We also applied the multiplier of 1.4 to compute the threshold of the maximum price for the professional component in non-fee schedule study states, as prices paid in non-fee schedule states often exhibit large variation. This multiplier allows the actual prices paid for the professional component to be up to 40 percent higher than the 90th percentile of the price distribution for services with the professional-component modifier specified. We also did a sensitivity analysis using an alternative multiplier of 1.2 to make sure that the classification of the whole-procedure prices is not sensitive to the choice of multiplier value. The results proved to be not sensitive to the choice between 1.2 and 1.4 for a multiplier value. We chose the multiplier of 1.4 to have consistency between the methods used for fee schedule and non-fee schedule states.

above this threshold were classified as prices paid for the whole procedure.

To trim outliers, we excluded 5 percent of the services at the lower and upper ends of the price distribution of the professional component for each procedure, state, and year; we applied the same data trimming method to the price distributions for the whole procedures as well. The average price paid for the professional component and the average price paid for the whole procedure for each marketbasket radiology procedure in a state was computed based on the final trimmed distributions. Note that the relative frequency of the professional component and the whole procedure for each marketbasket code was held constant across states and years when computing the average price at the service group level for radiology services.

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IDENTIFYING MODIFIED SERVICES FOR SURGERY

Surgical procedures also have a set of commonly used modifiers to identify modified or reduced payments for surgical procedures. In particular, in the case of multiple surgical procedures performed at the same operative session, modifiers indicate which surgical procedure was primary. Additional or non-primary surgical procedures are commonly reimbursed at about 50 percent of the full rate—the rate at which the same procedure is reimbursed when performed as primary by a primary surgeon.[8] Also, modifiers are used to identify payments for services of a primary surgeon versus an assistant surgeon. Services of an assistant surgeon are typically reimbursed at about 15–25 percent of the full rate. Unfortunately, the modifiers are not always consistently and accurately reported in the data, and they are often missing. Because of the incompleteness of the modifiers, we focus on the prices paid for services of a primary surgeon performing the primary surgery procedure only.

In this study, we used an algorithm to isolate the payments to the primary surgeon for the primary procedure. This algorithm has two steps: (1) capture the most expensive surgical service (i.e., primary surgery) on a surgery day, and (2) further remove remaining reduced payments and unusually high values. The following are more detailed discussions of each step.

First, following payment rules establishing discounted rates for secondary procedures and services of assistant surgeons, we considered all surgical services provided on a surgery day and kept the one with the highest payment. This approach removed reduced payments for non-primary surgical services and payments for assistant surgeon services. After restricting distribution of actual payments to include only the highest payment on the surgery day, some number of misclassified facility payments (or unusually high values) and modified payments (or values around 15–25 percent or 50 percent of the full rate) still appeared in the price distribution, motivating additional trimming. Incomplete billing information, especially missing payments for the primary surgery for the primary surgeon services, was likely to result in discounted payments to remain in the price distribution prior to the second step.

Second, we removed the remaining reduced payments as well as the unusually high values. The developed trimming method relied on the estimated threshold of the maximum price for modified services for each surgical procedure code in a state and eliminated all payments below this threshold as modified payments. Since non-primary surgical procedures are commonly reimbursed at about 50 percent of the full rate, and services of an assistant surgeon are typically reimbursed at about 15–25 percent of the full rate, the threshold of the maximum price for modified services was computed as 50 percent of the full fee schedule rate for a particular procedure in a fee schedule state. For non-fee schedule states, since a fee schedule rate was not available, we relied on a typical price observed for the primary procedure performed by a primary

[8] The discount rates for reduced payments are based on state fee schedule regulations.

surgeon, which was computed in the earlier step, by keeping the most expensive procedure for each operative session. Hence, in order to compute the maximum price for modified services for each surgical procedure in a state without a fee schedule, the threshold was defined as 50 percent of the median of the paid price for primary procedures as identified after the first step.

To address the issue of misclassified facility payments, the trimming technique restricted the final price distribution by eliminating surgical procedures with payments above 2.5 times the full fee schedule rate for a particular procedure for a fee schedule state.[9] In non-fee schedule states, we relied on the typical price observed for the primary procedure performed by a primary surgeon as identified in the first step. Hence, to exclude misclassified facility payments for each surgical procedure in a state without a fee schedule, prices above 2.5 times the median price for primary procedures were dropped from the analysis. The average price paid for each marketbasket surgical procedure in a state was computed based on the final trimmed distribution of prices paid to the primary surgeon performing the primary procedure.

