



Medical Cost Trends: Then and Now

INTRODUCTION

Between 1995 and 2016, the cumulative change in workers compensation (WC) accident year (AY) medical severity for lost-time claims substantially exceeded the growth in US healthcare costs per capita. Medical services now constitute about 60% of WC claims costs, up from 40% in the early 1980s. As the table below shows, the average annual growth rate in medical severity was strikingly different between the early part of this period and recent years.

<u>Period</u>	<u>Annual Growth Rate</u>
AY 1995–AY 2002	9%
AY 2002–AY 2009	6%
AY 2009–AY 2015	1%

One of the key contributors to the moderation in the medical severity growth between AY 2009 and AY 2015 was the 1% decrease in AY 2015, reported at NCCI's **2016 Annual Issues Symposium**, which marked the first time in more than two decades that medical severity declined year-over-year.

NCCI reported at its **2017 Annual Issues Symposium** that WC medical severity increased by an estimated 5% in AY 2016. Despite this increase, the average annual growth in medical severity between AY 2009 and AY 2016 was 2%, still a mild growth rate in comparison to the average growth rate over the AY 1995–AY 2009 period.

This study will compare medical cost drivers during a period when medical severity was rapidly increasing (AY 1995–AY 2009) to a more recent period when such increases were more benign (AY 2009–AY 2015). We examine several possible contributors including physician fee schedules, provider networks, hospital costs, and Medicare Set-Asides (MSAs).

KEY FINDINGS

- In recent years, the growth in US healthcare costs per capita has outpaced the growth in medical severity.
- In AY 2015, medical severity decreased by 1%. This marked the first time in more than two decades that medical severity declined year over year—driven to some extent by relatively lower utilization of physician services.
- Since 1979, the number of states with a physician fee schedule has been steadily increasing. These regulatory provisions have helped moderate cost increases.
- Currently, 33 of the 44 states that have a physician fee schedule base it on Medicare reimbursement rates. Medicare's reimbursement rates for physicians have not changed very much in recent years, which further contributes to moderation in WC medical costs.

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- Recently, Medicare has put greater upward pressure on hospital inpatient and outpatient prices than on physician prices.
- The in-network share of payments for physician services has been steadily increasing. In 2015, the share of in-network physician payments was 65%.
- MSAs put upward pressure on medical costs
 - The average approved amount for MSAs appears steady since 2013
 - The gap between approved and submitted MSAs appears steady since 2013 as well
 - The processing time for MSAs has been steadily declining

STUDY DATA

Several data sources were used in this study. We refer the reader to the Appendix for more details about each data source.

TERMINOLOGY

Terminology used throughout this study includes:

- Accident Year (AY)—The year in which the work-related injury took place
- CMS—Centers for Medicare & Medicaid Services
- Lost-Time Claim—A WC claim involving an injured worker who has been absent from work longer than the state mandated waiting period due to a work-related injury or serious occupational disease
- Medical-Only Claim—A claim involving medical services but no absence from work beyond the state-mandated waiting period
- Medical Severity—AY average medical lost-time claim severity at ultimate
- Price—What is paid for an individual service
- Utilization—The intensity of services provided per claim, including:
 - The number of medical units provided on a claim, e.g., 15 minutes versus 30 minutes of physical therapy
 - The mix of services provided on a claim, e.g., a shift from less expensive X-rays to more expensive MRIs

ORGANIZATION OF THE STUDY

This report includes the following sections:

- Medical Severity vs. US Healthcare Costs per Capita—examines the growth in medical severity between AY 1995 and AY 2015 and compares it to the growth in US healthcare costs per capita during the same period
- Drivers of the AY 2015 WC Medical Severity Decline—provides possible explanations for the observed medical severity decline in AY 2015
- Growth in Use of Fee Schedules—continues the investigation of recent medical severity growth moderation by examining the use of fee schedules to control medical costs
- Hospital Medical Costs—shows how hospital costs have recently impacted medical severity and provides possible explanations
- Impact of Medicare Set-Asides (MSAs)—discusses recent trends in MSA settlements
- Impact of Medical Advances on Future Medical Costs—concludes the study by commenting about recent novel medical advances that could assist injured workers in their daily activities and possible impacts of these treatments on future medical costs
- Appendix—provides a detailed description of each data source used in the study

MEDICAL SEVERITY VS. US HEALTHCARE COSTS PER CAPITA

Exhibit 1 shows the growth in medical severity from AY 1995 to AY 2016. Except for AY 2015, medical severity had been steadily increasing during this period. Medical costs now comprise approximately 60% of total WC benefit dollar.

Growth in medical severity between AY 1995 and AY 2015 has not been constant, as Exhibit 1 shows. To better understand growth variations in this period we will look at three distinct time periods:

- AY 1995–AY 2002, a period of very rapid growth in medical severity
- AY 2002–AY 2009, a period of moderate growth
- AY 2009–AY 2015, a period of mild growth

In the next three exhibits, we compare the average annual growth in medical severity to the average annual growth in US healthcare costs per capita. For the latter, we use Personal Health Care (PHC) Spending per Capita, published by CMS.

WC Average Medical Lost-Time Claim Severity

Private Carriers and State Funds—NCCI States

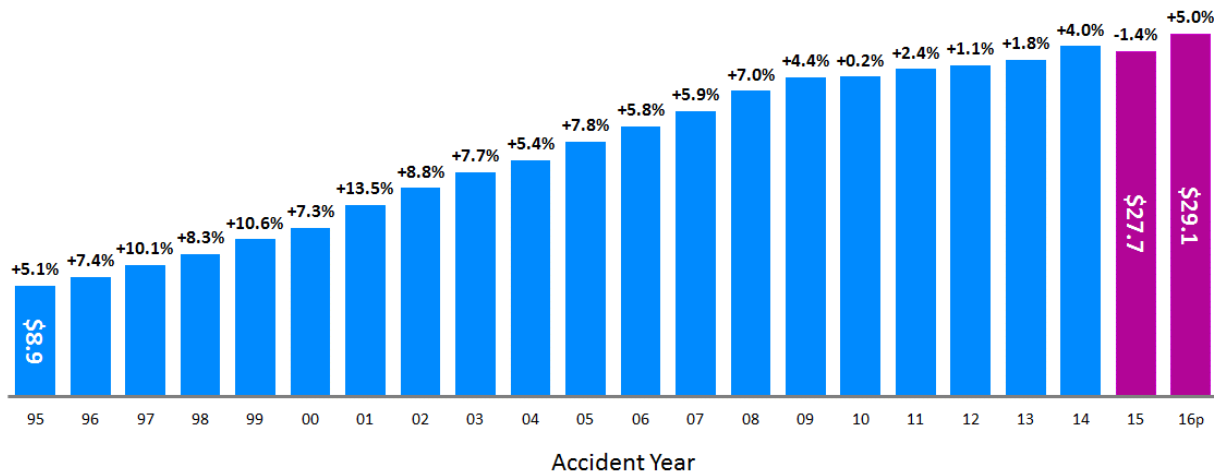


Exhibit 1

p Preliminary based on data valued at 12/31/2016

Source: NCCI Financial Call data, developed to ultimate, excludes high-deductible policies; 1995–2015; Based on data through 12/31/2015. Includes all states where NCCI provides ratemaking services; WV is excluded through 2007

