



Medical Data Report

For the state of

SOUTH DAKOTA

October 2023



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Introduction

Medical costs have been growing over the last 30 years. Today, in many states, close to 60% of workers compensation benefits are attributed to medical costs. Managing the cost and delivery of medical care is one of the major concerns facing workers compensation (WC) stakeholders now and in the foreseeable future. The availability of medical data on WC claims is essential for the pricing of proposed state legislation and assessing impacts of changes to fee schedules.

This publication is a data source for regulators and others who are interested in the driving forces behind changing medical costs in WC claims. The information in this report provides important benchmarks against which cost containment strategies may be measured and gives valuable insight into the medical cost drivers that underlie the financial soundness of the WC system. When making comparisons to the region and countrywide (CW), it is important to note that some states in this report do not have a fee schedule.

Knowing how payments for different services contribute to WC medical benefit costs provides insight into the growth of medical benefits. This report illustrates the breakdown of services by category, namely:

- Physician
- Hospital Outpatient
- Hospital Inpatient
- Ambulatory Surgical Centers
- Drugs
- Durable Medical Equipment, Prosthetics, Orthotics, and Supplies (DMEPOS)
- Other

The report drills down into these categories to show which procedures represent the greatest share of payments.

There is one important caveat: Information in this report may not coincide with an analysis of a medical fee schedule change performed in the future. An analysis of a medical fee schedule change requires evaluation of the specific procedures covered by the fee schedule, which may be different from how payments are categorized in this report.

The data contained in this report represents medical transactions for Service Year 2022 (medical services delivered from January 1, 2022, to December 31, 2022), except where otherwise noted. WC insurance carriers must report paid medical transactions if, over the most recent three years, they write at least 1% of the market share in any one state for which NCCI is the rating or advisory organization. Once a carrier meets the eligibility criteria, it is required to report for all applicable states in which it writes WC insurance. All carriers within an insurance group are required to report.

No data adjustments have been made for the reporting of COVID-19-related claims.

For South Dakota in Service Year 2022, the reported number of transactions was more than 223,000, with more than \$54,342,700 paid, for more than 12,000 claims. This represents data from 97% of the workers compensation premium written, which includes experience for large-deductible policies. Bulk payments and lump-sum settlements are not required to be reported. Also, self-insured data is not included.



Unless otherwise noted, the source for all data in this report is NCCI's Medical Data Call, Service Year 2022.

Also:

- Region includes data from the following states: IA, IL, IN, KS, MI, MN, MO, NE, and OK.
- Countrywide includes data from the following states: AK, AL, AR, AZ, CO, CT, DC, FL, GA, HI, IA, ID, IL, IN, KS, KY, LA, MD, ME, MI, MN, MO, MS, MT, NC, NE, NH, NM, NV, OK, OR, RI, SC, SD, TN, TX, UT, VA, VT, and WV
- Texas data is included for Service Year 2020 and beyond

Additional information regarding the data underlying this report is available in the Appendix.

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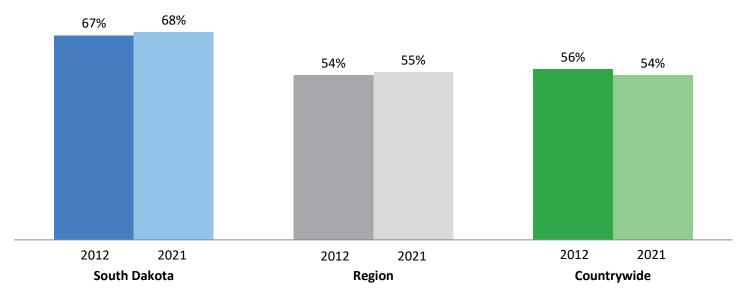
Medical Cost Statistics

Traditional workers compensation policies cover two types of benefit payments: medical benefits and indemnity (lost wages) benefits.

Of the two, medical benefits resulting from a work-related injury or disease are the leading cost drivers for workers compensation claims on a countrywide basis. Because this is a relative measure and benefits for both indemnity and medical may vary from state to state, the share of medical benefit costs may vary across states. In particular, the medical share in a state may be large because the indemnity benefits are relatively less prominent.

Chart 1 displays the medical percentage of total benefit costs for South Dakota, the region, and countrywide for Accident Years 2012 and 2021.

Chart 1
Medical Share of Total Benefit Costs by Accident Year



Source: NCCI's Calendar-Accident Year Call for Compensation Experience. Region includes IA, IL, IN, KS, MO, NE, and OK. Countrywide data includes 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.

The countrywide overall medical average cost per claim has seen moderate increases in recent years, averaging about 1% from Accident Years 2012 to 2021; this has increased at a slightly lower rate than the United States Personal Healthcare Spending per capita. ¹ Chart 2 displays the historical overall medical average cost per case (per lost-time claim) for the most recent 10 accident years. Results are displayed for South Dakota, the region, and countrywide.

Medical losses are at historical benefit levels and historical dollar values—meaning that no adjustment for inflation or changes in benefits has been made. Since the data is aggregated for medical losses of lost-time claims by accident year, the results shown in this chart provide a high-level perspective of the average medical cost per case.

This chart illustrates how South Dakota compares to the regional and countrywide average for each individual accident year and allows for the comparison of the growth in average medical costs.

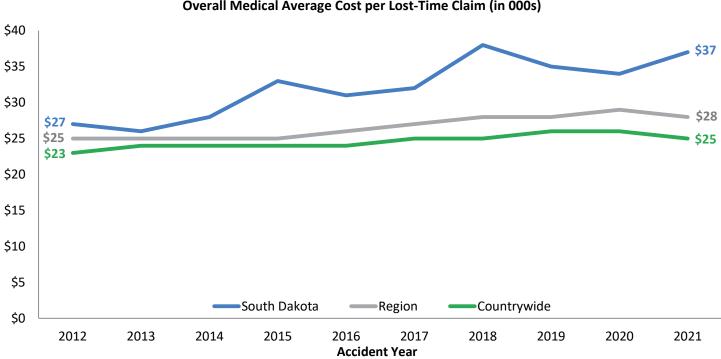


Chart 2
Overall Medical Average Cost per Lost-Time Claim (in 000s)

Source: NCCI's Calendar-Accident Year Call for Compensation Experience. Region includes IA, IL, IN, KS, MO, NE, and OK. Countrywide data includes 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.

¹ State of the Line Report, Annual Issues Symposium, May 2022, www.ncci.com/Articles/Pages/AIS2022-SOTL-Presentation.pdf

One factor that impacts medical costs is the time over which medical services are used. Payments on a workers compensation claim often continue for many years. NCCI research has found that it is likely that about 10% of the cost of medical benefits for workplace injuries that occur this year will be for services provided more than two decades into the future.

A key determinant driving payment patterns for medical services is the effectiveness of dispute resolution processes, settlement practices, and statutory provisions for medical benefits. An aging workforce and continued changes in rules for Medicare set-asides have created a shifting environment for the settlement of claims and, particularly, medical benefits.

Chart 3 shows the percentage of medical benefits paid (including medical settlements) at different claim maturities for South Dakota and countrywide.

Chart 3

Percentage of Medical Paid by Claim Maturity

91% 93%

79% 81%

84% 87%

South Dakota

1 Countrywide

1 Years From Beginning of Accident Year

Source: NCCI's Calendar-Accident Year Call for Compensation Experience. Countrywide data includes 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, and VT.

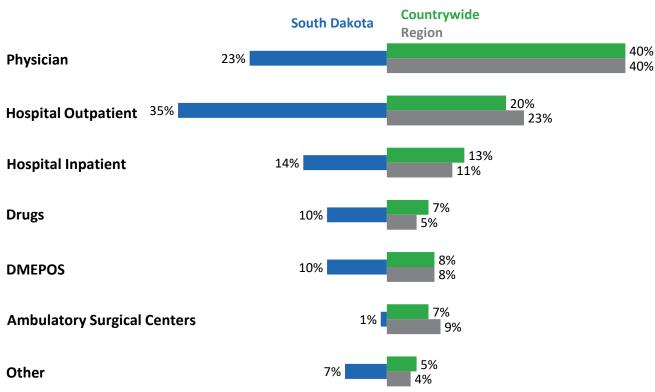
Knowing how payments for different medical services contribute to workers compensation medical benefit costs provides insight into the growth in medical benefits.

Payments categorized as Drugs; DME, Supplies, and Implants; and Other (includes home health, transportation, vision, and dental services) are based on the procedure code reported. Payments are mapped to these categories regardless of who provides the service or where the service is performed. For the remaining categories—Physicians, Hospital Outpatient, Hospital Inpatient, and Ambulatory Surgical Centers (ASC)—NCCI relies on a combination of:

- Provider taxonomy code—identifies the type of provider that billed for, and is being paid for, a medical service
- Procedure code—alphanumeric code used to identify procedures performed by medical professionals
- Place of services—alphanumeric code used to identify places where procedures were performed (e.g., physician's
 office or ambulatory surgical center)

Chart 4 displays the distribution of medical payments by type of service.

Chart 4
Distribution of Medical Payments





Physicians

In the 1970s, fewer than a dozen states had physician fee schedules in place. In the 1990s, several states established such schedules. Today, few states remain without a physician fee schedule. Recent changes in the schedules indicate greater attention to provisions that often seek to balance cost containment with service provider availability. NCCI's most recent study, "The Impact of Fee Schedule Updates on Physician Payments" (December 2018), shows that:

- Approximately 80% of any change in the maximum allowable reimbursement (MAR) for a physician service will be realized as a change in prices paid
- Most of the impact of a MAR change on prices paid is realized within one year from the date of a fee schedule change

One measure of workers compensation medical costs is a comparison of current payments to the Medicare rates adjusted for your state.

The chart below shows the average percentage of Medicare schedule reimbursement² amounts for physician payments by category for South Dakota, the region, and countrywide. Note that "all physician services" in Chart 5 below refers only to the categories listed in the chart, and the state comparison reflects Medicare's geographic adjustments. In South Dakota, 94% of "all physician services" payments are included in the chart below.

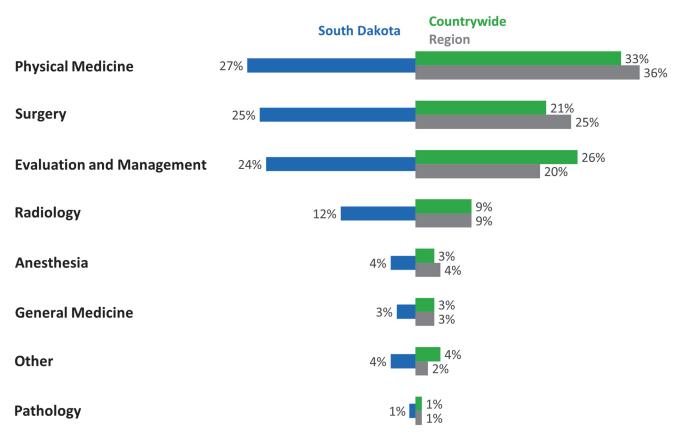
Chart 5
Physician Payments as a Percentage of Medicare

Physician Service Category	South Dakota	Region	Countrywide
General and Physical Medicine	113%	149%	133%
Surgery	197%	321%	250%
Evaluation and Management	99%	144%	137%
Radiology	225%	282%	219%
Anesthesia	283%	386%	290%
All Physician Services	137%	189%	160%

² The calculation for Surgery takes into account Medicare's endoscopic procedures reimbursement rules.

Chart 6 displays the distribution of physician payments by service category for South Dakota, the region, and countrywide.

Chart 6
Distribution of Physician Payments by AMA Service Category



In 2019, NCCI conducted a review of physician costs in workers compensation as compared to group health (GH). Results³ show that WC physician costs are 77% higher than GH in general, with variation across states ranging from 0% to 200%. The difference in costs for physician services is due to both prices and utilization of services. Most notably, physical medicine services in WC are almost three times the costs of physical medicine services in GH, largely due to the number of services provided.

Physicians typically use current procedural terminology (CPT) codes to identify the services that they provide to claimants. These codes are specific and provide detailed information on what service was performed. The charts below display the top 10 procedure codes reported by physicians for the following service categories: anesthesia, surgery, radiology, physical and general medicine, and evaluation and management. A brief description of each procedure code is displayed in the corresponding table below each chart.