IDENTIFYING MODIFIED SERVICES FOR PAIN MANAGEMENT INJECTIONS

It is also common to have multiple pain management injection procedures during a single visit, and some of the multiple procedures can be subject to a reduced payment rule. In some cases, the multiple procedure codes (CPTs) billed during a visit are multiple levels of the same procedure where the single level and each additional level are recorded under different CPTs. Typically, billing multiple units is not allowed under single-level procedure codes. However, billing for multiple services associated with procedure codes identified as "each additional level" is common and requires a modifier 59. In this case, a reduced payment rule for multiple procedures will apply. It is also possible to have different multiple pain management injection procedures during a single visit, which are also likely to be subject to a reduced payment rule for secondary procedures. Similar to the methods applied to surgical procedures, to isolate full prices paid for the pain management injection procedures in the marketbasket, we focused on the prices paid for a primary pain management injection procedure during a visit, since it is not subject to a reduced payment rule. To isolate the payments for the primary procedure, we considered all pain management injections administered during a single visit and kept the one with the highest payment. To remove outliers for pain management injection procedures, we excluded 5 percent of the primary services at the lower end of the price distribution and 10 percent at the upper end of the price distribution for each procedure, year, and state.[10]

APPLYING A VISIT-LEVEL APPROACH TO NERVE CONDUCTION STUDIES

In 2013, CMS implemented a fundamental change in the coding for nerve conduction studies. Previous procedure codes for sensory conduction studies, motor conduction studies with or without an F-wave test, or H-reflex tests have been deleted (i.e., CPT codes 95900, 95903, 95904, 95934, 95936). These have been replaced with the code couplets in the table on the next page. This code change affected the most commonly billed procedures in the neurological/neuromuscular testing service group. Under the new coding system, a

[9] Fee schedule rates for facility services associated with common surgeries are substantially greater than the fee schedule amounts for the relevant professional services of surgeons. In particular, in 2009, the Texas fee schedule rate for facility services related to common shoulder arthroscopy (ambulatory payment classification [APC] 42 or CPT 29826) was $6,472, while the fee schedule rate for surgeon's services was $1,143 (see Coomer and Liu, 2010, and Coomer, 2010). In Tennessee, the facility rate associated with common shoulder arthroscopy was $4,679 versus $1,668 for the relevant professional services.

[10] A larger percentage of services were removed from the upper end of the price distribution to exclude misclassified facility payments.

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single nerve conduction study includes a sensory nerve conduction test, a motor nerve conduction test with or without an F-wave test, or an H-reflex test. Essentially, the new coding system combines various types of nerve conduction studies (i.e., a sensory nerve conduction test, a motor nerve conduction test with or without an F-wave test, or an H-reflex test) and assigns a specific code depending on the number of multiple separate nerve conduction tests performed during a visit. To determine which code to use, only the number of the separate tests should be added, and, when multiple sites on the same nerve are stimulated or recorded, each type of nerve conduction study is counted only once. The old approach did not have this clear rule limiting the number of multiple nerve conduction studies, making interpretation of the number of multiple services ambiguous. Since under the old rule the number of multiple services included both testing multiple sites on a single nerve and multiple separate studies, a direct crosswalk at the CPT level to the new coding system is impossible. To maintain continuity, for nerve conduction studies, we implemented a visit-level approach that combines all payments associated with nerve conduction studies under a single visit-level measure. The other four procedures included in the marketbasket for neurological/neuromuscular testing services follow the standard procedure-level method for price computation (see Table TA.2). Note that because of this visit-level approach, some of the observed changes in the prices paid for neurological/neuromuscular testing services may also reflect changes in utilization and/or billing patterns of nerve conduction studies.

Table TA.6 New CPT Codes for Nerve Conduction Studies Implemented in 2013

CPT Code	Definition
95907	Nerve conduction studies; 1–2 studies
95908	Nerve conduction studies; 3–4 studies
95909	Nerve conduction studies; 5–6 studies
95910	Nerve conduction studies; 7–8 studies
95911	Nerve conduction studies; 9–10 studies
95912	Nerve conduction studies; 11–12 studies
95913	Nerve conduction studies; 13 or more studies

REGRESSION ANALYSIS OF AGGREGATE PRICE LEVELS AND GROWTH RATES

The statistical methods discussed here were estimated and reported previously in the seventh edition of this series. In the regression analysis, we focused on the key outcome of this study—the aggregate price for overall professional services in workers' compensation and its annual growth rate. The state-level aggregate prices for overall professional services (P_s^{yr}) were computed for the most common medical services provided to injured workers employing a marketbasket approach, as outlined in the "Creating the Price Indices" section. Hence, in this analysis, we isolated the price per service measure from the changes in utilization patterns and mix of medical services by controlling for the mix of services across states and years via a marketbasket approach.