Exhibit 2 compares medical severity year-over-year changes to PHC spending per capita year-over-year changes between AY 1995 and AY 2002, a period with a rapid growth in WC medical severity. Each point on the graph shows the percentage change for both medical severity and PHC spending per capita from the previous year. For example, the 95-96 point shows the 1996 percent change from 1995 for both metrics. For medical severity, the year-over-year 95-96 change was 7.4%, while that for PHC spending per capita was 4.5%.

As shown in the exhibit, for each year in this period the medical severity growth exceeded the growth in PHC spending per capita. One can also see that in several years, such as 96-97, the growth in medical severity was more than double the growth in PHC spending. The medical severity annual growth rate (AGR) in this period was 9%—surpassing the AGR in PHC spending per capita of 6%.

WC Change in Average Medical Lost-Time Claim Severity

Comparison to Change in Personal Health Care (PHC) Spending per Capita

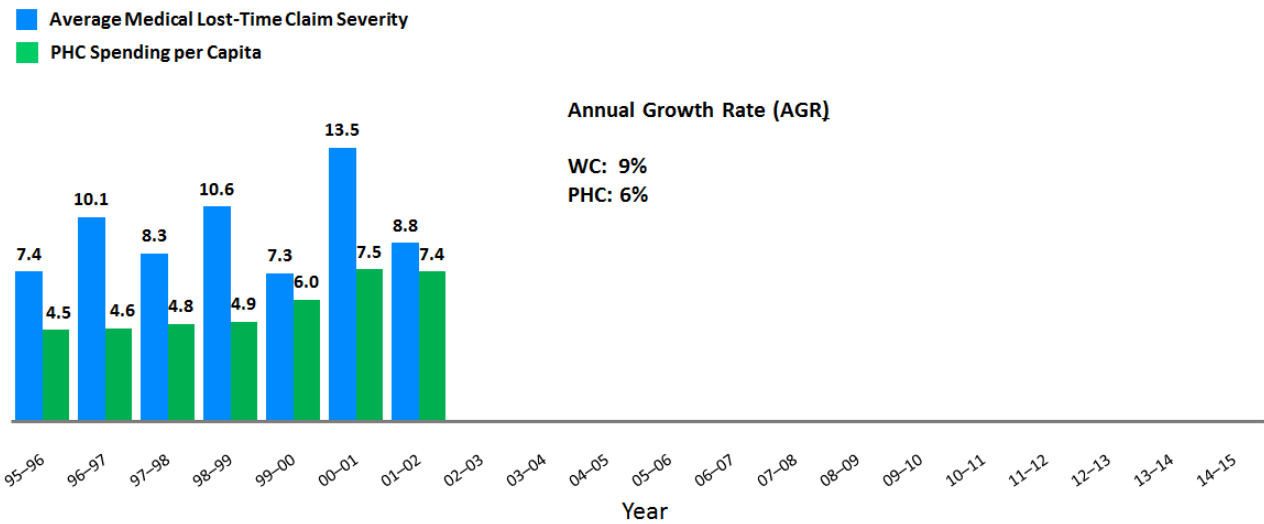


Exhibit 2

Sources: Severity: NCCI Financial Call data, developed to ultimate, excludes high-deductible policies; Accident Years 1995–2015: Based on data through 12/31/2015. Includes all states where NCCI provides ratemaking services; WV is excluded through 2007

PHC Spending per Capita included in National Health Expenditure Data as published by the Centers for Medicare & Medicaid Services at <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/index.html>; Calendar Years 1995–2015: Based on historical data

Exhibit 3 compares medical severity year-to-year changes to PHC spending per capita year-to-year changes between 2002 and 2009, a period during which moderate growth in medical severity was observed. Except for the 04-05 and 07-08 changes, the exhibit shows that the growth in medical severity was generally similar to that in PHC spending per capita. The AGR in this period for medical severity was 6%, close to the PHC spending per capita AGR of 5%.

WC Change in Average Medical Lost-Time Claim Severity

Comparison to Change in Personal Health Care (PHC) Spending per Capita

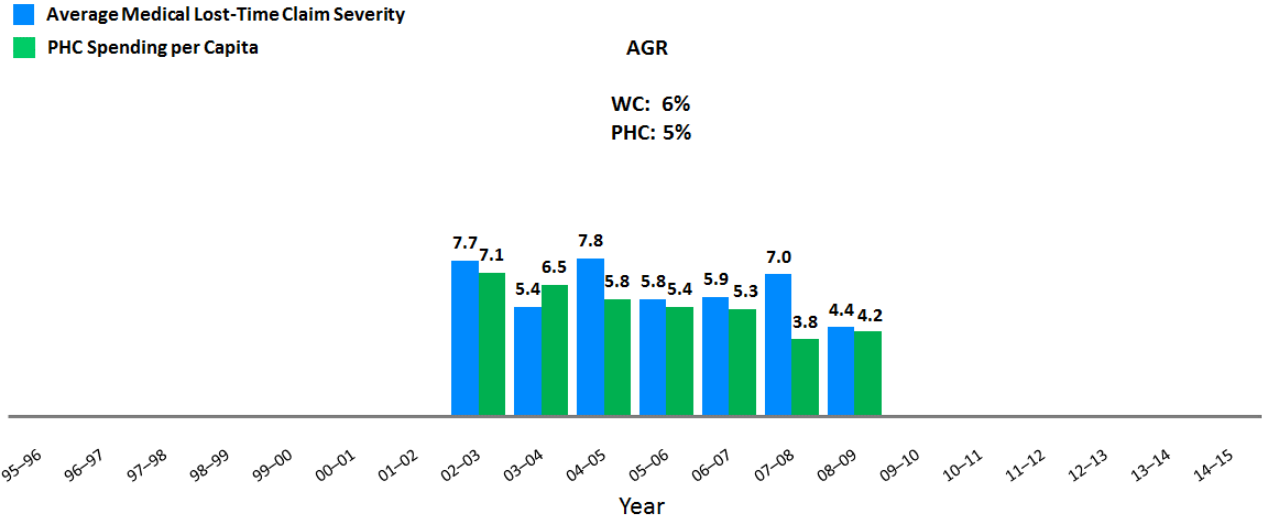


Exhibit 3

Sources: Severity: NCCI Financial Call data, developed to ultimate, excludes high-deductible policies; Accident Years 1995–2015: Based on data through 12/31/2015. Includes all states where NCCI provides ratemaking services; WV is excluded through 2007

PHC Spending per Capita included in National Health Expenditure Data as published by the Centers for Medicare & Medicaid Services at <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/index.html>; Calendar Years 1995–2015: Based on historical data

Exhibit 4 compares medical severity year-to-year changes to PHC spending per capita year-to-year changes between 2009 and 2015. This is the period that witnessed further moderation in medical severity growth. In fact, the AY 2015 year-over-year medical severity change was a decrease—something that had not occurred in more than 20 years.