Except for anesthesia codes and physical & general medicine codes, the charts also include the average amount paid per transaction (PPT) for these codes in South Dakota, in the region, and countrywide. The average PPT is calculated by taking the total payments for the procedure code and dividing by the number of transactions for the procedure code. Other fields, such as the secondary paid procedure code, modifier, diagnosis code, place of service, and quantity/units, may need to be considered when evaluating average payments per service. The charts for the top 10 anesthesia codes and physical & general medicine codes include the average amount paid per unit (PPU) for the codes in South Dakota, in the region, and countrywide. The PPU is calculated by taking the total payments for the procedure code and dividing by the number of units for the procedure code. For these codes, a unit is typically a measurement of time (15-minute increment, 30-minute increment, 1-hour increment, etc.) but can also be one transaction. The procedure code description will indicate the unit measurement.

The Top 10 charts rank the procedure codes for each service category. Procedure codes are sorted from highest total payments to lowest total payments. The procedure code with the highest amount paid is ranked first, the procedure code with the second highest amount paid is ranked second, and so on. This method of ranking shows those procedures that represent the highest percentage share of payments.

Additional charts show time until first treatment. Time to initial treatment (TTT) is a measure of the availability of medical services and is measured by the number of days between the date of injury and the date on which the worker first received medical services.

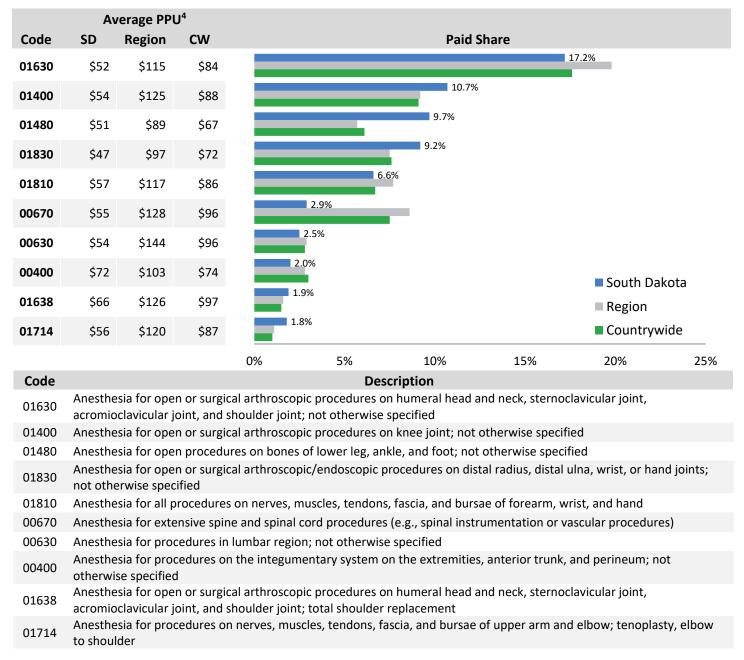
³ Lipton, Barry, Work Comp vs. Group Health—The Price We Pay (Channel NCCI, video file), May 23, 2019, www.youtube/fb3tnbQoMSY

(NCCI)

In South Dakota, physician payments for anesthesia services provided in 2022 are, on average, 283% of Medicare-scheduled reimbursement amounts, compared to 386% in the region and 290% countrywide. Payments for these services comprise 4% of physician payments, compared to 4% in the region and 3% countrywide.

Chart 7

Top 10 Anesthesia Procedure Codes by Amount Paid



⁴ A unit is an increment of 15 minutes unless otherwise defined in the description.



In South Dakota, physician payments for surgery services provided in 2022 are, on average, 197% of Medicare-scheduled reimbursement amounts, compared to 321% in the region and 250% countrywide. Payments for these services comprise 25% of physician payments, compared to 25% in the region and 21% countrywide.

Top 10 Surgery Procedure Codes by Amount Paid

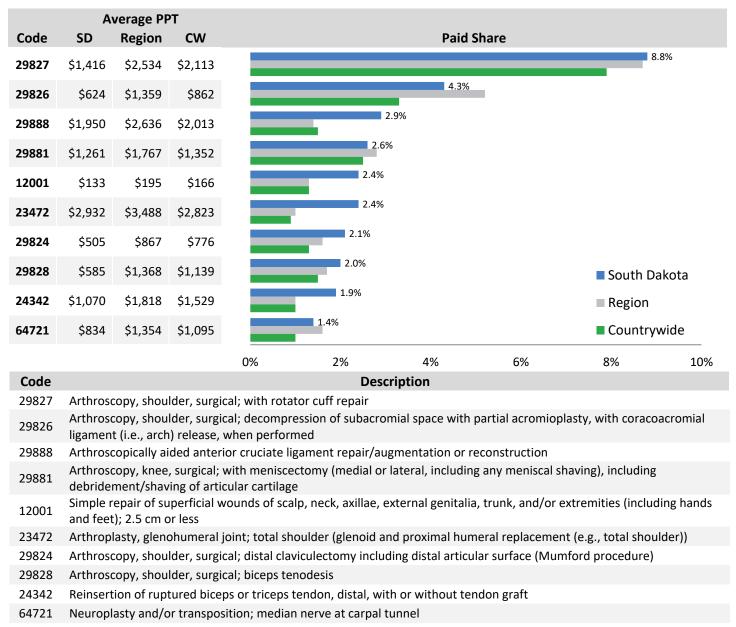
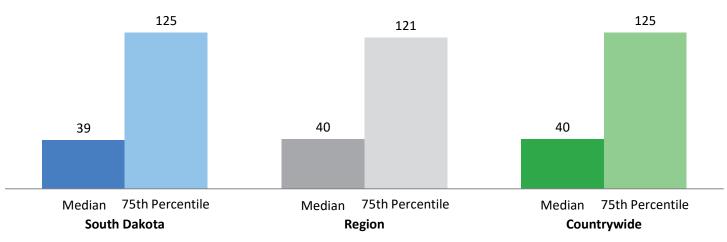




Chart 9 shows the median and 75th percentile⁵ time until first treatment for major surgery for South Dakota, the region, and countrywide. No adjustment has been made to account for injuries that may take time to develop such as an occupational disease, which may extend the time between the date a work-related injury or disease is reported and the first medical treatment takes place.

Chart 9 Time Until First Treatment for Major Surgery⁶ (in Days)



Source: NCCI's Medical Data Call for Accident Year 2021 and Service Years 2021 and 2022.

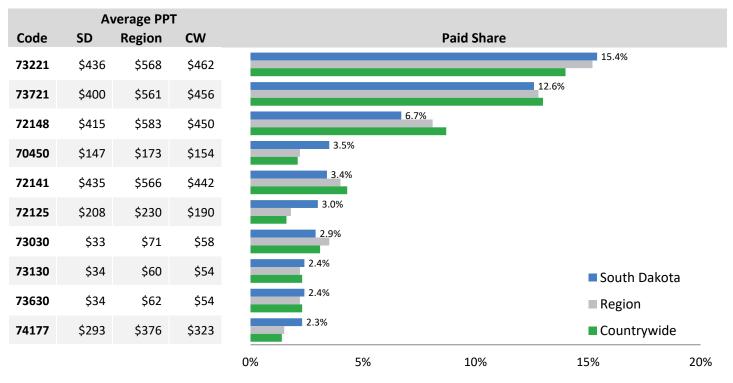
⁵ The median is the TTT where one-half of all TTT values are higher and one-half are lower. This statistic is less affected by extremely low or extremely high values. The 75th percentile is the TTT where 75% of all TTT values are lower and 25% are higher. For example, Chart 9 indicates that out of 100 claimants, 75 will receive a major surgery within 125 days of their accident date. Comparing the median to the 75th percentile illustrates the variation in TTT between claims.

⁶ A service is classified as "surgical" if it falls within the surgical category as defined by the AMA. A service is further classified as "major surgery" if it is not an injection and has a global follow-up period of 90 days, as defined by the Centers for Medicare & Medicaid Services, or the procedure involves spine/spinal cord neurostimulators.

In South Dakota, physician payments for radiology services provided in 2022 are, on average, 225% of Medicare-scheduled reimbursement amounts, compared to 282% in the region and 219% countrywide. Payments for these services comprise 12% of physician payments, compared to 9% in the region and 9% countrywide.

Chart 10

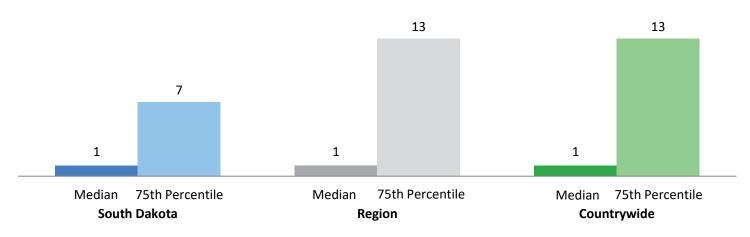
Top 10 Radiology Procedure Codes by Amount Paid



Code	Description
73221	Magnetic resonance (e.g., proton) imaging, any joint of upper extremity; without contrast material
73721	Magnetic resonance (e.g., proton) imaging, any joint of lower extremity; without contrast material
72148	Magnetic resonance (e.g., proton) imaging, spinal canal and contents, lumbar; without contrast material
70450	Computed tomography (CT), head or brain; without contrast material
72141	Magnetic resonance (e.g., proton) imaging, spinal canal and contents, cervical; without contrast material
72125	Computed tomography (CT), cervical spine; without contrast material
73030	Radiologic examination, shoulder; complete minimum of 2 views
73130	Radiologic examination, hand; minimum of 3 views
73630	Radiologic examination, foot; complete minimum of 3 views
74177	Computed tomography (CT), abdomen and pelvis; with contrast material

Chart 11 shows the median and 75th percentile time until first treatment for radiology procedures for South Dakota, the region, and countrywide.

Chart 11
Time Until First Treatment for Radiology (in Days)



Source: NCCI's Medical Data Call for Accident Year 2021 and Service Years 2021 and 2022.



In South Dakota, physician payments for physical and general medicine services provided in 2022 are, on average, 113% of Medicare-scheduled reimbursement amounts, compared to 149% in the region and 133% countrywide. Payments for these services comprise 30% of physician payments, compared to 39% in the region and 36% countrywide.

Chart 12 Top 10 Physical and General Medicine Procedure Codes by Amount Paid

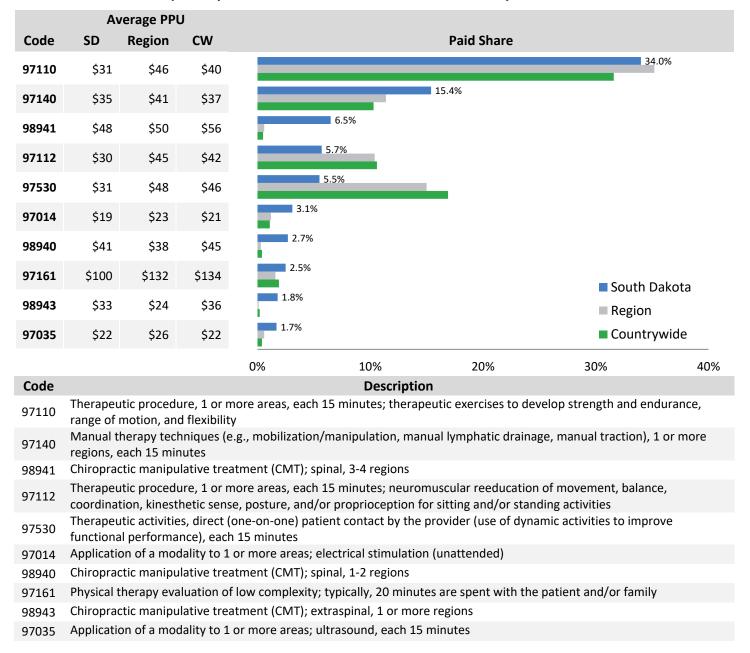
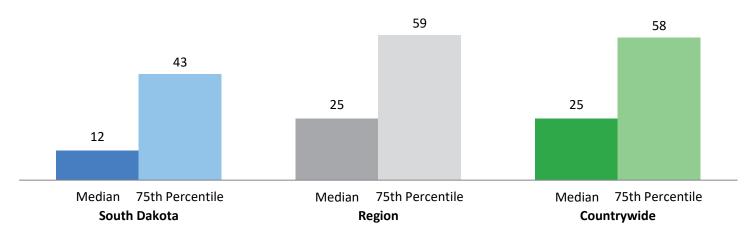


Chart 13 shows the median and 75th percentile time until first treatment for physical and general medicine procedures for South Dakota, the region, and countrywide.