The objective of the regression analysis is to provide statistical evidence to support the descriptive analysis of variation in medical prices across states and over time in relation to fee schedules presented in "Discussion of Key Lessons." To be consistent with the organization of the discussion into two sections, "Lessons from Interstate Index Comparisons" and "Lessons from Growth Rate Comparisons across States," the regression analysis also has two parts. To address the first topic, we further evaluated observations that states without professional fee schedules had higher prices paid than states with professional fee schedules. In

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particular, we examined the statistical significance of the difference in professional prices paid between non-fee schedule states and fee schedule states, while controlling for network participation rates. The choice of variables (i.e., the type of professional fee regulation and the network penetration rate) as main factors explaining prices paid is informed by the conceptual framework described in the earlier section, "Introduction and How to Use This Report." Similar to the descriptive analysis of interstate price comparisons, this association was estimated on the state-level price measures of the full sample of the study states for years between 2008 and 2013.[11] The regression analysis also includes the full set of year dummies, to control for price growth in professional prices. To summarize, for this part of the regression analysis, we estimated a linear regression model (i.e., ordinary least squares model) that specifies a linear relationship between log-transformed aggregate price for overall professional services in a year *yr* ($ln(P_s^{yr})$) and professional fee regulation type (NFS_s^{yr}), as well as the network participation rate (N_s^{yr}),[12] while controlling for year fixed effects (τ^{yr}):

$$ln(P_s^{yr}) = \beta_0 + \beta_1 NFS_s^{yr} + \beta_2 N_s^{yr} + \beta_3 \tau^{yr} + e_s^{yr}$$

Since the outcome variable is expressed in log form, the estimated coefficients (β) require a simple transformation, (exp(β)-1)*100 percent, before they can be interpreted (see Table 3).[13] Then, the transformed estimated coefficient of the non-fee schedule regulation type can be interpreted as a percentage difference in the aggregate price between the non-fee schedule states and the fee schedule states (base category), while controlling for differences in network penetration rates. In particular, the transformed coefficient of the non-fee schedule regulation type is equal to 55 percent, indicating that the aggregate prices in states without professional fee schedules are, on average, 55 percent higher than in fee schedule states. That is supportive of the observed patterns in the interstate variation of professional prices paid by regulation type. Also, the transformed coefficient on the network participation variable shows that a 10 percentage point higher network participation rate is, on average, associated with 6.6 percent lower overall professional prices.

To supplement the descriptive analysis of the second topic of the growth rate comparisons by regulation type, we examined the statistical significance of the observation that most states without fee schedules experienced faster growth in prices paid compared with fee schedule states. To do so, we estimated the association between annual growth rate in professional prices and regulation type, adjusting for differences in the network penetration rate changes. Similar to the descriptive analysis, here we focus on the study states with no major fee schedule changes from January 2008 to June 2014.[14] Excluding states with major fee schedule changes allows us to characterize cost-containment properties of fee schedule versus non-fee schedule regimes rather than the effect of fee schedule introduction or reform.

The relationship between growth in professional prices paid and fee regulation type was formulated as a linear regression model with the annual growth rate in prices computed as a time difference in log-

[11] The analyzed sample excludes 2014 and 2015 since the regression analysis was conducted in the previous edition of this series and covers the full sample of states included in *WCRI Medical Price Index for Workers' Compensation, Seventh Edition (MPI-WC)* (Yang and Fomenko, 2015).

[12] We also tested sensitivity of the coefficients of the fee regulation type to the functional form specifications of the network participation rate. In particular, we included additional powers of the network participation rate variable, and we found that the estimated coefficients of interest are not sensitive to the inclusion of additional terms. The reported results are based on the specification where we control for the network participation rate using second degree polynomials.

[13] Note that direct interpretation of the coefficients is approximately true for small values such as $-0.1 < \beta < 0.1$.