This exhibit shows that the growth in PHC spending per capita exceeded the growth in medical severity for all accident years. In this subperiod, the AGR for medical severity was 1%, while that for PHC spending per capita was 3%.

In summary, WC medical severity was rising rapidly from 1995 to 2002 and outpaced the growth in US healthcare costs per capita during this time frame. The growth moderated between 2002 and 2009 and was almost identical to the observed growth rate in US healthcare costs. This moderation continued between 2009 and 2015, with the growth in US healthcare costs exceeding the growth in medical severity.

WC Change in Average Medical Lost-Time Claim Severity

Comparison to Change in Personal Health Care (PHC) Spending per Capita

- Average Medical Lost-Time Claim Severity
- PHC Spending per Capita

AGR

WC: 1%
PHC: 3%

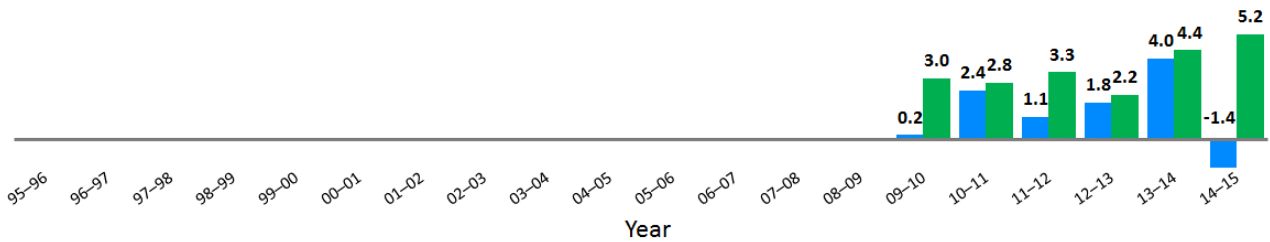


Exhibit 4

Sources: Severity: NCCI Financial Call data, developed to ultimate, excludes high-deductible policies; Accident Years 1995–2015: Based on data through 12/31/2015. Includes all states where NCCI provides ratemaking services; WV is excluded through 2007

PHC Spending per Capita included in National Health Expenditure Data as published by the Centers for Medicare & Medicaid Services at <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/index.html>; Calendar Years 1995–2015: Based on historical data

DRIVERS OF THE AY 2015 WC MEDICAL SEVERITY DECLINE

NCCI reported at its *2016 Annual Issues Symposium* that WC lost-time medical severity decreased by an estimated 1% in AY 2015. This marks the first time in at least two decades that medical severity declined year-over-year. This decrease is one of the important contributors to the recent moderation in medical severity growth and examining the drivers of the decline could provide further clues about the recent trend changes in medical severity.

Exhibit 5 shows the paid medical costs per claim by medical service category. This exhibit shows that paid costs per claim for physician services decreased in AY 2015 by 3%, while paid hospital costs per claim increased by 2%. With physician services representing approximately 40% of WC medical costs, their decrease is the largest contributor to the observed 1% decline in AY 2015 paid medical costs per claim.

Physicians Contribute to the AY 2015 Medical Payments per Claim Decline

AY Payments Through 12 Months; Includes Medical-Only Claims, Does Not Include Case Reserves

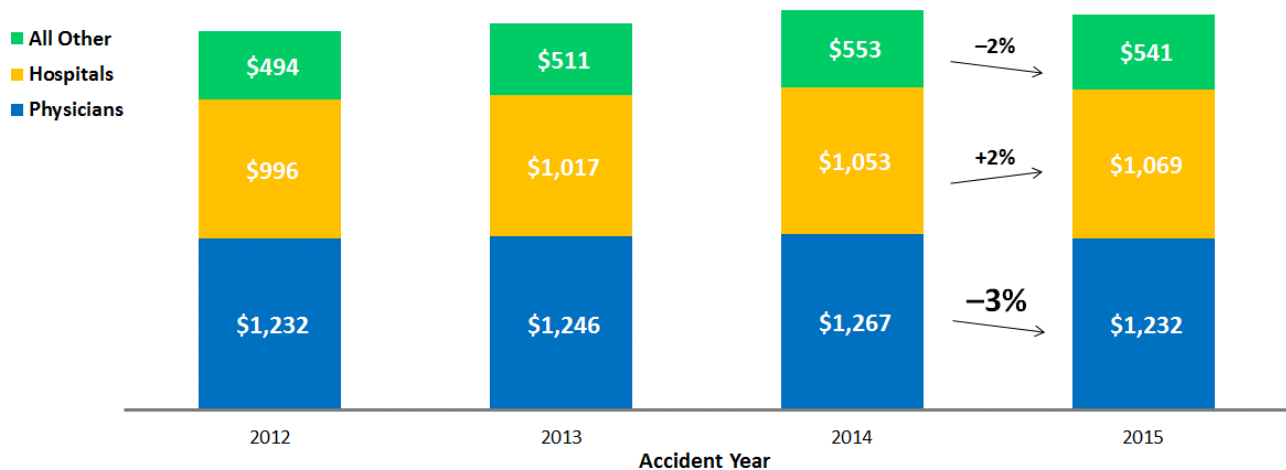


Exhibit 5

NCCI analysis is based on Medical Data Call for medical services provided during the year of injury and paid within three months after the end of the year. For example, Accident Year 2013 includes payments reported by March 31, 2014, for services rendered in 2013 for claims with an accident date in 2013. An analysis is based on claims with at least one medical service during the accident year. Data includes the states where NCCI provides ratemaking services. Data used with permission.

Paid costs per claim for physician services account for most of the 1% decrease in overall medical costs per claim. Physician services include services such as evaluation and management, physical medicine, surgery, and radiology.

Any year-to-year change in costs per claim is a combination of changes in:

- **Price**—The portion of the total cost change that can be attributed to changes in prices relative to the previous year.
- **Utilization**—The difference between the total cost change and the price change. The change in utilization includes changes in the number of services per claim and the impact of changes in the mix of medical services (e.g., from previously used services to more costly alternatives).