Chart 13

Time Until First Treatment for Physical and General Medicine (in Days)



Source: NCCI's Medical Data Call for Accident Year 2021 and Service Years 2021 and 2022.

In South Dakota, physician payments for evaluation and management services provided in 2022 are, on average, 99% of Medicare-scheduled reimbursement amounts, compared to 144% in the region and 137% countrywide. Payments for these services comprise 24% of physician payments, compared to 20% in the region and 26% countrywide.

Chart 14 Top 10 Evaluation and Management Procedure Codes by Amount Paid

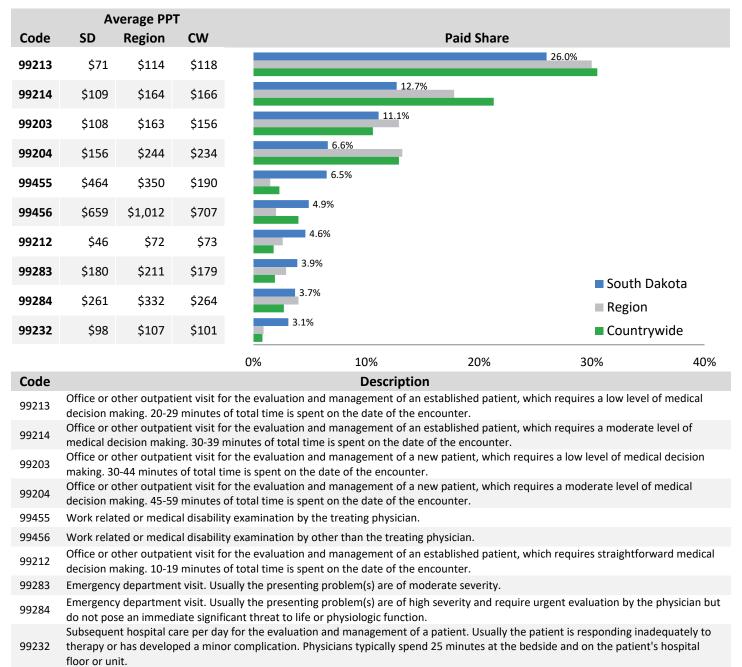
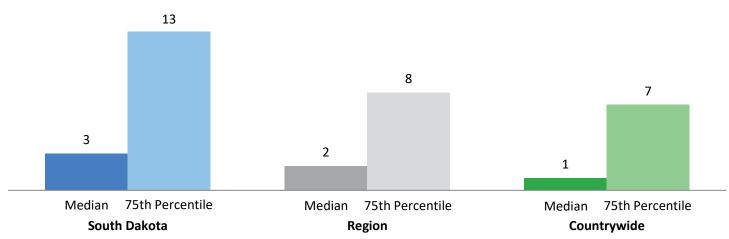


Chart 15 shows the median and 75th percentile time until first treatment for evaluation and management procedures for South Dakota, the region, and countrywide.

Chart 15

Time Until First Treatment for Evaluation and Management (in Days)



Source: NCCI's Medical Data Call for Accident Year 2021 and Service Years 2021 and 2022.



Hospital Inpatient

Payments attributed to facilities represent hospital inpatient services, hospital outpatient services, and ambulatory surgical center services. General healthcare trends may be the primary driver of the cost distribution; however, the fee schedule may also play a role. In many states, the fee schedule varies by type of facility, which may help explain differences observed between states.

Hospital inpatient fee schedules in workers compensation vary across jurisdictions. Some states have fee schedules based on a group of facility services related to the hospital admission, such as a Medicare Severity Diagnosis-Related Group (MS-DRG or DRG for short); others are on a per-diem basis, with some variation on the per-diem amount by type of admission. Other states have provisions for the reimbursement to be a certain percentage of hospital charges. Several states remain without any regulation today.

A hospital inpatient stay is typically reported with one of two types of codes: DRG code or revenue code. Data reporters are instructed to report the code that is consistent with how the reimbursement was determined.

If the hospital inpatient fee schedule is a Medicare-based fee schedule, then a greater share of payments reported by DRG codes would be expected. DRG codes are a system of hospital payment classifications that group patients with similar clinical problems who are expected to require similar amounts of hospital resources. DRG codes provide detailed information about the type of services performed during the inpatient stay. In South Dakota, 56% of hospital inpatient payments are reported with a DRG code.

Comparisons by procedure code for inpatient costs should be interpreted with caution due to differences in fee schedules, which may result in varied reporting of codes across jurisdictions, the region, and countrywide. Some measures for hospital inpatient services include the average cost of an inpatient stay, the average length of stay, or the average cost per day.

Unless otherwise stated, the inpatient results are based on inpatient stays with a discharge date in 2022.

A measure of workers compensation hospital inpatient costs is a comparison of current payments to the Medicare rates. The chart below shows the average percentage of Medicare-scheduled reimbursement amounts for hospital inpatient payments for South Dakota, the region, and countrywide, based on hospital episodes that are reported with a DRG code.

Chart 16 **Hospital Inpatient Payments as a Percentage of Medicare**

	South			
Medical Cost Category	Dakota	Region	Countrywide	
Hospital Inpatient	225%	198%	199%	

Source: NCCI's Medical Data Call for inpatient stays discharged in Calendar Year 2022. Region includes IA, IL, IN, KS, MI, MN, MO, NE, and OK. Countrywide data includes AK, AL, AR, AZ, CO, CT, DC, FL, GA, HI, IA, ID, IL, IN, KS, KY, LA, ME, MI, MN, MO, MS, MT, NC, NE, NH, NM, NV, OK, OR, RI, SC, SD, TN, TX, UT, VA, VT, and WV. The distribution of medical payments for hospital inpatient is 14% for South Dakota, 11% for the region, and 13% for countrywide. One comparative measure of inpatient service costs is the average payment per inpatient stay. An inpatient stay is defined as any hospital service or set of services provided to a claimant during the period of time when the claimant is in an inpatient setting, for a specific diagnosis. Any stay may have more than one procedure performed, and any claimant may have more than one stay.

Chart 17 displays the average amount paid per stay for hospital inpatient services, while Chart 18 displays the average amount paid per day for hospital inpatient services for South Dakota, the region, and countrywide. Note that there are no controls for mix of diagnosis or severity of claims between jurisdictions.

Chart 17

Average Amount Paid per Stay for Hospital Inpatient Services

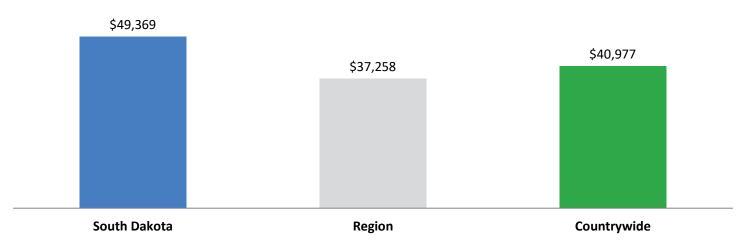


Chart 18

Average Amount Paid per Day for Hospital Inpatient Services

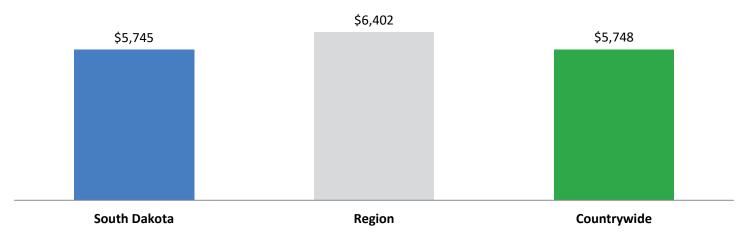


Chart 19 displays the average number of hospital inpatient stays per 1,000 active claims in 2022 for South Dakota, the region, and countrywide. An active claim is a workers compensation claim for which there is at least one medical service provided during that service year. Chart 20 displays the average and median length of stay for hospital inpatient services for South Dakota, the region, and countrywide. Note that there are no controls for mix of diagnosis or severity of claims between jurisdictions.

Chart 19

Average Number of Inpatient Stays per 1,000 Active Claims

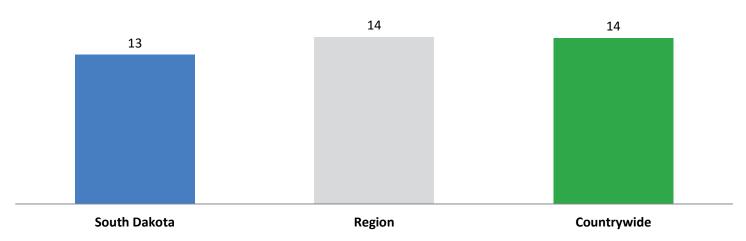


Chart 20
Length of Stay for Hospital Inpatient Services (in Days)

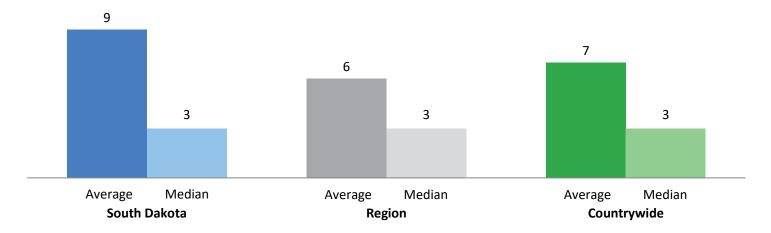
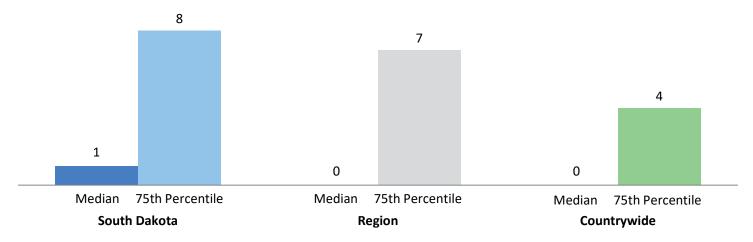


Chart 21 shows the median and 75th percentile time until first treatment for inpatient stays, other than emergency room visits, for South Dakota, the region, and countrywide.

Chart 21
Time Until First Treatment for Hospital Inpatient Stays (in Days)



Source: NCCI's Medical Data Call for Accident Year 2021 and Service Years 2021 and 2022.

(NECI)

Charts 22 and 23 display the top 10 diagnosis groups and top 10 DRG codes for hospital inpatient stays. A diagnosis group is identified for each stay based on an ICD-10 (International Classification of Diseases) code. The diagnosis groups and DRG codes are ranked based on total payments for hospital inpatient services in South Dakota. A brief description of each DRG code is displayed in the table below chart 23. The information is based on inpatient stays with a discharge date in 2021 or 2022.

Chart 22 **Top 10 Diagnosis Groups by Amount Paid for Hospital Inpatient Services**

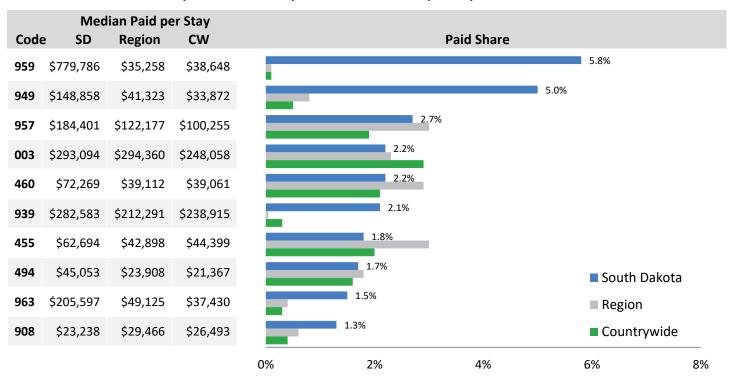
		Median Amount Paid per Stay South		
Diagnosis Group	Paid Share	Dakota	Region	Countrywide
Traumatic brain injury	16.3%	\$78,288	\$26,419	\$28,469
Injury of nerves and spinal cord at neck level	11.1%	\$178,898	\$38,468	\$50,881
Hip/pelvis fracture/major trauma	9.1%	\$28,151	\$22,794	\$22,091
Tibia/fibula fracture	5.7%	\$34,860	\$25,290	\$24,642
Chest trauma major	4.4%	\$37,182	\$20,290	\$21,822
Lumbar spine degeneration	2.9%	\$45,104	\$39,871	\$38,869
Lumbosacral intervertebral disc disorders	2.8%	\$23,922	\$29,710	\$31,275
Complication from surgical device	2.8%	\$24,042	\$20,998	\$24,272
Crush injury, hand/wrist	2.4%	\$28,710	\$25,186	\$22,857
Respiratory failure	2.3%	\$152,601	\$40,251	\$40,897

Source: NCCI's Medical Data Call for inpatient stays with a discharge date in Calendar Year 2021 or 2022.