[14] This analysis was originally reported in the seventh edition of this study series. States with major fee schedule changes are discussed separately in the section "Discussion of Substantial Price Changes."

transformed aggregate prices, $\Delta ln(P_s^{yr})$:[15]

$$\Delta ln(P_s^{yr}) = \beta_1 FS_s^{yr} + \beta_2 NFS_s^{yr} + \beta_3 \Delta N_s^{yr} + e_s^{yr}$$

To control for two types of professional fee regulations, two dummy variables were included—*FS* denotes states with fee schedules, and *NFS* stands for non-fee schedule states. The coefficients of indicators for different types of professional fee regulations capture the annual growth rate for various fee regulation types. The interpretation of coefficients *(β)* for different fee regulation types also requires a simple transformation. After a simple transformation of the coefficients of interest ((exp(β)-1)*100 percent), the transformed coefficients can be interpreted as percentage growth rates in overall professional prices for different regulation types, while controlling for the changes in network participation rates. Standard errors of the transformed coefficients were estimated using the delta method. In this model, we also controlled for the growth in the network participation rate. The transformed coefficient on the network participation variable reflects the percentage difference in the annual price growth rate as network participation changes from year to year (i.e., a 2.5 percent decrease in the annual growth rate in professional prices if the network participation rate increases by 10 percentage points). We also reported on the difference in the annual growth rates between non-fee schedule states and fee schedule states along with their statistical significance levels, which were obtained using the delta method estimation (see Table 6). In particular, we found statistical support for the observations of the faster growth in professional prices in the non-fee schedule states, and the difference in the annual growth rates between non-fee schedule states and fee schedule states was estimated to be 1.7 percentage points. This difference was statistically significant.

[15] Δ denotes change from one year to the next.

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Table TA.1 Brief Marketbasket Service Group Definitions

Service Group	Definition
Professional services	Professional services in this study refer to medical professional services that are billed by physicians, physical therapists/occupational therapists, and chiropractors. Medical professional services in this study include eight types of services: evaluation and management, physical medicine, minor radiology, major radiology, major surgery, pain management injections, neurological/neuromuscular testing, and emergency services. Note that medical professional services include both professional and technical components of diagnostic tests for applicable services among the eight service types. Medical professional services provided in a hospital setting but billed by physicians, physical therapists/occupational therapists, and chiropractors are included in this study. Medical professional services billed by hospitals are excluded.
Emergency services	The services in this group include emergency department visits for patients with various levels of severity and office services provided on an emergency basis. See Table TA.2 for a detailed description of all service codes included in this group.
Evaluation and management	The services in this group are primarily new and established patient office visits. These consist of office visits that require at least two of three parts: a problem focused history, a problem focused examination, and straightforward medical decision making of various complexities. See Table TA.2 for a detailed description of all service codes included in this group.
Major radiology	The services in this group mostly include magnetic resonance imaging (MRIs) and computed tomography (CT) scans of various areas, including, but not limited to, spinal canal and contents, cervical, lumbar, and any joint of the upper or lower extremity. See Table TA.2 for a detailed description of all service codes included in this group.
Minor radiology	The services in this group mostly include radiologic exams (X rays or ultrasounds) involving at least two views of various areas of the body, including, but not limited to, the spine, lumbosacral, shoulder, and wrist. See Table TA.2 for a detailed description of all service codes included in this group.
Neurological/neuromuscular testing	The services in this group include neurological and neuromuscular testing. They are largely made up of sensory and motor nerve conduction studies but also include range of motion tests and application of neurostimulators. These services may be billed by physicians as well as by chiropractors and physical therapists. See Table TA.2 for a detailed description of all service codes included in this group.
Physical medicine	The services in this group include physical medicine procedures, modalities, therapeutic activities and manual therapy techniques involving one or more areas, electronic stimulation, and work hardening/conditioning, as well as chiropractic care and manipulations. These services may be provided by physical therapists and occupational therapists as well as chiropractors. Physical medicine codes may be billed by physicians, chiropractors, or physical therapists and occupational therapists. See Table TA.2 for a detailed description of all service codes included in this group.
Major surgery	The services in this group include invasive surgical procedures, as opposed to surgical treatments and pain management injections (which are also included in the surgery section of the Current Procedural Terminology [CPT] manual). The most frequent surgeries in this service group include, but are not limited to, arthroscopic surgeries of the shoulder or knee, laminectomies, laminotomies, discectomies, carpal tunnel surgeries, neuroplasty, and hernia repair. See Table TA.2 for a detailed description of all service codes included in this group.
Pain management injections	The services in this group include injection procedures that are commonly used for pain management, such as epidural or steroid injections on nerve roots and muscles for lumbar, sacral, cervical, or thoracic areas. See Table TA.2 for a detailed description of all service codes included in this group.