Exhibit 6 displays the year-to-year changes in price, utilization, and costs per claim for physician services. This exhibit shows that prices for physician services have remained relatively stable and that utilization was the major contributor to the AY 2015 decline in paid costs per claim for physician services. In fact, the average prices for physician services were almost unchanged in AY 2015, while the 3% decrease in utilization is the major driver of the overall decrease in paid costs per claim for physician services.

Utilization Drives the AY 2015 Decline in Physician Paid per Claim

Physician Price and Utilization Changes by Accident Year Valued at 12 Months

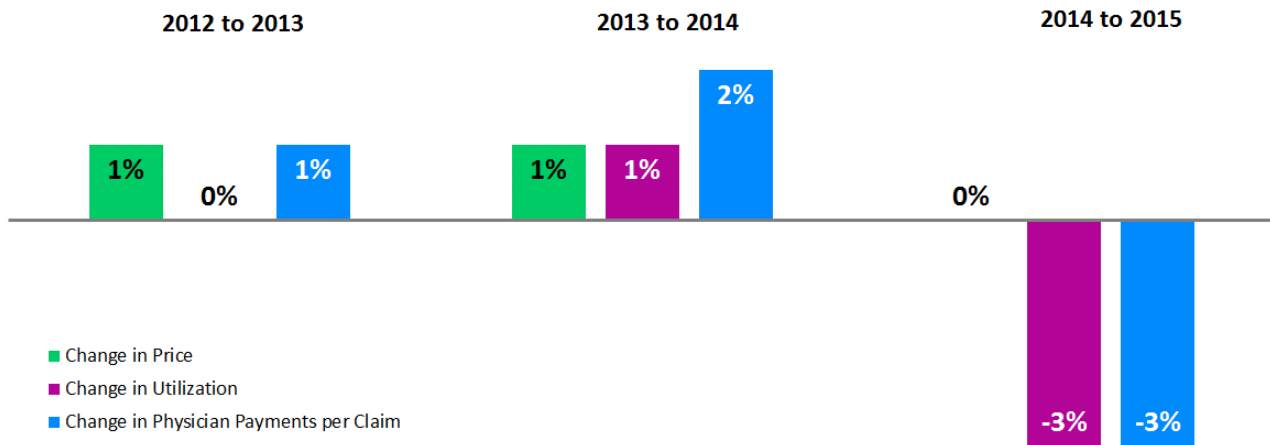


Exhibit 6

NCCI analysis is based on Medical Data Call for medical services provided during the year of injury and paid within three months after the end of the year. For example, Accident Year 2013 includes payments reported by March 31, 2014, for services rendered in 2013 for claims with an accident date in 2013. An analysis is based on claims with at least one medical service during the accident year. Data includes the states where NCCI provides ratemaking services. Data used with permission.

Exhibit 7 shows that the mix of injuries by diagnosis has remained relatively stable between AY 2012 and AY 2015. Thus, the mix of injuries did not influence the observed decline in AY 2015.

For more information regarding the AY 2015 medical severity decline, refer to [1].

The Mix of Injuries by Diagnosis Has Remained Stable Between AY 2012 and AY 2015

Valued at 12 Months

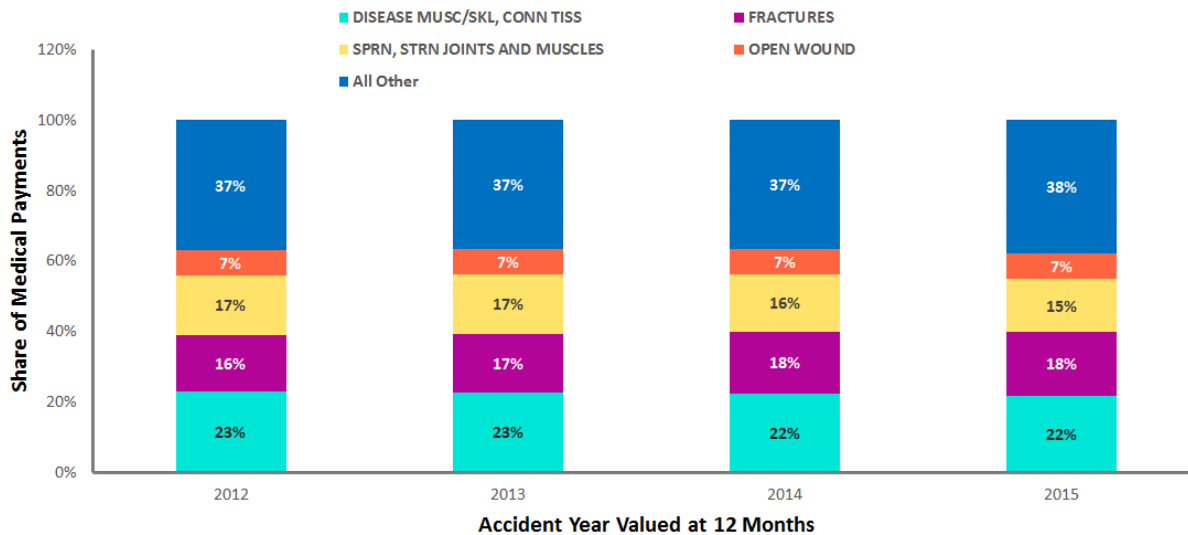


Exhibit 7

NCCI analysis is based on Medical Data Call for medical services provided during the year of injury and paid within three months after the end of the year. For example, Accident Year 2013 includes payments reported by March 31, 2014, for services rendered in 2013 for claims with an accident date in 2013. An analysis is based on claims with at least one medical service during the accident year. Data includes the states where NCCI provides ratemaking services. Data used with permission.

Factors affecting the recent moderate growth in WC medical severity include the use of medical fee schedules, use of provider networks, hospital costs, and Medicare Set-Asides.

GROWTH IN USE OF FEE SCHEDULES

Fee schedules are the oldest and most widely used mechanism to regulate workers compensation medical payments. Exhibits 8a–8c show the steady increase since year-end 1979 in number of states with a physician fee schedule. At Year-End 1979, only 12 states had a physician fee schedule. By the end of 2016, this number had grown to 44 states, with 33 of those states having a Medicare-based physician fee schedule. As discussed later in this paper, Medicare physician price changes have been small in recent years. This fact, in conjunction with the large number of states basing their physician fee schedule on Medicare prices, provides a partial explanation for the recent moderation in medical severity growth.