(NCCI)

Chart 23

Top 10 DRG Codes by Amount Paid for Hospital Inpatient Services



Code	Description
959	Other O.R. Procedures for multiple significant trauma without complications or comorbidities/major complications or comorbidities
949	Aftercare with complications or comorbidities/major complications or comorbidities
957	Other operation room procedures for multiple significant trauma with major complications or comorbidities
003	Extracorporeal membrane oxygenation (ECMO) or tracheostomy with mechanical ventilation 96+ hours or principal diagnosis except face, mouth, and neck with major operating room
460	Spinal fusion, except cervical, without major complications or comorbidities
939	Operating room procedures with diagnoses of other contact with health services with major complications or comorbidities
455	Combined anterior/posterior spinal fusion without complications or comorbidities/major complications or comorbidities
494	Lower extremity and humerus procedures except hip, foot, and femur without complications or comorbidities/major complications or comorbidities
963	Other multiple significant trauma with major complications or comorbidities
908	Other operating room procedures for injuries with complications or comorbidities

Source: NCCI's Medical Data Call for inpatient stays with a discharge date in 2021 or 2022. Region includes IA, IL, IN, KS, MI, MN, MO, NE, and OK. Countrywide data includes AK, AL, AR, AZ, CO, CT, DC, FL, GA, HI, IA, ID, IL, IN, KS, KY, LA, MD, ME, MI, MN, MO, MS, MT, NC, NE, NH, NM, NV, OK, OR, RI, SC, SD, TN, TX, UT, VA, VT, and WV.

Note: In South Dakota, 56% of hospital inpatient payments are reported with a DRG code.

Hospital Outpatient

Hospital outpatient services are reported with several types of procedure codes. Data reporters are instructed to report the code that is consistent with the way the reimbursement was determined.

If the hospital outpatient fee schedule is a Medicare-based fee schedule, then a greater share of payments reported by current procedural terminology (CPT) or other healthcare common procedure coding system (HCPCS) codes would be expected. These codes are very specific and provide detailed information about the actual services performed. Some payments are also reported by a specific ambulatory payment classification (APC) code. An APC code represents a group of services provided by the facility on an outpatient basis.

If the hospital outpatient fee schedule is based on a discount from charged amounts, then revenue codes may be the more prevalent code type. Revenue codes are very generic and do not provide much information about the specific services that were performed.

Comparisons by procedure code for outpatient benefits should be interpreted with caution due to differences in fee schedules, which may result in varied reporting of codes across jurisdictions, the region, and countrywide. One comparative measure of outpatient service costs is the average cost per outpatient visit. A visit is defined as any service or set of services provided to a claimant on a specific date. Any visit may have more than one procedure performed, and any claim may have more than one visit.

Hospital outpatient visits can vary in nature and the level of reimbursement varies considerably by type of visit. A service is classified as "surgical" if it falls within the surgical category as defined by the AMA. A service is further classified as "major surgery" if it is not an injection and has a global follow-up period of 90 days, as defined by the Centers for Medicare & Medicaid Services (CMS), or the procedure involves spine/spinal cord neurostimulators. A hospital outpatient visit could be the result of an emergency visit and those visits are shown separately. Nonemergency outpatient visits are shown separately for those with and without major surgery services; those without a major surgery service are referred to as "Other" outpatient visits.

The distribution of medical payments for hospital outpatient is 35% for South Dakota, 23% for the region, and 20% for countrywide.

One measure of workers compensation hospital outpatient costs is a comparison of current payments to the Medicare rates. The chart below shows the average percentage of Medicare-scheduled reimbursement amounts for hospital outpatient payments for South Dakota, the region, and countrywide. In South Dakota, 78% of hospital outpatient payments are included in the chart below.

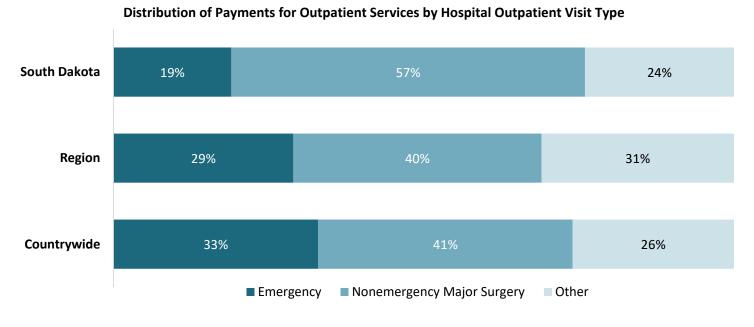
Chart 24
Hospital Outpatient Payments as a Percentage of Medicare

	South		
Medical Cost Category	Dakota	Region	Countrywide
Hospital Outpatient	248%	240%	231%

Source: NCCl's Medical Data Call for Service Year 2022. Region includes IA, IL, IN, KS, MI, MN, MO, NE, and OK. Countrywide data includes AK, AL, AR, AZ, CO, CT, DC, FL, GA, HI, IA, ID, IL, IN, KS, KY, LA, ME, MI, MN, MO, MS, MT, NC, NE, NH, NM, NV, OK, OR, RI, SC, SD, TN, TX, UT, VA, VT, and WV.

Chart 25 displays the distribution of hospital outpatient payments by visit type for South Dakota, the region, and countrywide.

Chart 25



Emergency hospital outpatient visits represent 19% of hospital outpatient payments in South Dakota. Chart 26 displays the average amount paid per emergency visit for outpatient services, while Chart 27 displays the average number of emergency hospital outpatient visits per 1,000 active claims for South Dakota, the region, and countrywide. Note that there are no controls for mix of diagnosis or severity of claims between jurisdictions.

Chart 26

Average Amount Paid for Hospital Outpatient Services per Emergency Visit

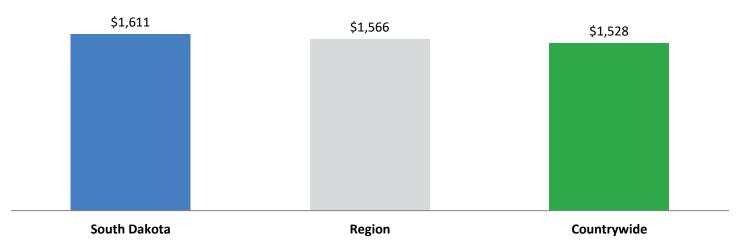


Chart 27

Average Number of Emergency Hospital Outpatient Visits per 1,000 Active Claims

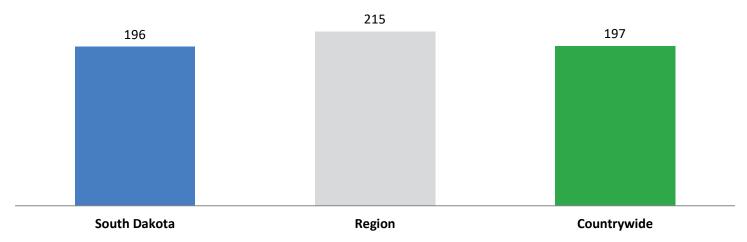


Chart 28 displays the top 10 diagnosis groups for emergency outpatient visits. The diagnosis groups are ranked based on total payments for outpatient services in South Dakota.

Chart 28

Top 10 Diagnosis Groups by Amount Paid for Emergency Hospital Outpatient Visits

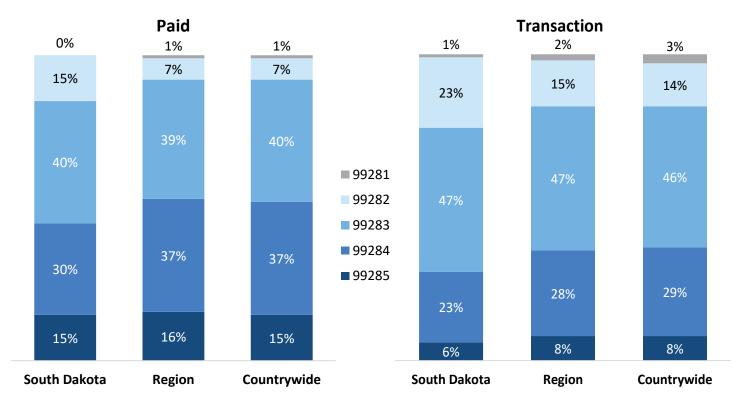
		Median Amount Paid Per Visit		
		South		
Diagnosis Group	Paid Share	Dakota	Region	Countrywide
Minor hand/wrist injuries	11.9%	\$654	\$754	\$698
Hand/wrist fracture	9.3%	\$1,170	\$1,118	\$1,087
Head/face wound	6.1%	\$1,081	\$1,002	\$941
Low back pain	4.3%	\$936	\$890	\$827
Head injury not otherwise classified	4.0%	\$1,169	\$1,253	\$1,125
Concussion/minor traumatic brain injury	3.3%	\$1,240	\$1,258	\$1,089
Neck pain	2.9%	\$1,420	\$1,450	\$1,214
Tibia/fibula fracture	2.7%	\$1,321	\$1,260	\$1,157
Minor ankle/foot injuries	2.4%	\$657	\$743	\$697
Rib/sternal fracture	2.3%	\$1,943	\$1,828	\$1,685



For emergency room visits, there are five levels of severity, ranging from limited or minor problems reported with Procedure Code 99281 to life-threatening situations reported with Procedure Code 99285. About 83% of all emergency visits had outpatient services. Chart 29 shows the distribution of emergency room outpatient services by procedure code for both paid amount and transactions for Service Year 2022 as well as the average payment per transaction.

Chart 29

Distribution of Emergency Room Outpatient Services by Procedure Code



Emergency Room Outpatient Paid per Transaction by Procedure Code

		Average PPT		
Code	Severity	South Dakota	Region	Countrywide
99281	Minor	\$187	\$183	\$177
99282	Low to Moderate	\$287	\$292	\$278
99283	Moderate	\$390	\$520	\$492
99284	High	\$574	\$812	\$749
99285	High and immediately life-threatening	\$1,094	\$1,256	\$1,161

Nonemergency outpatient visits with major surgery services represent 57% of hospital outpatient payments in South Dakota. Chart 30 displays the average amount paid per major surgery visit for outpatient services, while Chart 31 displays the average number of major surgery hospital outpatient visits per 1,000 active claims for South Dakota, the region, and countrywide. Note that there are no controls for mix of diagnosis or severity of claims between jurisdictions.