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Table TA.2 Marketbasket Services

Service Group	% of Services	CPT Code	Description
Emergency			
1	47.8%	99283	Emergency department visit, moderate severity
2	32.2%	99284	Emergency department visit, high severity, urgent evaluation
3	10.5%	99285	Emergency department visit, high severity, immediate significant threat
4	8.0%	99282	Emergency department visit, low–moderate severity
5	1.6%	99281	Emergency department visit, self-limited/minor
Evaluation and management			
6	42.3%	99213	Established patient office visit, low–moderate severity, 15 minutes
7	21.9%	99214	Established patient office visit, moderate–high severity, 25 minutes
8	10.7%	99203	New patient office visit, moderate severity, 30 minutes
9	7.4%	99204	New patient office visit, moderate–high severity, 45 minutes
10	7.4%	99212	Established patient office visit, self-limited/minor, 10 minutes
11	2.7%	99202	New patient office visit, low–moderate severity, 20 minutes
12	2.1%	99215	Established patient office visit, moderate–high severity, 40 minutes
13	1.2%	99243	Office consultation, new/established patient, moderate severity, 40 minutes
14	1.2%	99232	Subsequent hospital care, minor complication, 25 minutes
15	1.1%	99244	Office consultation, new/established patient, moderate–high severity, 60 minutes
16	0.9%	99205	New patient office visit, moderate–high severity, 60 minutes
17	0.7%	99211	Established patient office visit, no physician necessary, 5 minutes
18	0.5%	99245	Office consultation, new/established patient, moderate–high severity, 80 minutes
Major radiology			
19	21.1%	73221	MRI, any joint of upper extremity, without contrast material
20	19.1%	73721	MRI, any joint of lower extremity, without contrast material
21	16.6%	72148	MRI, spinal canal and contents, lumbar, without contrast material
22	10.3%	70450	Computed tomography, head or brain, without contrast material
23	8.1%	72141	MRI, spinal canal and contents, cervical, without contrast material
24	5.3%	72125	Computed tomography, cervical spine, without contrast material
25	4.0%	73222	MRI, any joint of upper extremity, with contrast material
26	2.7%	72131	Computed tomography, lumbar spine, without contrast material
27	2.4%	72158	MRI, spinal canal and contents, without then with contrast material, lumbar
28	2.3%	74177	Computed tomography, abdomen and pelvis, with contrast material
29	2.2%	73700	Computed tomography, lower extremity, without contrast material
30	2.1%	73718	MRI, lower extremity, other than joint, without contrast material
31	2.1%	72146	MRI, spinal canal and contents, thoracic, without contrast material
32	1.8%	73218	MRI, upper extremity, other than joint, without contrast material
Minor radiology			
33	10.7%	73030	Radiologic exam, shoulder, complete, minimum of two views
34	7.7%	73140	Radiologic exam, finger(s), minimum of two views
35	7.6%	72100	Radiologic exam, spine, lumbosacral, two or three views
36	7.6%	73610	Radiologic exam, ankle, complete, minimum of three views
37	7.3%	73130	Radiologic exam, hand, minimum of three views
38	7.3%	73110	Radiologic exam, wrist, complete, minimum of three views
39	7.2%	73630	Radiologic exam, foot, complete, minimum of three views
40	5.0%	73562	Radiologic exam, knee, three views
41	3.9%	73560	Radiologic exam, knee, one or two views
42	3.5%	76942	Ultrasonic guidance for needle placement, imaging supervision and interpretation
43	3.4%	72040	Radiologic exam, spine, cervical, two or three views
44	3.3%	72110	Radiologic exam, spine, lumbosacral, minimum of four views
45	3.0%	73080	Radiologic exam, elbow, complete, minimum of three views
46	3.0%	73564	Radiologic exam, knee, complete, four or more views
47	2.9%	71020	Radiologic exam, chest, two views, frontal and lateral
48	2.1%	71010	Radiologic exam, chest, single view, frontal
49	2.1%	73590	Radiologic exam, tibia and fibula, two views
50	2.0%	73510	Radiologic examination, hip, unilateral; complete, minimum of two views
51	1.8%	73070	Radiologic examination, elbow, two views
52	1.8%	72170	Radiologic exam, pelvis, one or two views
53	1.7%	73100	Radiologic exam, wrist, two views
54	1.7%	72050	Radiologic exam, spine, cervical, minimum of four views
55	1.6%	73090	Radiologic exam, forearm, two views
56	1.5%	72070	Radiologic exam, spine, thoracic, two views

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Table TA.2 Marketbasket Services (continued)