States With Physician Fee Schedules as of Year-End 1979 12 States in Total

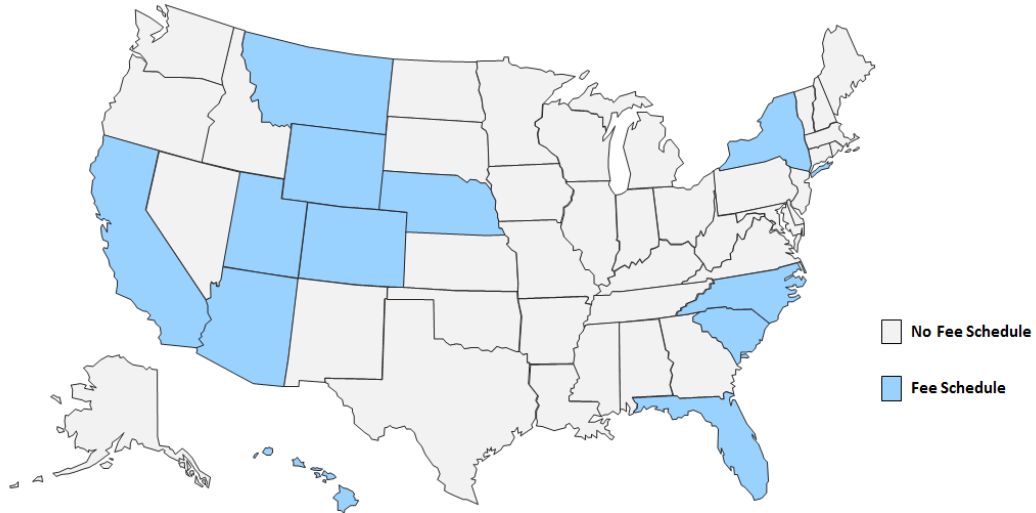


Exhibit 8a

States With Physician Fee Schedules as of Year-End 1999 40 States in Total

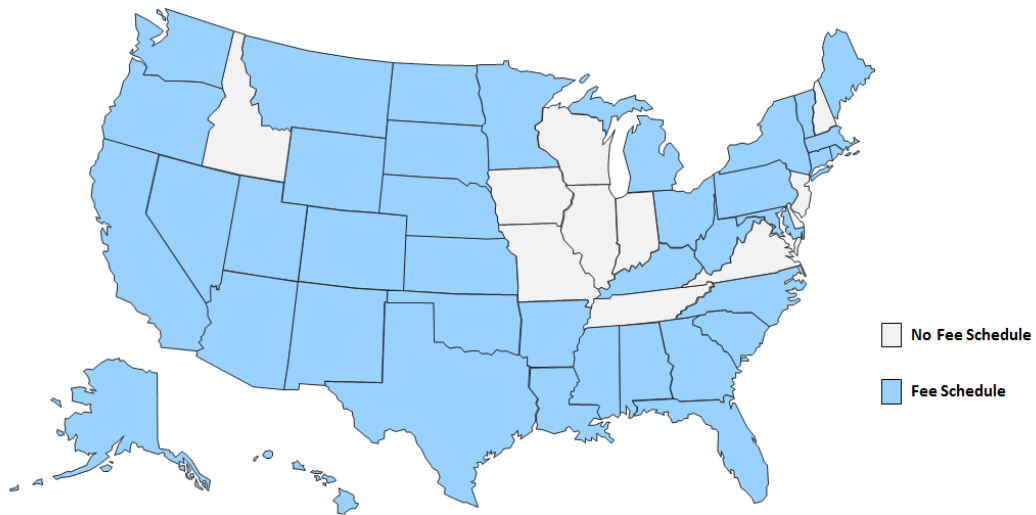


Exhibit 8b

Note: The District of Columbia implemented a physician fee schedule after Year-End 1979 but before Year-End 1999.

States With Physician Fee Schedules as of Year-End 2016

44 States in Total—33 of Which Have a Medicare-Based Schedule

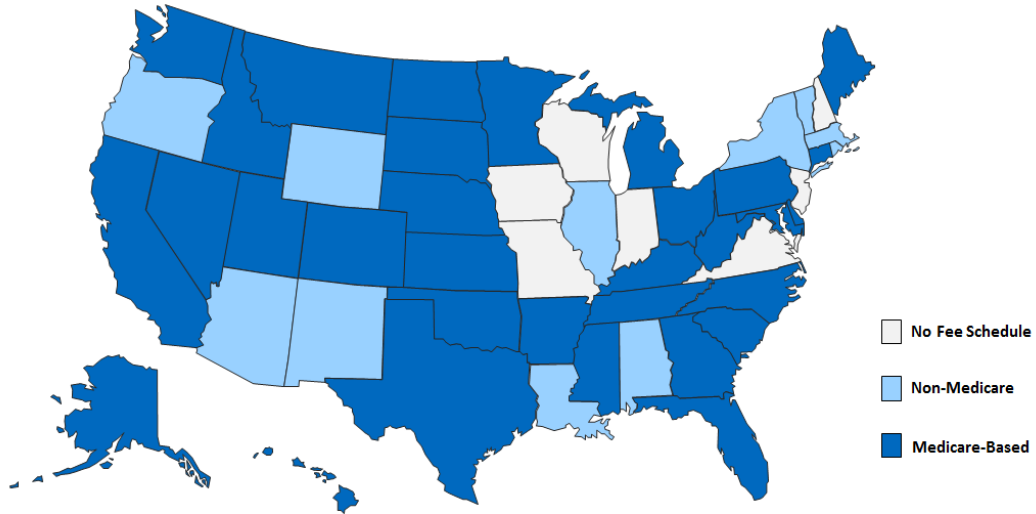


Exhibit 8c

Exhibit 9 shows the share of physician payments for medical services performed over the past several years in provider networks. The share of in-network payments has been steadily increasing and, in 2015 was 65%, the highest percentage in recent years. Services in-network are generally provided at a discount from similar services provided out-of-network. The greater network penetration in recent years helps further explain the slowdown in the growth of medical severity.

In addition to the price discount, we believe that doctors in-network tend to perform fewer services per claim, leading to lower utilization. This will be an upcoming area of research at NCCI.