Chart 30

Average Amount Paid for Hospital Outpatient Services per Nonemergency Major Surgery Visit

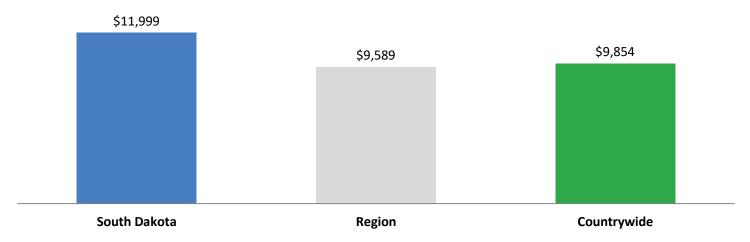


Chart 31

Average Number of Nonemergency Major Surgery Hospital Outpatient Visits per 1,000 Active Claims

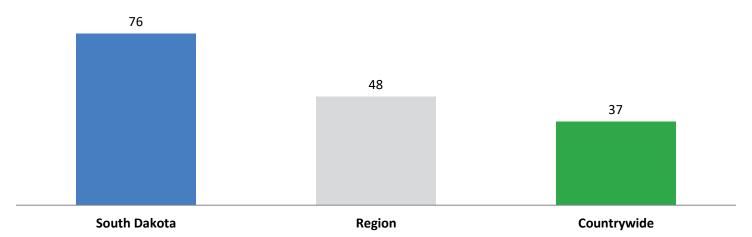
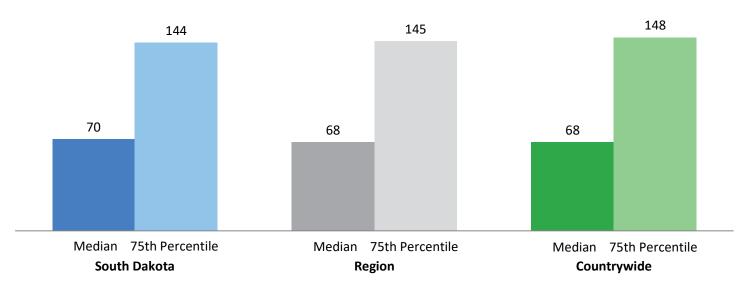


Chart 32 shows the median and 75th percentile time until first treatment for nonemergency major surgery outpatient visits for South Dakota, the region, and countrywide.

Chart 32

Time Until First Treatment for Nonemergency Major Surgery Outpatient Visits (in Days)



Source: NCCI's Medical Data Call for Accident Year 2021 and Service Years 2021 and 2022.

Chart 33 displays the top 10 diagnosis groups for nonemergency major surgery outpatient visits. The diagnosis groups are ranked based on total payments for outpatient services in South Dakota.

Chart 33

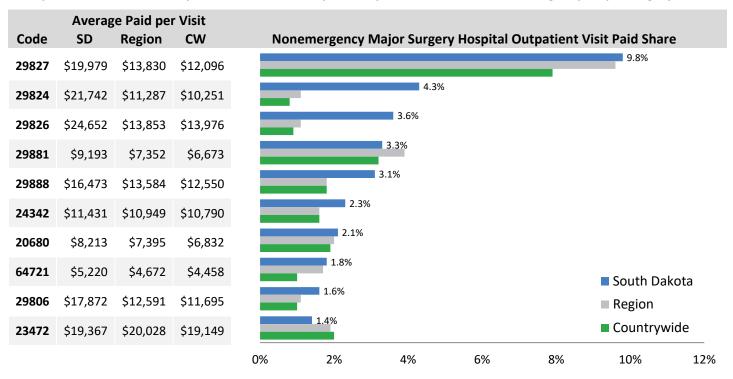
Top 10 Diagnosis Groups by Amount Paid for Nonemergency Major Surgery Hospital Outpatient Visits

		Median Ar South	mount Paid P	er Visit
Diagnosis Group	Paid Share	Dakota	Region	Countrywide
Rotator cuff tear	19.5%	\$14,810	\$10,998	\$10,560
Hand/wrist fracture	7.4%	\$9,536	\$6,074	\$6,090
Minor shoulder injury	7.4%	\$12,571	\$9,209	\$9,481
Knee internal derangement - meniscus injury	5.7%	\$8,626	\$5,770	\$5,467
Tibia/fibula fracture	3.5%	\$19,583	\$9,797	\$10,259
Knee internal derangement - cruciate ligament tear	3.4%	\$15,174	\$11,097	\$11,154
Carpal tunnel syndrome	3.3%	\$4,820	\$3,515	\$3,431
Degenerative shoulder	3.1%	\$17,426	\$10,267	\$10,245
Inguinal hernia	2.3%	\$10,426	\$9,169	\$8,230
Knee degenerative/overuse injuries	2.3%	\$13,361	\$9,060	\$11,123

Charts 34 displays the average amount paid per nonemergency major surgery visit for outpatient services in South Dakota, the region, and countrywide for the top 10 CPT codes in South Dakota. The codes are ranked based on total outpatient payments in South Dakota, where the code shown below is the code with the highest total paid on a nonemergency major surgery visit. In 2022, 85% of Hospital Outpatient costs were reported with a CPT code being the highest paid code. A brief description of each code is displayed in the table below.

Chart 34

Top 10 Procedure Codes by Amount Paid for Hospital Outpatient Services in Nonemergency Major Surgery Visits



Code	Description
29827	Arthroscopy, shoulder, surgical; with rotator cuff repair
29824	Arthroscopy, shoulder, surgical; distal claviculectomy including distal articular surface (Mumford procedure)
29826	Arthroscopy, shoulder, surgical; decompression of subacromial space with partial acromioplasty, with coracoacromial ligament (i.e., arch) release, when performed
29881	Arthroscopy, knee, surgical; with meniscectomy (medial or lateral, including any meniscal shaving), including debridement/shaving of articular cartilage
29888	Arthroscopically aided anterior cruciate ligament repair/augmentation or reconstruction
24342	Reinsertion of ruptured biceps or triceps tendon, distal, with or without tendon graft
20680	Removal of implant; deep (e.g., buried wire, pin, screw, metal, band, nail, rod, or plate)
64721	Neuroplasty and/or transposition; median nerve at carpal tunnel
29806	Arthroscopy, shoulder, surgical; capsulorrhaphy
23472	Arthroplasty, glenohumeral joint; total shoulder (glenoid and proximal humeral replacement (e.g., total shoulder))

Nonemergency outpatient visits without a major surgery service, referred to as "Other" outpatient visits, represent 24% of hospital outpatient payments in South Dakota. Chart 35 displays the average amount paid per other visit for hospital outpatient services, while Chart 36 displays the average number of other visits per 1,000 active claims for hospital outpatient services for South Dakota, the region, and countrywide. Note that there are no controls for mix of diagnosis or severity of claims between jurisdictions.

Chart 35

Average Amount Paid for Hospital Outpatient Services per Other Outpatient Visit

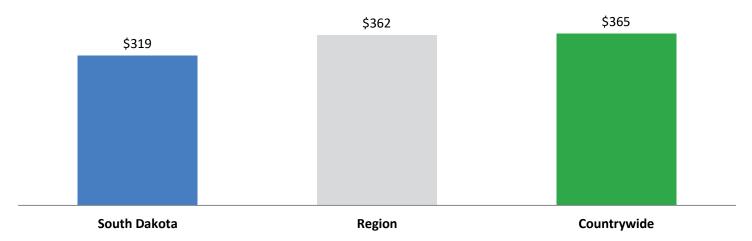


Chart 36

Average Number of Other Hospital Outpatient Visits per 1,000 Active Claims

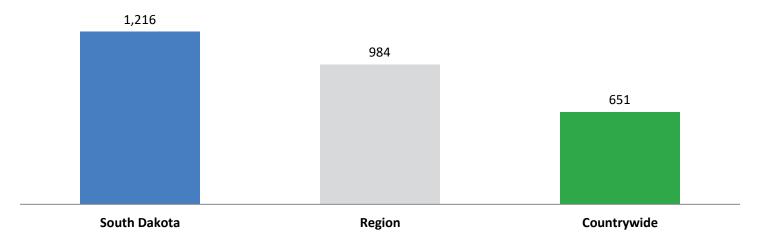
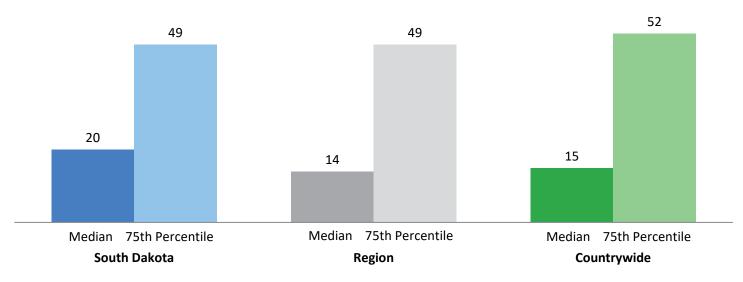


Chart 37 shows the median and 75th percentile time until first treatment for other outpatient visits for South Dakota, the region, and countrywide.

Chart 37

Time Until First Treatment for Other Outpatient Visits (in Days)



Source: NCCI's Medical Data Call for Accident Year 2021 and Service Years 2021 and 2022.

Chart 38 displays the top 10 diagnosis groups for other outpatient visits. The diagnosis groups are ranked based on total payments for outpatient services in South Dakota.

Chart 38

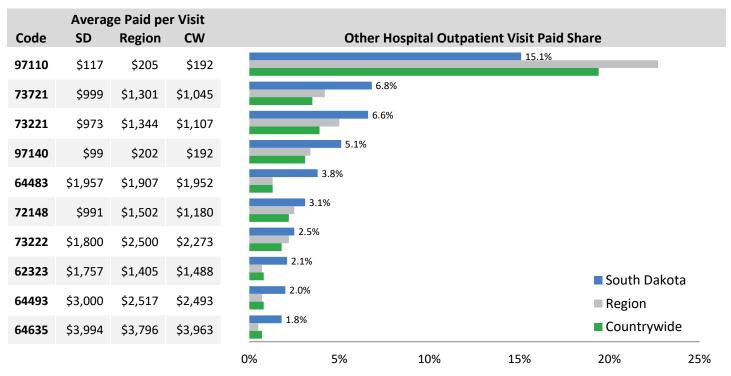
Top 10 Diagnosis Groups by Amount Paid for Other Hospital Outpatient Visits

		Median An South	nount Paid p	er Visit
Diagnosis Group	Paid Share	Dakota	Region	Countrywide
Minor shoulder injury	8.2%	\$97	\$174	\$161
Lumbar spine degeneration	6.5%	\$944	\$368	\$353
Low back pain	5.9%	\$97	\$185	\$166
Lumbar radiculopathy/sciatica	4.7%	\$112	\$227	\$200
Lumbosacral intervertebral disc disorders	4.4%	\$772	\$263	\$259
Minor knee injury	4.4%	\$99	\$184	\$169
Minor hand/wrist injuries	4.4%	\$99	\$171	\$156
Rotator cuff tear	3.2%	\$100	\$203	\$170
Minor ankle/foot injuries	2.3%	\$96	\$181	\$165
Hand/wrist fracture	2.2%	\$89	\$184	\$161

(NEEI)

Chart 39 displays the average amount paid per other visit for outpatient services in South Dakota, the region, and countrywide for the top 10 CPT codes in South Dakota. The codes are ranked based on total outpatient payments in South Dakota, where the code shown below is the code with the highest total paid on an "Other" outpatient visit. A brief description of each code is displayed in the table below.

Chart 39 Top 10 Procedure Codes by Amount Paid for Hospital Outpatient Services in Other Visits



Code	Description
97110	Therapeutic procedure, 1 or more areas, each 15 minutes; therapeutic exercises to develop strength and endurance, range of motion, and flexibility
73721	Magnetic resonance (e.g., proton) imaging, any joint of lower extremity; without contrast material
73221	Magnetic resonance (e.g., proton) imaging, any joint of upper extremity; without contrast material
97140	Manual therapy techniques (e.g., mobilization/manipulation, manual lymphatic drainage, manual traction), 1 or more regions, each 15 minutes
64483	Injection(s), anesthetic agent, and/or steroid, transforaminal epidural, with imaging guidance (fluoroscopy or computed tomography (CT)); lumbar or sacral, single level
72148	Magnetic resonance (e.g., proton) imaging, spinal canal and contents, lumbar; without contrast material
73222	Magnetic resonance (e.g., proton) imaging, any joint of upper extremity; with contrast material
62323	Injection(s) of diagnostic or therapeutic substance(s) (e.g., anesthetic, antispasmodic, opioid, steroid, other solution), not including neurolytic substances, including needle or catheter placement, interlaminar epidural or subarachnoid, lumbar or sacral
64493	Injection(s), diagnostic or therapeutic agent, paravertebral facet (zygapophyseal) joint (or nerves innervating that joint), with image guidance (fluoroscopy or computed tomography (CT)), lumbar or sacral; single level
64635	Destruction by neurolytic agent, paravertebral facet joint nerve(s), with imaging guidance (fluoroscopy or computed tomography (CT)); lumbar or sacral, single facet joint

Ambulatory Surgical Centers

An Ambulatory Surgical Center (ASC) is often used as an alternative facility to a hospital for conducting outpatient surgeries. The distribution of medical payments for ASCs is 1% for South Dakota, 9% for the region, and 7% for countrywide.