Service Group	% of Services	CPT Code	Description
Neurological/neuromuscular testing			
57	43.2%	95886	Needle electromyography, each extremity, with related paraspinal areas, done with nerve conduction, amplitude and latency/velocity study
58–64	39.7%	NCS	Nerve conduction study (i.e., CPT codes 95907–95913)
65	7.1%	95851	ROM measurements and report, each extremity (excluding hand) or each trunk section
66	5.9%	95831	Muscle testing, manual (separate procedure) with report; extremity (excluding hand) or trunk
67	4.0%	95885	Needle EMG, each extremity, with related paraspinal areas, when performed, done with nerve conduction, amplitude and latency/velocity study; limited (list separately in addition to code for primary procedure)
Physical medicine			
68	45.8%	97110	Therapeutic procedure, one or more areas, each 15 minutes, therapeutic exercises
69	15.7%	97140	Manual therapy techniques, one or more regions, each 15 minutes
70	7.9%	97530	Therapeutic activities, direct patient contact, each 15 minutes
71	6.2%	97014	Electrical stimulation (unattended), one or more areas
72	5.0%	97112	Therapeutic procedure, one or more areas, each 15 minutes, neuromuscular re-education of movement
73	4.9%	97010	Hot/cold packs, one or more areas
74	3.2%	97035	Ultrasound, one or more areas, each 15 minutes
75	1.6%	97001	Physical therapy evaluation
76	1.2%	98940	Chiropractic manipulative treatment, spinal, one to two regions
77	1.1%	97032	Electric stimulation, one or more areas, each 15 minutes
78	1.0%	97124	Therapeutic procedure, one or more areas, each 15 minutes, massage
79	1.0%	98941	Chiropractic manipulative treatment, spinal, three to four regions
80	0.9%	97546	Work hardening/conditioning, each additional hour
81	0.9%	97012	Traction, mechanical, one or more areas
82	0.8%	97545	Work hardening/conditioning, initial two hours
83	0.8%	97113	Therapeutic procedure, one or more areas, each 15 minutes, aquatic therapy with therapeutic exercises
84	0.8%	97002	Physical therapy re-evaluation
85	0.7%	97033	Iontophoresis, one or more areas, each 15 minutes
86	0.6%	97750	Physical performance test or measurement, with written report, each 15 minutes
Major surgery			
87–90	33.3%	Shoulder arthroscopies	Arthroscopic shoulder surgery (i.e., CPT codes 29823, 29824, 29826, and 29827)
91	18.7%	29881	Arthroscopy, knee surgery, with meniscectomy, medial or lateral
92	15.4%	64721	Neuroplasty and/or transposition, median nerve at carpal tunnel
93	6.6%	29880	Arthroscopy, knee surgery, with meniscectomy, medial and lateral
94	5.6%	63030	Laminotomy with decompression of nerve root, one interspace, lumbar
95	5.3%	49505	Repair initial inguinal hernia, age five years or over, reducible
96	4.4%	29888	Arthroscopically aided ACL repair, augmentation, reconstruction
97	3.8%	23412	Repair of ruptured musculotendinous cuff, chronic
98	3.8%	22551	Arthrodesis, anterior interbody, including disc space preparation, discectomy, osteophytectomy and decompression of spinal cord and/or nerve roots; cervical below C2
99	3.1%	63047	Laminectomy, facetectomy and foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s] [e.g., spinal or lateral recess stenosis]), single vertebral segment; lumbar
Pain management injections			
100	22.9%	20552	Injection(s), single or multiple trigger point(s), one or two muscle(s)
101	21.3%	64415	Injection, anesthetic agent, brachial plexus, single
102	16.5%	64483	Injection(s), anesthetic agent and/or steroid, transforaminal epidural, with imaging guidance (fluoroscopy or CT); lumbar or sacral, single level
103	13.4%	62311	Injection, single (not via indwelling catheter), not including neurolytic substances, with or without contrast (for either localization or epidurography), of diagnostic or therapeutic substance(s) (including anesthetic, antispasmodic, opioid, steroid, other solution), epidural or subarachnoid, lumbar, sacral (caudal)
104	6.7%	64493	Injections, diagnostic or therapeutic agent, paravertebral facet joint (or nerves innervating that joint) with image guidance, lumbar or sacral, single level
105	6.3%	62310	Injection, single (not via indwelling catheter), not including neurolytic substances, with or without contrast (for either localization or epidurography), of diagnostic or therapeutic substance(s) (including anesthetic, antispasmodic, opioid, steroid, other solution), epidural or subarachnoid, cervical or thoracic
106	5.5%	64450	Injection, anesthetic agent, other peripheral nerve or branch
107	5.4%	20553	Injection(s), single or multiple trigger point(s), three or more muscle(s)
108	2.0%	62284	Injection procedure for myelography and/or computed tomography, spinal (other than C1–C2 and posterior fossa)

Key: ACL: anterior cruciate ligament; CPT: Current Procedural Terminology; EMG: electromyography; MRI: magnetic resonance imaging; NCS: nerve conduction study; ROM: range of motion.