Network Share of Physician Payments Slows Medical Cost Growth

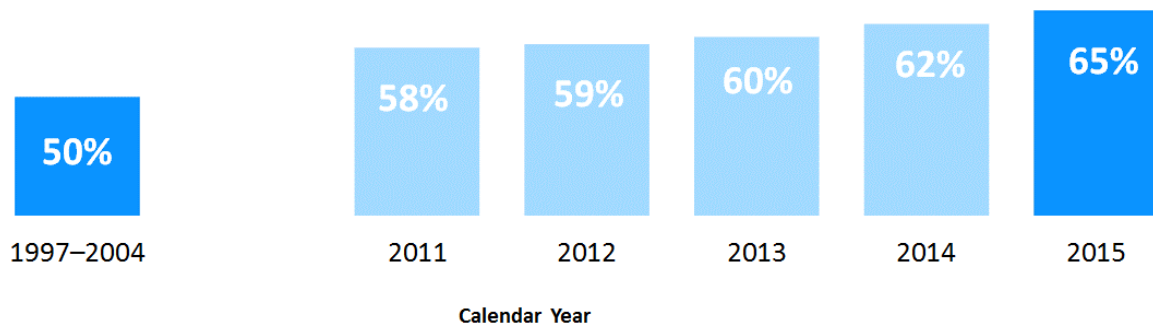


Exhibit 9

Source: Calendar Years 1997–2004 period is based on sample data provided by carriers for 25 states. Calendar Years 2011–2015 is based on data carriers reporting Medical Data Call for 37 states for which NCCI provides ratemaking services, excluding Texas. Data includes Medical-Only claims. 2011–2015 shares are similar to shares shown when restricted to the carriers and states used for the analysis of Calendar Years 1997–2004.

The growth in use of fee schedules is not exclusive to physicians. A number of states have recently implemented hospital fee schedules while several other states are exploring such an implementation. A majority of these states base their hospital fee schedule on Medicare. Furthermore, most states have a prescription drug fee schedule and many carriers use pharmacy benefit management firms to help control WC drug costs.

HOSPITAL MEDICAL COSTS

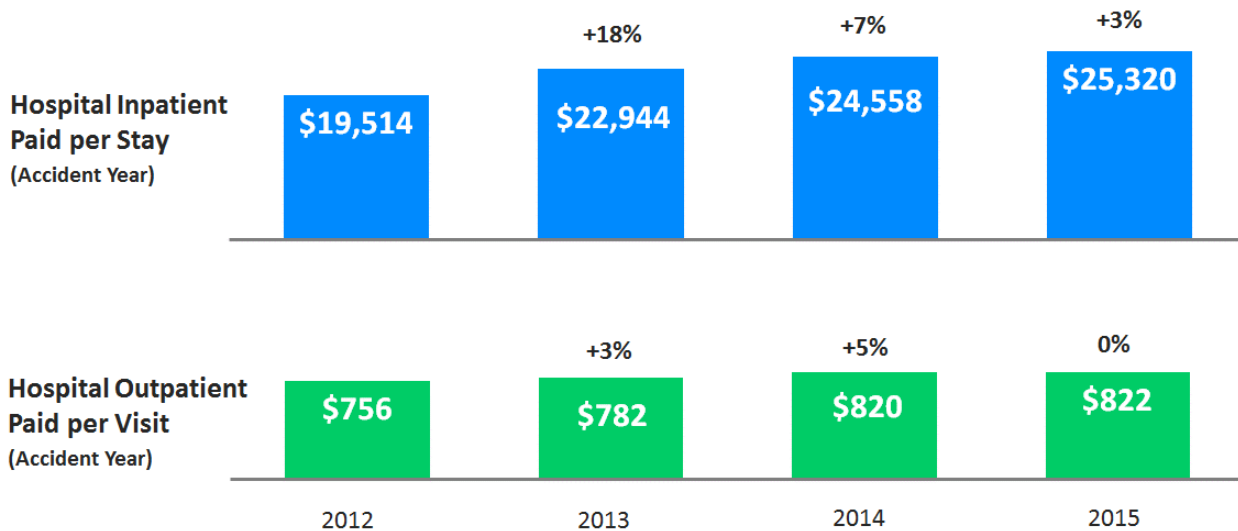
As shown in Exhibit 5, hospitals are the second largest medical service category. Hospital medical payments per claim constitute approximately 35% of total medical payments per claim.

Exhibit 10 shows the average inpatient payment per inpatient stay and average outpatient payment per visit for 2012 to 2015.¹

A major driver of the 2% increase in AY 2015 hospital payments per claim was the increase in hospital inpatient payments per stay. In AY 2015, hospital inpatient payments per stay increased 3%, while the change in payments per outpatient visit was close to zero.

WC Payments per Inpatient Stay and Outpatient Visit Are Rising

AY Payments Through 12 Months; Includes Medical-Only Claims, Does Not Include Case Reserves



NCCI analysis is based on Medical Data Call for medical services provided during the year of injury and paid within three months after the end of the year. For example, Accident Year 2013 includes payments reported by March 31, 2014, for services rendered in 2013 for claims with an accident date in 2013. Analysis is based on claims with at least one medical service during the accident year. Data includes the states where NCCI provides ratemaking services. Data used with permission.

Exhibit 10

A state may adopt Medicare reimbursement rate changes, delay adoption, or modify them. However, increases in Medicare reimbursement rates exert upward pressure on WC reimbursement rates for states that adopt Medicare-based fee schedules. Since a majority of these states base their hospital fee schedules on Medicare, an increase in Medicare reimbursement rates will also put upward pressure on overall medical costs.

Exhibit 11 shows how WC costs in states where NCCI provides ratemaking services would have changed if all WC payments in each service year were made according to the federal Medicare reimbursement schedules (as published by CMS) and the number and mix if WC medical services were held constant. We can see that:

- There were significant price increases for hospital outpatient visits for Service Years 2014 and 2015
- More upward pressure is put on hospital inpatient and outpatient Medicare prices than on Medicare prices for physicians over the period 2012 to 2016
- Physicians' Medicare price changes are small and sometimes slightly negative

¹ To reduce the volatility of the impact on average inpatient payments per stay due to serious injuries requiring extensive hospitalization, we have removed inpatient stays costing more than \$445K.

The direction, and to a certain extent, the magnitude of Medicare hospital inpatient and outpatient price changes displayed in Exhibit 11 correspond to the changes shown in Exhibit 10. This is not surprising since, as of Year-End 2016, approximately 50% of states where NCCI provides ratemaking services had a Medicare-based hospital inpatient or outpatient fee schedule. There are two places where the magnitude of the changes in Exhibit 10 significantly deviates from the projected Medicare changes shown in Exhibit 11:

- The AY 2013 hospital inpatient cost per stay increased by 18%, while the projected Medicare change was an increase of 3.6%. One of the reasons for this difference could be a larger-than-usual number of claims requiring extensive hospitalization.
- The AY 2015 hospital outpatient cost per visit change was negligible, while the projected Medicare change was an increase of 8.5%. A possible explanation to this discrepancy could be the time needed to fully implement a fee schedule change.