Typically, surgery-related services are performed in ASCs. The most prevalent procedure code types reported are CPT codes and revenue codes.

One measure of workers compensation ASC costs is a comparison of current payments to the Medicare rates. The chart below shows the average percentage of Medicare-scheduled reimbursement amounts for ASC payments for South Dakota, the region, and countrywide. In South Dakota, 74% of ASC payments are included in the chart below.

Chart 40 ASC Payments as a Percentage of Medicare

Medical Cost Category	South Dakota	Region	Countrywide
Ambulatory Surgical Center	154%	283%	247%

Source: NCCI's Medical Data Call for Service Year 2022. Region includes IA, IL, IN, KS, MI, MN, MO, NE, and OK. Countrywide data includes AK, AL, AR, AZ, CO, CT, DC, FL, GA, HI, IA, ID, IL, IN, KS, KY, LA, ME, MI, MN, MO, MS, MT, NC, NE, NH, NM, NV, OK, OR, RI, SC, SD, TN, TX, UT, VA, VT, and WV.

ASC visits with major surgery services represent 72% of ASC payments in South Dakota. Other ASC visits typically include minor procedures, with injections for therapeutic or diagnostic purposes being the most common. Chart 41 displays the average amount paid per major surgery visit for ASC services, while Chart 42 displays the average number of major surgery ASC visits per 1,000 active claims for South Dakota, the region, and countrywide. Note that there are no controls for mix of diagnosis or severity of claims between jurisdictions.

Chart 41

Average Amount Paid per Major Surgery Visit for ASC Services

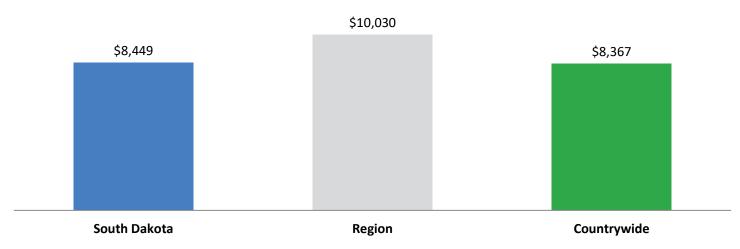


Chart 42

Average Number of ASC Major Surgery Visits per 1,000 Active Claims

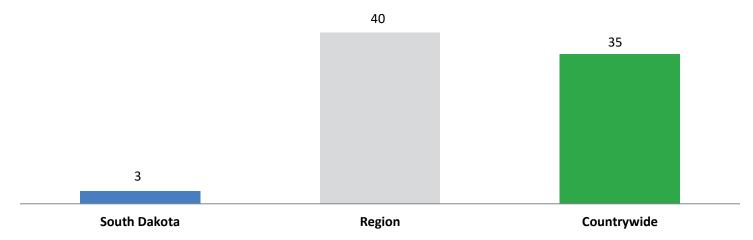
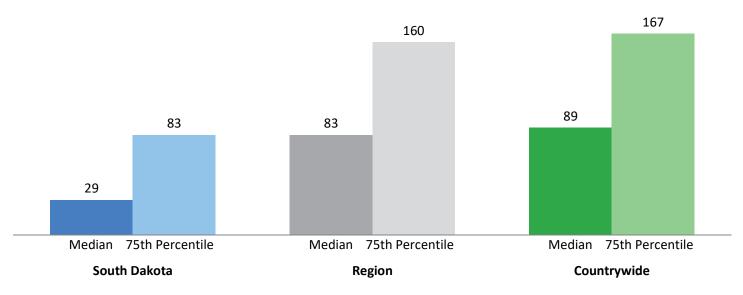


Chart 43 shows the median and 75th percentile time until first treatment for ASC major surgery visits for South Dakota, the region, and countrywide.

Chart 43

Time Until First Treatment for ASC Major Surgery Visits (in Days)



Source: NCCI's Medical Data Call for Accident Year 2021 and Service Years 2021 and 2022.

Chart 44 displays the top 10 diagnosis groups for ASC major surgery visits. The diagnosis groups are ranked based on total payments for ASC services in South Dakota.

Chart 44

Top 10 Diagnosis Groups by Amount Paid for ASC Major Surgery Visits

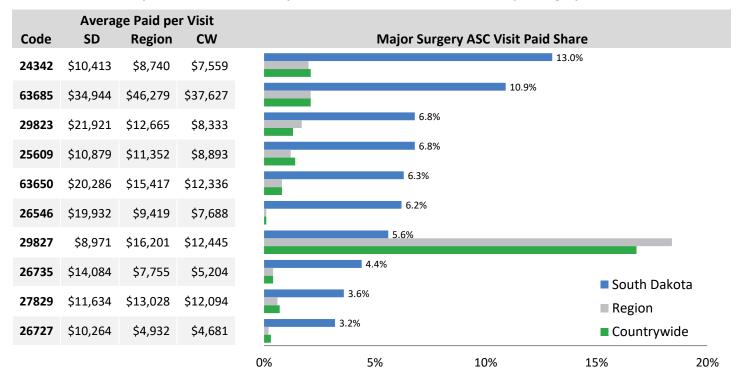
		Median A	mount Paid p	er Visit
Diagnosis Group	Paid Share	Dakota	Region	Countrywide
Hand/wrist fracture	20.9%	\$11,623	\$6,589	\$5,367
Minor shoulder injury	20.7%	\$8,962	\$9,499	\$8,148
Chronic pain	10.9%	\$34,944	\$18,489	\$14,256
Cervical radiculopathy/myelopathy	6.3%	\$20,286	\$23,041	\$15,968
Rotator cuff tear	5.6%	\$8,971	\$13,769	\$10,245
Knee internal derangement - meniscus injury	4.3%	\$3,138	\$5,290	\$4,201
Minor ankle/foot injuries	3.6%	\$11,634	\$9,054	\$8,137
Muscle/tendon injury, hand/wrist	3.2%	\$10,264	\$4,427	\$3,791
Retinal detachments and breaks	3.2%	\$10,256	\$2,558	\$3,515
Other disorders of cornea	2.8%	\$9,017	\$4,266	\$1,380



Chart 45 displays the average amount paid per major surgery visit for ASC services in South Dakota, the region, and countrywide for the top 10 CPT codes in South Dakota. The codes are ranked based on total ASC payments in South Dakota, where the code shown below is the code with the highest total paid on a major surgery visit. A brief description of each procedure code is displayed in the table beneath the chart. Chart 46 displays similar results for visits in an outpatient setting for the list of codes in Chart 45, if applicable.

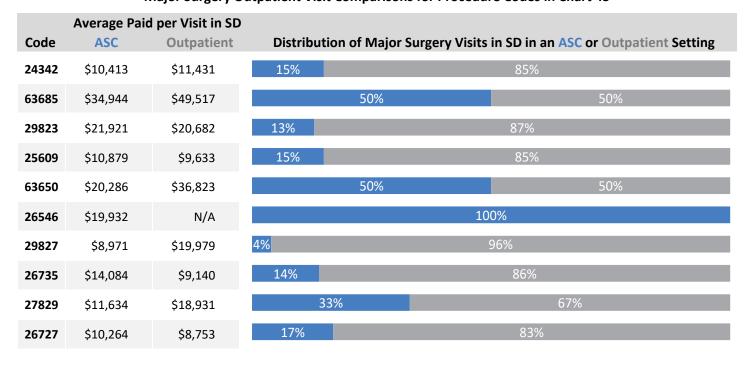
Chart 45

Top 10 Procedure Codes by Amount Paid for ASC Services in Major Surgery Visits



Code	Description
24342	Reinsertion of ruptured biceps or triceps tendon, distal, with or without tendon graft
63685	Insertion or replacement of spinal neurostimulator pulse generator or receiver, direct or inductive coupling
29823	Arthroscopy, shoulder, surgical; debridement, extensive
25609	Open treatment of distal radial intra-articular fracture or epiphyseal separation; with internal fixation of 3 or more fragments
63650	Percutaneous implantation of neurostimulator electrode array, epidural
26546	Repair non-union, metacarpal or phalanx (includes obtaining bone graft with or without external or internal fixation)
29827	Arthroscopy, shoulder, surgical; with rotator cuff repair
26735	Open treatment of phalangeal shaft fracture, proximal or middle phalanx, finger or thumb, includes internal fixation, when performed, each
27829	Open treatment of distal tibiofibular joint (syndesmosis) disruption, includes internal fixation, when performed
26727	Percutaneous skeletal fixation of unstable phalangeal shaft fracture, proximal or middle phalanx, finger or thumb, with manipulation, each

Chart 46
Major Surgery Outpatient Visit Comparisons for Procedure Codes in Chart 45





Prescription Drugs

The distribution of medical payments for drugs is 10% for South Dakota, 5% for the region, and 7% for countrywide. Prescription drugs are uniquely identified by a national drug code (NDC). Charts 47 through 55 provide greater detail on payments for prescription drugs reported with an NDC, whether the drugs were provided in a pharmacy, physician's office, hospital, or other place of service. Payments are categorized as drugs if the code reported on the transaction is an NDC. Payments for drugs can also be reported using codes other than NDCs, such as revenue codes, HCPCS codes, and other state-specific procedure codes. The results in these charts are based only on payments reported with an NDC.

The Controlled Substances Act (CSA) was passed in 1970 to regulate the manufacture, distribution, possession, and use of certain drugs. There are five schedules, or groups of drugs, determined by varying qualifications, such as the drug's medical uses, if any, and its potential for abuse. For example, Schedule V drugs are defined as having the lowest potential for abuse, while Schedule I drugs are illegal at the federal level, mainly because they are defined as having no currently accepted medical uses and a high potential for abuse.

In South Dakota, the share of claims observed in Service Year 2022 with at least one controlled substance was 6%. This compares to the region and countrywide shares of 7% and 8%, respectively. In 2022, South Dakota spent \$0.4M on Schedule II and Schedule III drugs for workers compensation claims.

Chart 47

Chart 47 shows the distribution of prescription drug payments by CSA schedule in South Dakota, the region, and countrywide.

South Dakota

20%
2% 3% 12%
63%

Region
10% 3% 3% 6%
78%

Countrywide
10% 2% 3% 7%
Schedule II Schedule III Schedule IV Schedule V Noncontrolled



Chart 48 displays the shares of the payments of prescription medication for the top 10 drugs used in workers compensation treatment, by amount paid in South Dakota. This chart also indicates whether the drugs are generic (G) or brand name (B) and whether the drugs are opioids (O) or non-opioids (N); for generic drugs, a commonly used brand name equivalent is also provided. This method of ranking shows which drugs have the highest percentage share of payments. Also included is the average price per unit (PPU). (See the Glossary for the definition of units.)

Chart 48 **Top 10 Workers Compensation Drugs by Amount Paid**

Drug Name	SD	Average PPU Region	I CW	South Dakota Paid Share
Pregabalin	\$3.54	\$4.02	\$4.66	8.5%
Oxycontin®	\$8.93	\$10.12	\$10.03	7.3%
Nucynta®	\$9.95	\$10.33	\$11.03	4.9%
Duloxetine HCl	\$2.92	\$3.73	\$4.37	4.6%
Gabapentin	\$0.66	\$0.74	\$0.90	4.1%
Dupixent®	\$889.43	\$837.75	\$864.60	3.5%
Lyrica®	\$9.29	\$9.09	\$9.20	3.4%
MACI®	\$48,994.80	\$55,505.09	\$44,573.27	2.5%
Botox®	\$254.30	\$317.08	\$382.52	2.2%
Celecoxib	\$2.78	\$4.70	\$5.41	1.9%

		Common			CSA	CW
Drug Name	B/G	Brand Name	O/N	Category	Schedule	Rank
Pregabalin	G	Lyrica®	Ν	Miscellaneous Central Nervous System Agents	V	1
Oxycontin [®]	В	N/A	0	Analgesics/Antipyretics	II	9
Nucynta®	В	N/A	0	Analgesics/Antipyretics	II	21
Duloxetine HCl	G	Cymbalta®	N	Psychotherapeutic Agents	None	8
Gabapentin	G	Neurontin®	N	Anticonvulsants	None	5
Dupixent®	В	N/A	N	Immunosuppressants	None	71
Lyrica®	В	N/A	N	Miscellaneous Central Nervous System Agents	V	32
MACI®	В	N/A	N	Skin/Mucous Membrane	None	42
Botox®	В	N/A	N	Toxins	None	30
Celecoxib	G	Celebrex®	N	Analgesics/Antipyretics	None	3

Chart 49 displays the top 10 drugs used in workers compensation treatment, according to the number of prescriptions in South Dakota. This chart reveals the most frequently prescribed drugs and the average PPU.