Table TA.3 Procedures for Arthroscopic Shoulder Surgery

Major Surgery	Procedure	CPT Code	Percentage Frequency[a]	Description
CPT 29826 is a primary code	1	29827	52.9%	Arthroscopy, shoulder, surgical; rotator cuff repair
	2	29826	29.4%	Arthroscopy, shoulder, surgical; decompression of subacromial space with partial acromioplasty, with or without coracoacromial release
	3	29823	12.7%	Arthroscopy, shoulder, surgical; debridement extensive
	4	29824	5.0%	Arthroscopy, shoulder, surgical; distal claviculectomy including distal articular surface (Mumford procedure)
CPT 29826 is an add-on code	1	29827	63.3%	Arthroscopy, shoulder, surgical; rotator cuff repair
	2	29823	20.6%	Arthroscopy, shoulder, surgical; debridement extensive
	3	29824	16.1%	Arthroscopy, shoulder, surgical; distal claviculectomy including distal articular surface (Mumford procedure)

Notes: The *CPT 2012 Professional Edition* converted CPT 29826 from a primary code to an add-on code. Fifteen study states reimburse CPT 29826 as an add-on code. The other study state workers' compensation fee schedules still establish the rate for CPT 29826 as a primary code.

[a] Percentage frequency is the frequency share for each CPT code within arthroscopic shoulder surgery.

Key: CPT: Current Procedural Terminology.

Table TA.4 Description of Marketbasket Contents

Service Group	Number of CPT Codes	% of Expenditures Captured by Marketbasket Codes	% of Expenditures in Marketbasket	% of Services Captured by Marketbasket Codes	% of Services in Marketbasket
Emergency	5	95%	2%	89%	1%
Evaluation and management	13	95%	26%	96%	17%
Major radiology	14	90%	8%	86%	1%
Minor radiology	24	76%	4%	82%	5%
Neurological/neuromuscular testing	11	78%	2%	77%	1%
Physical medicine	19	94%	36%	95%	73%
Major surgery	13	44%	20%	41%	1%
Pain management injections	9	79%	2%	85%	1%

Key: CPT: Current Procedural Terminology.

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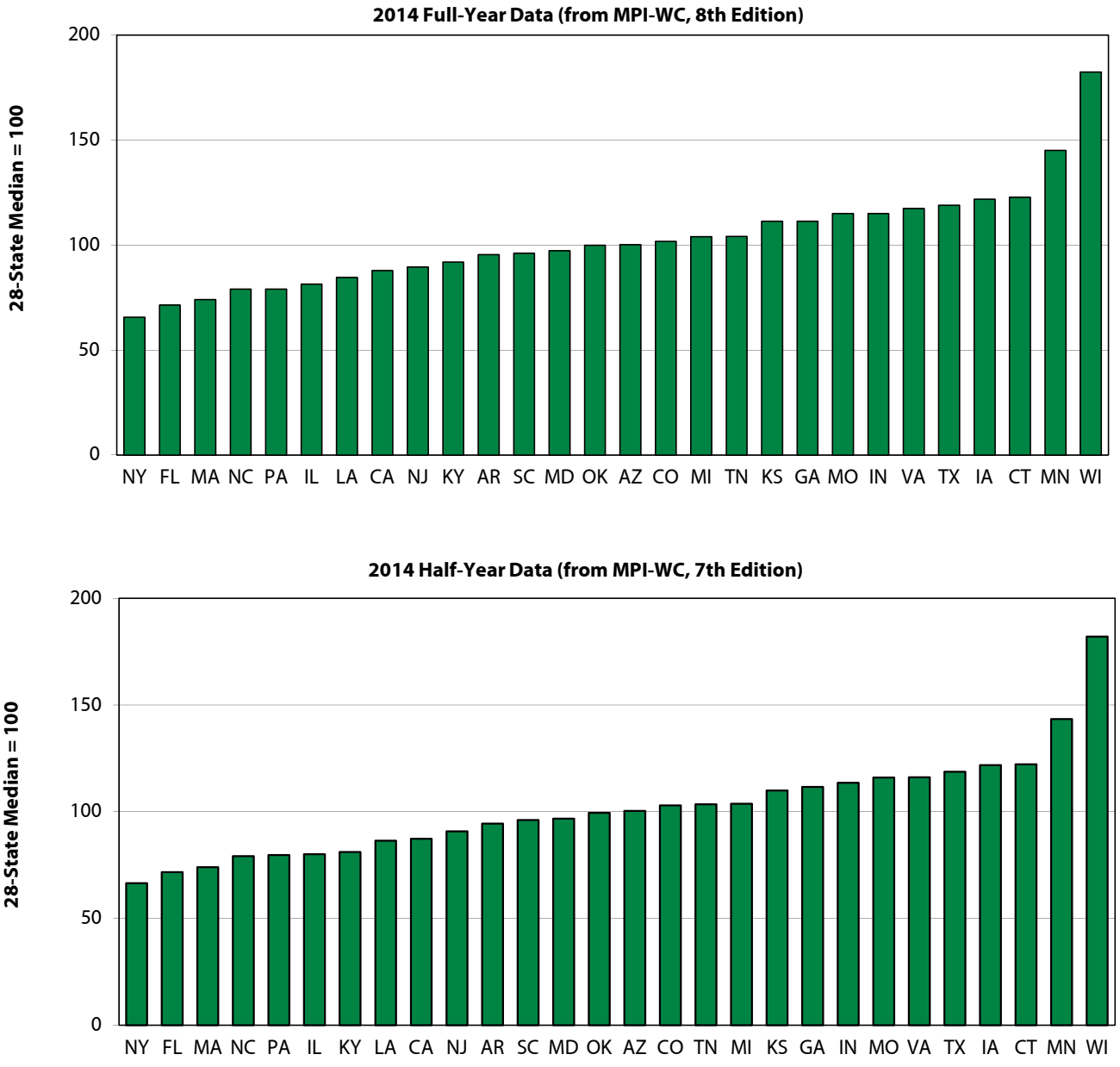
Table TA.5 Percentage of Expenditures Represented by the Marketbasket by State and Service Group, January 2013 to December 2014