Medicare Reimbursement Rate Changes Put Pressure on WC Prices

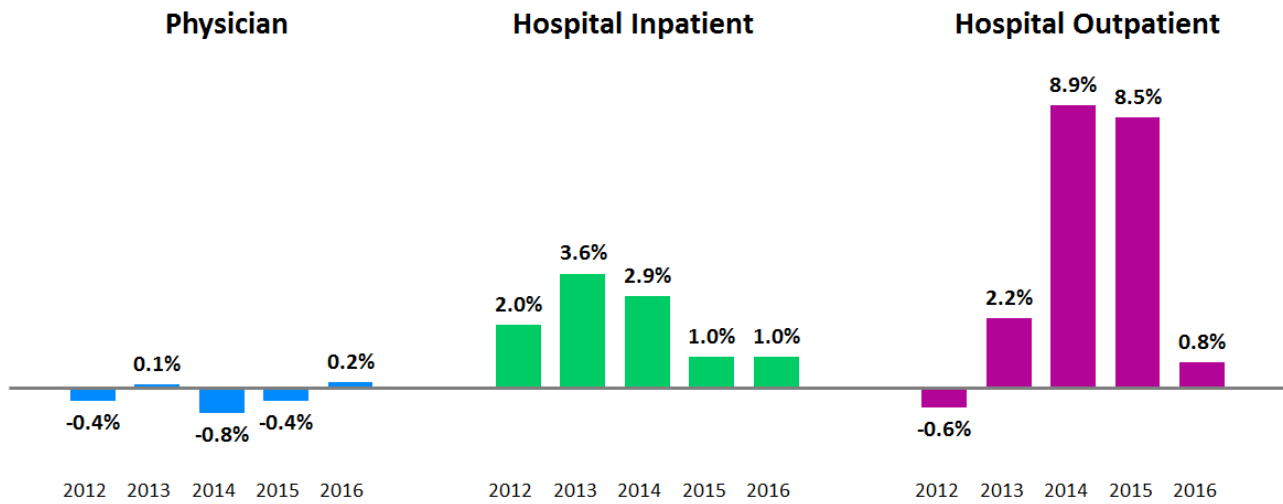


Exhibit 11

Source: NCCI analysis is based on Medical Data Calls—including Medical-Only claims—and conversion factors and relative value units as published by the Centers for Medicare & Medicaid Services.

IMPACT OF MEDICARE SET-ASIDES (MSAS)

Some WC claimants are eligible for Medicare benefits or may become eligible in the near future. Medicare acts as a secondary payer for work-related injuries and WC insurers and self-insured entities are required to protect Medicare’s interests when settling claims. MSAs are funds established to pay for future medical services due to work-related injuries that might otherwise be payable under Medicare.

CMS reviews proposed MSAs subject to certain eligibility criteria and often requires greater funding for the MSA than that proposed. This, of course, puts upward pressure on medical severity. For more background on MSAs, refer to [2] and [3].

In Exhibits 12 and 13, we look at some of the recent MSA trends and their possible impacts on recent trend changes in medical severity. Exhibit 12 shows the average approved and average submitted MSA amounts by the year in which the determination letter was received. The gap between approved and submitted amounts shrunk between 2010 and 2013. Since 2013, this gap appears relatively steady. With more experience in handling MSAs, vendors and carriers may now better understand CMS requirements and, as a result, the submitted values may be more in line with CMS requirements.

Furthermore, since 2013, the average approved MSA claim is approximately \$110K with little year-to-year variation. This is likely acting as another contributor to the observed medical severity moderation.

Approved vs. Submitted MSA Gap Appears Steady Since 2013



Exhibit 12

Source: NCCI analysis of data provided by ExamWorks Clinical Solutions and PMSI Settlement Solutions, LLC, an entity of Optum, for MSAs completed between January 2010 and December 2015 for submissions to the Centers for Medicare & Medicaid Services between September 2009 and December 2015. Data includes the District of Columbia and all states except North Dakota and Wyoming.

Exhibit 13 shows the CMS processing time for MSAs by the year in which the determination letter was received. Average processing time reached its peak in 2012 but since then has been steadily declining. For 2015, the average processing time is 73 days—the lowest in recent history. The decrease in processing time could be a result of a concerted effort by CMS to streamline the submission process (e.g., accepting online submissions instead of mail or fax). The improved processing time is likely to manifest itself in lower loss adjustment expenses and avoidance of medical hyperinflation—both of which could contribute to lower medical severity growth.

Processing Time for MSAs in 2015 Lowest in Recent History

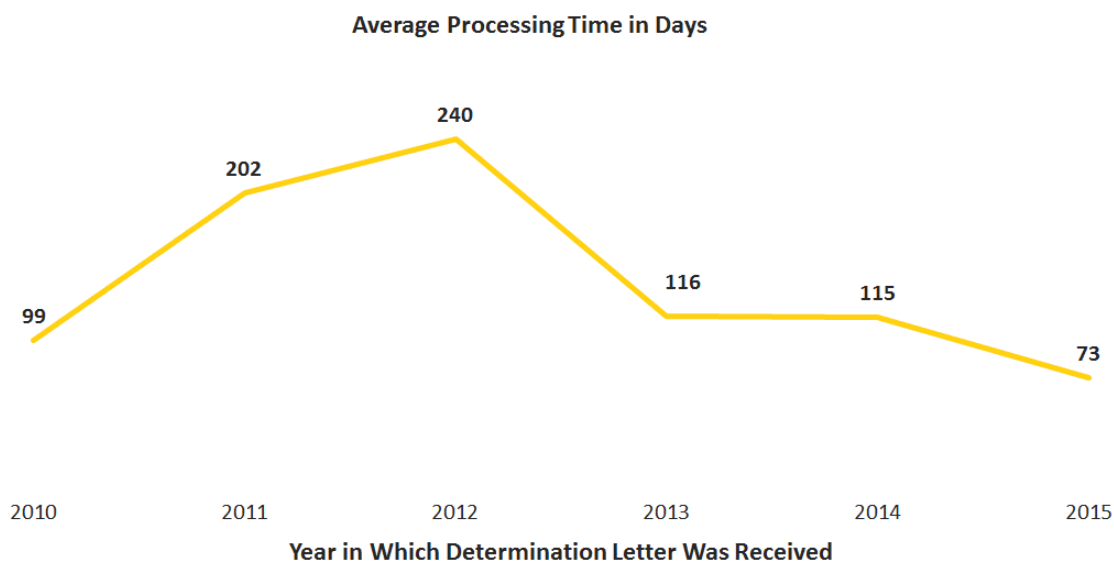


Exhibit 13

Source: NCCI analysis of data provided by ExamWorks Clinical Solutions and PMSI Settlement Solutions, LLC, an entity of Optum, for MSAs completed between January 2010 and December 2015 for submissions to the Centers for Medicare & Medicaid Services between September 2009 and December 2015. Data includes District of Columbia and all states except North Dakota and Wyoming.