Chart 49

Top 10 Workers Compensation Drugs by Prescription Counts

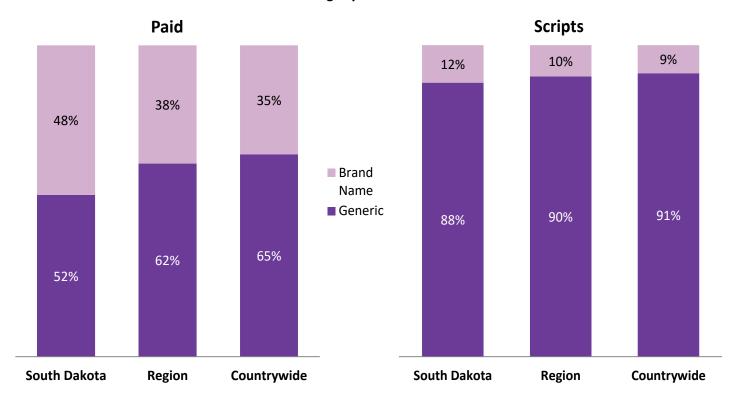
	А	verage PPI	J	
Drug Name	SD	Region	CW	South Dakota Prescription Share
abapentin	\$0.66	\$0.74	\$0.90	
ydrocodone Bitartrate- cetaminophen	\$0.44	\$0.46	\$0.47	
lloxetine HCl	\$2.92	\$3.73	\$4.37	5.2%
amadol HCl	\$0.52	\$0.73	\$0.78	5.2%
clobenzaprine HCl	\$0.70	\$1.78	\$1.96	4.2%
egabalin	\$3.54	\$4.02	\$4.66	4.0%
eloxicam	\$1.99	\$2.87	\$3.06	3.2%
ycodone HCl	\$0.66	\$0.54	\$0.65	2.7%
clofen	\$1.01	\$1.46	\$1.60	2.3%
lecoxib	\$2.78	\$4.70	\$5.41	2.3%

		Common			CSA	CW
Drug Name	B/G	Brand Name	O/N	Category	Schedule	Rank
Gabapentin	G	Neurontin®	N	Anticonvulsants	None	1
Hydrocodone Bitartrate- Acetaminophen	G	Vicodin®	0	Analgesics/Antipyretics	II	2
Duloxetine HCl	G	Cymbalta®	N	Psychotherapeutic Agents	None	16
Tramadol HCl	G	Ultram®	0	Analgesics/Antipyretics	IV	7
Cyclobenzaprine HCl	G	Flexeril®	N	Muscle Relaxants, Skeletal	None	3
Pregabalin	G	Lyrica®	N	Miscellaneous Central Nervous System Agents	V	10
Meloxicam	G	Mobic [®]	N	Analgesics/Antipyretics	None	5
Oxycodone HCl	G	Oxycontin®	0	Analgesics/Antipyretics	II	13
Baclofen	G	Lioresal®	N	Muscle Relaxants, Skeletal	None	18
Celecoxib	G	Celebrex®	N	Analgesics/Antipyretics	None	9

Chart 50 shows the distribution of prescription drugs by brand name and generic for South Dakota, the region, and countrywide. The share between brand name and generic is displayed based on the prescription counts and the payments. Typically, a higher percentage of drugs is given in the generic form; however, higher costs occur when brand name drugs are prescribed. In many states, a prescription drug fee schedule includes rules regarding the dispensing and reimbursement rates for brand name and generic drugs.

Chart 50

Distribution of Drugs by Brand Name and Generic

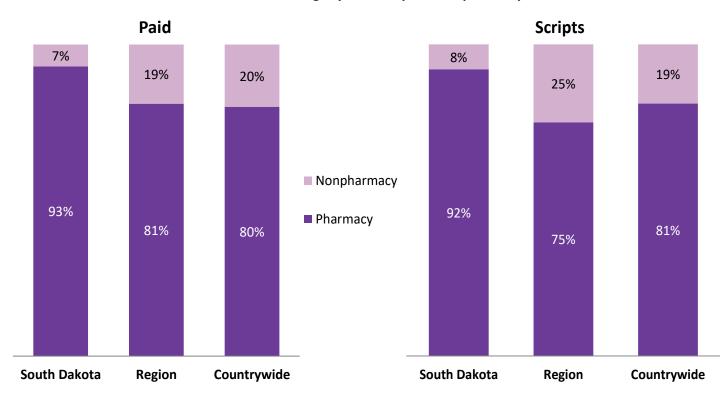


The rules on drug dispensing vary from state to state. Some states allow physician dispensing of drugs, while other states limit or prohibit physician dispensing. Analysis of the share of drugs dispensed from a pharmacy and from a nonpharmacy (e.g., physicians and hospitals) may provide insight into the drivers of drug costs.

Chart 51 shows the distribution of prescription drugs dispensed by pharmacies and nonpharmacies. The share between pharmacy-dispensed and nonpharmacy-dispensed is displayed, based on both prescription counts and payments, for South Dakota, the region, and countrywide.

Chart 51

Distribution of Drugs by Pharmacy and Nonpharmacy



There can be a multitude of medications prescribed during an injured worker's path to recovery from a workplace injury. Opioids are one type of drug used to treat moderate to severe pain—often when pain is chronic and troublesome. The opioid epidemic brought much needed awareness on the risks associated with opioid prescriptions.

Chart 52 shows the proportion of drug payments and prescription counts for opioids in South Dakota, the region, and countrywide.

Chart 52
Distribution of Drugs by Opioid and Nonopioid

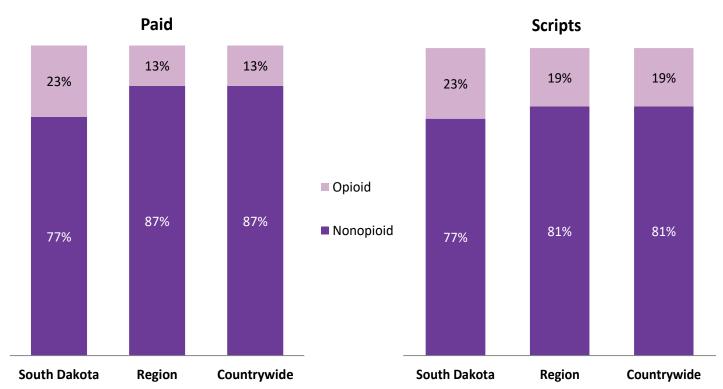
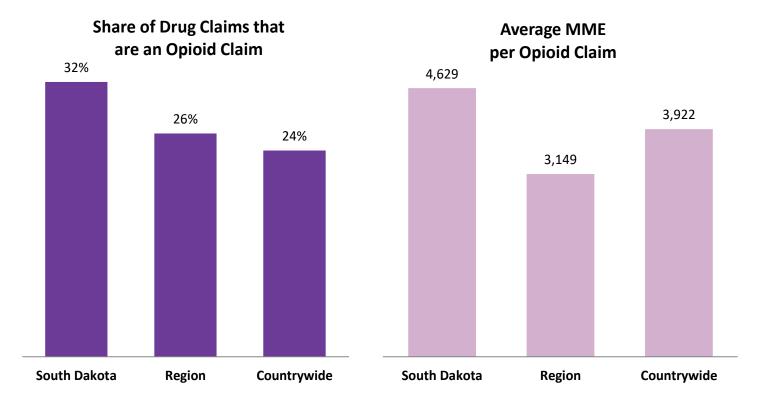




Chart 53 shows the share of claims with a prescription that also have an opioid prescription (an opioid claim), as well as the average Morphine Milligram Equivalents (MME) per opioid claim in South Dakota, the region, and countrywide.

With respect to MME, the CDC⁷ provides a way to convert daily—or hourly—doses of opioids to an equivalent daily dose of morphine by assigning a conversion factor to each type of drug, thus deriving the MME for any opioid prescription, based on the number of units (pills, for example) prescribed and the drug formulation.

Chart 53 **Share of Opioid Claims and Average MME**



⁷ https://www.cdc.gov/mmwr/volumes/71/rr/rr7103a1.htm#T1 down

Workers compensation insurance is considered to have a long tail of liability, meaning that injured workers continue to receive medical benefits over a long period of time, sometimes 30 years or more. Observing opioid claims by claim maturity provides insight into the long-lasting usage of opioid prescriptions and their prevalence among injured workers at various stages of their disability.

Chart 54 shows the distribution of opioid claims by claim maturity for South Dakota, the region, and countrywide, where maturity is measured by the number of years from the date of injury. Chart 55 shows the share of MME by maturity.

Chart 54
Opioid Claim Distribution by Claim Maturity in Years

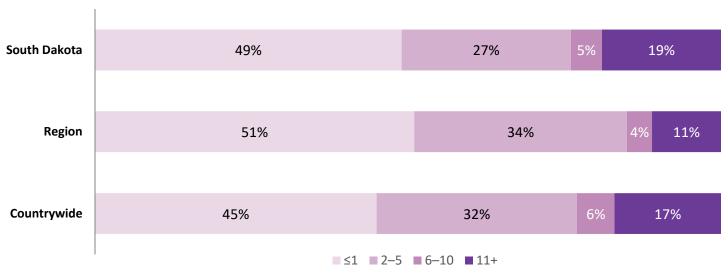
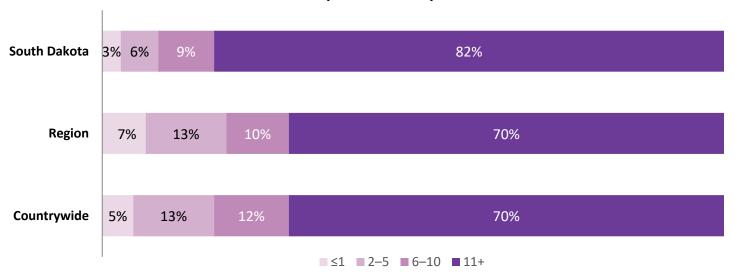


Chart 55

MME Share by Claim Maturity in Years



Durable Medical Equipment, Prosthetics, Orthotics, and Supplies (DMEPOS)

The distribution of medical payments for DMEPOS is 10% for South Dakota, 8% for the region, and 8% for countrywide.

Chart 56 displays the distribution of payments among three separate DMEPOS categories:

- Durable Medical Equipment (DME)
- Prosthetics, Orthotics, and Implants
- Supplies Other Than DME

Payments are mapped to each of these categories based on the procedure code reported, regardless of who provides the service or where the service is performed.

Chart 56

South Dakota

Region

Countrywide

26%

36%

38%

41%

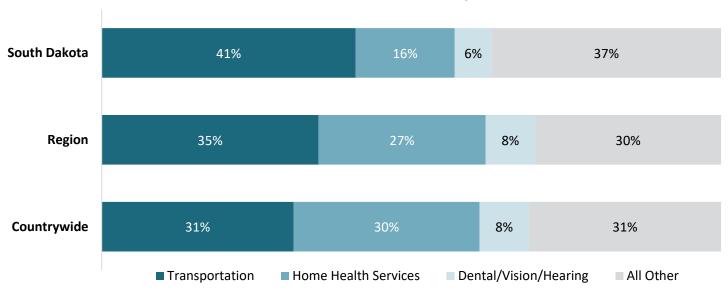
Prosthetics, Orthotics and Implants

Supplies Other Than DME

Other Medical Services

For Service Year 2022, other medical services represent 5% of total medical costs countrywide. Chart 57 shows the distribution of these services by four categories: transportation, home health services, dental/vision/hearing, and all other. The "All Other" category typically includes services that may have a missing, invalid, or unlisted procedure, in addition to some other valid services (e.g., payments for interpreters, vehicle modifications, etc.).