State	Emergency	Evaluation & Management	Major Radiology	Minor Radiology	Neurological/ Neuromuscular Testing	Physical Medicine	Major Surgery	Pain Management Injections
AR	94%	95%	87%	80%	70%	96%	36%	78%
AZ	96%	95%	86%	79%	83%	94%	42%	83%
CA	91%	92%	92%	67%	76%	79%	42%	84%
CO	95%	97%	91%	72%	75%	93%	46%	73%
CT	95%	97%	91%	76%	72%	98%	49%	79%
FL	70%	96%	90%	73%	86%	94%	36%	78%
GA	90%	97%	90%	79%	72%	95%	43%	81%
IA	100%	95%	91%	77%	93%	98%	43%	84%
IL	93%	94%	90%	74%	71%	98%	46%	79%
IN	99%	96%	91%	78%	82%	97%	47%	74%
KS	99%	95%	92%	77%	87%	96%	44%	85%
KY	100%	96%	88%	78%	88%	98%	45%	82%
LA	98%	91%	89%	74%	57%	86%	38%	77%
MA	97%	95%	91%	71%	77%	94%	51%	82%
MD	87%	96%	90%	78%	72%	92%	37%	78%
MI	99%	96%	89%	81%	92%	97%	40%	76%
MN	100%	96%	90%	77%	87%	92%	47%	69%
MO	99%	96%	90%	73%	87%	97%	48%	86%
MS	100%	95%	89%	75%	87%	95%	50%	84%
NC	97%	94%	90%	77%	85%	94%	44%	79%
NE	94%	95%	92%	83%	87%	98%	43%	80%
NJ	98%	93%	89%	71%	51%	96%	45%	76%
NY	97%	96%	92%	71%	81%	91%	45%	82%
OK	95%	96%	94%	79%	54%	95%	48%	79%
OR	93%	98%	91%	73%	88%	94%	41%	76%
PA	96%	95%	91%	78%	73%	91%	46%	78%
SC	93%	94%	92%	78%	89%	97%	38%	81%
TN	99%	97%	90%	82%	75%	95%	47%	76%
TX	99%	96%	86%	79%	65%	85%	33%	76%
VA	91%	95%	89%	74%	69%	97%	39%	80%
WI	98%	95%	90%	77%	90%	95%	51%	76%

Figure TA.1 Interstate Comparison of Evaluation and Management Prices Paid, Full-Year versus Half-Year Data in 2014, from Different Editions of the MPI-WC



Notes:

This comparison demonstrates that interstate comparisons based on half-year data are reasonable approximations for the results using full-year data, as the relative rankings of states are fairly similar. We show the comparisons for evaluation and management services here because there was little change in the marketbasket codes selection and computation methods for this service group between different editions of this study.

This comparison reflects the 28 states that were common to both editions of the MPI-WC. Because MS, NE, and OR were excluded due to insufficient cell sizes for 2014 (half-year) in the MPI-WC, 7th Edition, these three states have been excluded from the full-year data illustrated in the figure above.

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