OTHER FACTORS INFLUENCING MEDICAL SEVERITY

In 2010, the Affordable Care Act (ACA) was officially signed into law. The individual health insurance mandate and the state option for Medicaid expansion have increased the number of newly insured Americans, with the greatest impact occurring at the time both provisions first went into effect in 2014. NCCI conducted research to determine whether the resulting increase in demand for primary healthcare services crowded out the access to those services for WC claimants. NCCI's research concluded that the ACA had no discernible impact on WC medical utilization in the early stages of the claim [3].

IMPACT OF MEDICAL ADVANCES ON FUTURE MEDICAL COSTS

Advances in medicine and medical technology are having a profound impact on injured workers' lives. People once bound to a wheelchair are, in some cases, now able to walk and improve their daily lives in ways not expected years ago.

Here are three novel medical advances that might someday be applied to workers compensation:

- Use of artificial bones in humans. This treatment involves 3D printing of hyperelastic bones that help regrow damaged or missing bones. It is described in "Print-on-Demand Bone Could Quickly Mend Major Injuries," by Jessica Boddy, dated September 28, 2016, on the website for Science, a journal of the American Association for the Advancement of Science.
- A monkey regaining control of a paralyzed leg despite a partially severed spinal cord. This medical research is portrayed in "Primates Regain Control of Paralyzed Limb," by Hillary Sanctuary, dated November 9, 2016, on the website of the

École Polytechnique Fédérale de Lausanne (EPFL). This is not currently being tested on human subjects, and likely will not be for many years.

- Several people using brain-activated exoskeletons to open and close paralyzed hands. This medical advancement is explained in “Hybrid EEG/EOG-based Brain/Neural Hand Exoskeleton Restores Fully Independent Daily Living Activities After Quadriplegia,” by S.R. Soekadar, et al., published in *Science Robotics*, December 6, 2016.

While some of the advances are cost-effective, others are likely to increase costs on disability claims in the short term. However, some of the costly treatments may restore full functionality, enable a full return to work, and improve the quality of life for the injured worker. Thus, in the long term, such treatments could provide cost savings on permanent disability claims and redefine the concept of permanent disability.

CLOSING REMARKS

After a period of rapid increase, the growth in medical severity has recently moderated. Since 2009, the annual growth in medical severity has been smaller than the growth in US personal healthcare per capita. In AY 2015, medical severity decreased for the first time in at least 20 years—driven to some extent by relatively lower utilization of physician services.

Medicare reimbursement rates are used by 33 of the 44 states that have a physician fee schedule. Recent Medicare physician price changes have been negligible, which could help explain the recent moderation in medical severity growth. The share of in-network payments for physician services has been steadily rising, possibly providing another explanation for the slowdown in medical severity growth.

Hospital inpatient payments per stay and hospital outpatient payments per visit have been steadily increasing over the past several years. Approximately half of NCCI states have Medicare-based hospital inpatient or hospital outpatient fee schedules. Medicare has recently exerted relatively greater upward pressure on hospital inpatient and hospital outpatient prices, which partly explains the observed growth in hospital payments.

Since 2013, the gap between approved and submitted MSAs has remained relatively steady as have the average approved amounts. A decline in CMS’s MSA processing time has been observed over the recent past.

Recent medical advances are likely to improve the quality of life for seriously injured workers, but at this point it is unclear how they will impact the medical costs.

REFERENCES

[1] David Colón and Nedžad Arnautović, “Investigating the Drivers of the 2015 Workers Compensation Medical Severity Decline,” NCCI, September 2017. To be posted on ncci.com in September 2017.

[2] Barry Lipton, David Colón, John Robertson, and Daniel Stern, “Medicare Set-Asides and Workers Compensation,” NCCI, September 2014, https://www.ncci.com/Articles/Documents/II_medicare_set_asides_research.pdf.

[3] Nedžad Arnautović, “Medicare Set-Asides and Workers Compensation—October 2017 Update,” NCCI, October 2017. To be posted on ncci.com in October 2017.

[4] Leonard F. Herk, “Impacts of the Affordable Care Act on Workers Compensation,” NCCI, November 2016, https://www.ncci.com/Articles/Documents/II_Research_Brief_AffordableCareAct.pdf.

APPENDIX

Detailed Description of Data Sources Used in This Study

FINANCIAL CALL DATA (FCD)

Financial Call data, based on states where NCCI provides ratemaking services, developed to ultimate and excluding high deductible policies for Accident Years 1995 through 2015. West Virginia is excluded through 2007.

MEDICAL DATA CALL (MDC)

For states except Texas, the data source used in this study is NCCI's Medical Data Call (MDC). For Texas, the data source is DWC Medical State Reporting Public Use Data File (PUDF).² The MDC captures transaction-level detail on WC medical bills processed on or after July 1, 2010, including dates of service, charges, payments, procedure codes, and diagnosis codes.

For this study, we used experience reported through March 2016 for:

- Services provided during the year of injury for injuries occurring between January 1, 2012 and December 31, 2015 and processed within three months of the end of the year of injury. For example, for a claim with injury date October 1, 2013, we use services provided between October 1, 2013 and December 31, 2013, processed by March 31, 2014.
- All claims with at least one medical service. This includes lost-time and medical-only claims.
- Data for the following states has been included: AK, AL, AR, AZ, CO, CT, DC, FL, GA, HI, IA, ID, IL, IN, KS, KY, LA, MD, ME, MO, MS, MT, NC, NE, NH, NM, NV, OK, OR, RI, SC, SD, TN, TX, UT, VA, VT, and WV.

MEDICARE SET-ASIDE DATA PROVIDED BY EXAMWORKS CLINICAL SOLUTIONS AND PMSI SETTLEMENT SOLUTIONS

MSA data was provided by ExamWorks Clinical Solutions and PMSI Settlement Solutions, LLC, an entity of Optum. The sample data is based on approximately 11,500 MSAs submitted to CMS between September 2009 and December 2015, and completed between January 2010 and December 2015. Data for each submission to CMS includes the proposed total settlement, the proposed MSA amount, and the final MSA amount.

Although the data provided by ExamWorks Clinical Solutions and PMSI Settlement Solutions is only a sample and may not be representative of all MSAs, the distribution of MSAs by state was in line with the general state population for states that allow settlements for WC medical benefits.

PERSONAL HEALTHCARE SPENDING PER CAPITA

Personal Healthcare Spending included in National Health Expenditure Data as published by CMS and available at <https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/index.html>. Personal Health Care includes professional services, hospital care, prescription drugs, durable medical equipment, and other nondurable medical products.

² Texas Department of Insurance, Division of Workers' Compensation, Austin, TX.