Chart 57
Distribution of Other Medical Services Payments





Diagnosis Group and Body System

Charts 58 and 59 display the top 10 body systems and diagnosis groups, respectively. A body system and diagnosis group are identified for each claim based on an ICD-10 code. The ICD-10 code indicates the condition for which the care is provided. NCCI assigns an ICD-10 code to each workers compensation claim based on the severity of the ICD-10 codes reported on bills by medical providers for services provided to the injured worker.

The top 10 body systems and diagnosis groups are ranked by total claim payments for South Dakota. This method of ranking shows which body systems and diagnosis groups have the highest percentage share of payments. Payments are based on claims with dates of injury between January 1, 2021, and December 31, 2021, and they include all reported services provided for those claims through December 31, 2022.

Chart 58

Top Body Systems by Amount Paid for Dates of Injury in 2021

		Average Ar South	mount Paid Po	er Claim
Body System	Paid Share	Dakota	Region	Countrywide
Shoulder	23.5%	\$11,999	\$12,471	\$9,684
Hand/wrist	13.3%	\$2,320	\$3,165	\$2,814
Knee	11.2%	\$7,121	\$6,596	\$5,684
Lumbar spine	8.5%	\$3,548	\$5,237	\$4,532
Head	5.8%	\$4,513	\$3,741	\$3,927
Hip/pelvis	5.5%	\$15,675	\$12,294	\$11,368
Leg	4.5%	\$5,384	\$7,199	\$6,658
Ankle/foot	4.4%	\$2,385	\$4,204	\$3,719
Neck	3.4%	\$3,591	\$7,999	\$6,390
Chest/upper torso	2.4%	\$3,403	\$3,766	\$3,783

Chart 59

Top Diagnosis Groups by Amount Paid for Dates of Injury in 2021

		Average Amount Paid Per Claim South			
Diagnosis Group	Paid Share	Dakota	Region	Countrywide	
Rotator cuff tear	11.2%	\$25,926	\$29,020	\$23,094	
Minor shoulder injury	5.4%	\$4,711	\$6,376	\$5,053	
Hip/pelvis fracture/major trauma	4.7%	\$80,212	\$47,741	\$47,280	
Hand/wrist fracture	4.5%	\$6,647	\$8,133	\$7,732	
Knee internal derangement - meniscus injury	4.2%	\$15,253	\$15,371	\$13,588	
Traumatic brain injury	3.8%	\$111,369	\$57,394	\$71,554	
Minor hand/wrist injuries	3.8%	\$907	\$1,644	\$1,477	
Tibia/fibula fracture	3.5%	\$32,786	\$30,726	\$30,636	
Knee internal derangement - cruciate ligament tear	3.4%	\$42,335	\$28,537	\$24,056	
Lumbosacral intervertebral disc disorders	2.4%	\$14,532	\$21,534	\$18,416	



Comparison of Selected Results by Year

The charts in this section provide a comparison of results for South Dakota. These comparisons are over the latest five service years unless otherwise noted. Analysis in the growth of shares may provide additional insight into medical cost drivers above and beyond an analysis at a specific point in time.

Results in the charts below may vary compared to medical reports from previous years. This is due to a lag in reporting, as well as improved derivations affecting categories for certain charts.

Distribution of Medical Payments (Chart 4)

Medical Category	2018	2019	2020	2021	2022
Physician	25%	25%	25%	25%	23%
Hospital Outpatient	32%	35%	37%	35%	35%
Hospital Inpatient	15%	12%	11%	12%	14%
Drugs	11%	11%	11%	11%	10%
DMEPOS	12%	11%	11%	12%	10%
ASC	2%	1%	1%	1%	1%
Other	3%	5%	4%	4%	7%

Distribution of Physician Payments by AMA Service Category (Chart 6)

AMA Service Category	2018	2019	2020	2021	2022
Physical Medicine	27%	28%	28%	27%	27%
Surgery	30%	29%	28%	31%	25%
Evaluation and Management	22%	22%	22%	21%	24%
Radiology	10%	10%	10%	10%	12%
Anesthesia	6%	5%	5%	5%	4%
General Medicine	3%	3%	4%	3%	3%
Other	1%	2%	2%	2%	4%
Pathology	1%	1%	1%	1%	1%



Median Time Until First Treatment (in Days) (Charts 9, 11, 13, 15, 21, 32, 37, and 43)8

Medical Category	AY 2017	AY 2018	AY 2019	AY 2020	AY 2021
Physicians – Major Surgery	33	35	30	28	39
Physicians – Radiology	1	1	1	1	1
Physicians – Physical and General Medicine	12	12	12	11	12
Physicians – Evaluation and Management	2	2	2	3	3
Hospital Inpatient	0	0	0	0	1
Hospital Outpatient – Major Surgery	59	59	62	58	70
Hospital Outpatient – All Other	18	19	20	16	20
ASC – Major Surgery	44	31	76	75	29

75th Percentile of Time Until First Treatment (in Days) (Charts 9, 11, 13, 15, 21, 32, 37, and 43)8

Medical Category	AY 2017	AY 2018	AY 2019	AY 2020	AY 2021
Physicians – Major Surgery	102	103	99	104	125
Physicians – Radiology	7	7	6	7	7
Physicians – Physical and General Medicine	36	38	42	39	43
Physicians – Evaluation and Management	10	11	11	12	13
Hospital Inpatient	15	7	11	8	8
Hospital Outpatient – Major Surgery	133	138	135	123	144
Hospital Outpatient – All Other	51	49	51	44	49
ASC – Major Surgery	120	77	163	112	83

Hospital Inpatient Statistics (Charts 17 and 19)

	2018	2019	2020	2021	2022
Average Amount Paid Per Stay	\$32,815	\$28,692	\$31,197	\$33,275	\$49,369
Number of Stays per 1,000 Active Claims	18	16	15	15	13

⁸ In the charts displaying the distribution of time until first treatment, the data is organized by the year in which the injury occurred, rather than by service year, and includes services performed within 365 days of the date of injury.



Distribution of Hospital Outpatient Payments by Outpatient Visit Type (Chart 25)

Visit Type	2018	2019	2020	2021	2022
Emergency	17%	17%	16%	17%	19%
Nonemergency Major Surgery	53%	56%	57%	56%	57%
Other	30%	27%	27%	27%	24%

Emergency Hospital Outpatient Statistics (Charts 26 and 27)

	2018	2019	2020	2021	2022
Average Amount Paid Per Visit	\$1,026	\$1,212	\$1,331	\$1,359	\$1,611
Number of Visits per 1,000 Active Claims	204	192	172	181	196

Emergency Room Outpatient Services Paid per Transaction (Chart 29)

Code	Severity	2018	2019	2020	2021	2022
99281	Minor	\$95	\$113	\$108	\$212	\$187
99282	Low to moderate	\$189	\$217	\$250	\$258	\$287
99283	Moderate	\$276	\$293	\$347	\$387	\$390
99284	High	\$436	\$440	\$500	\$546	\$574
99285	High and immediately life-threatening	\$713	\$789	\$961	\$986	\$1,094

Nonemergency Major Surgery Hospital Outpatient Statistics (Charts 30 and 31)

	2018	2019	2020	2021	2022
Average Amount Paid Per Visit	\$9,488	\$10,916	\$11,409	\$11,104	\$11,999
Number of Visits per 1,000 Active Claims	69	72	73	75	76

Other Hospital Outpatient Statistics (Charts 35 and 36)

	2018	2019	2020	2021	2022
Average Amount Paid Per Visit	\$299	\$310	\$299	\$308	\$319
Number of Visits per 1,000 Active Claims	1,254	1,230	1,323	1,274	1,216

ASC Major Surgery Statistics (Charts 41 and 42)

	2018	2019	2020	2021	2022
Average Amount Paid Per Visit	\$6,957	\$6,232	\$5,417	\$8,810	\$8,449
Number of Visits per 1,000 Active Claims	11	4	3	3	3



Distribution of Prescription Drug Payments by CSA Schedule (Chart 47)

CSA Schedule	2018	2019	2020	2021	2022
Schedule II	25%	25%	26%	25%	20%
Schedule III	1%	1%	1%	1%	2%
Schedule IV	4%	3%	3%	3%	3%
Schedule V	17%	16%	10%	9%	12%
Noncontrolled	53%	55%	60%	62%	63%

Distribution of Drug Payments by Brand Name and Generic (Chart 50)

Type of Drug	2018	2019	2020	2021	2022
Brand Name	50%	49%	45%	47%	48%
Generic	50%	51%	55%	53%	52%

Distribution of Drug Payments by Pharmacy and Nonpharmacy (Chart 51)

Type of Provider	2018	2019	2020	2021	2022
Pharmacy	92%	94%	95%	89%	93%
Nonpharmacy	8%	6%	5%	11%	7%

Distribution of Drug Payments by Opioid and Non-Opioid (Chart 52)

Drug Type	2018	2019	2020	2021	2022
Non-Opioid	72%	72%	72%	72%	77%
Opioid	28%	28%	28%	28%	23%

Share of Drug Claims that are Opioid Claims and the Average MME per Opioid Claim (Chart 53)

	2018	2019	2020	2021	2022
Opioid Claim Share	38%	37%	34%	33%	32%
Average MME per Opioid Claim	5,025	4,564	5,011	5,286	4,629



Distribution of Payments by DMEPOS (Chart 56)

Category	2018	2019	2020	2021	2022
DME	7%	8%	8%	11%	14%
Prosthetics, Orthotics and Implants	44%	33%	35%	24%	25%
Supplies Other Than DME	49%	59%	57%	65%	61%

Distribution of Payments by Other Medical Services (Chart 57)

Category	2018	2019	2020	2021	2022
Transportation	25%	32%	29%	36%	41%
Home Health Services	34%	18%	15%	16%	16%
Dental/Vision/Hearing	11%	10%	10%	8%	6%
All Other	30%	40%	46%	40%	37%

Glossary

75th Percentile: The point on a distribution that is higher than 75% of observations and lower than 25% of observations.

Accident Year: A loss accounting definition in which experience is summarized by the calendar year in which an accident occurred.

Ambulatory Payment Classification (APC): Unit of payment under Medicare's Outpatient Prospective Payment System (OPPS) for hospital outpatient services where individual services are grouped based on similar characteristics and similar costs.

Ambulatory Surgical Center (ASC): A state-licensed facility that is used mainly to perform outpatient surgery, has a staff of physicians, has continuous physician and nursing care, and does not provide for overnight stays. An ASC can bill for facility fees much like a hospital, but it generally has a separate fee schedule.

Controlled Substances: Drugs that are regulated by the Controlled Substances Act (CSA) of 1970. Each controlled substance is contained in one of five schedules based on its medical use(s) and its potential for abuse and addiction.

CPT Code Modifiers: Modifiers are codes added to a CPT code that further describe the procedure performed without changing the meaning of the original code.

Current Procedural Terminology (CPT): A numeric coding system maintained by the American Medical Association (AMA). The CPT coding system consists of five-digit codes that are primarily used to identify medical services and procedures performed by physicians and other healthcare professionals.

Diagnosis Groups: Based on ICD-10 codes; groups based on similar injuries and parts of body.

Diagnosis-Related Groups (DRG): A system of hospital payment classifications that groups patients with similar clinical problems who are expected to require similar amounts of hospital resources.

Drugs: Includes any data reported by a National Drug Code (NDC), which is referred to as a prescription drug. Also included are data for revenue codes, the Healthcare Common Procedure Coding System (HCPCS), and other state-specific codes that represent drugs.

Durable Medical Equipment (DME): Equipment that is primarily and customarily used to serve a medical purpose, can withstand repeated use, could normally be rented and used by successive patients, is appropriate for use in the home, and is not generally useful to a person in the absence of an illness or injury.

Emergency Services: Services performed for patients requiring immediate attention.

Emergency Visit: A visit where emergency services are performed.

Healthcare Common Procedure Coding System (HCPCS): Alphanumeric codes that include mostly nonphysician items or services such as medical supplies, ambulatory services, prostheses, etc. These are items and services not covered by Current Procedural Terminology (CPT) procedures.

ICD-10 Codes: The *International Classification of Diseases, Tenth Revision,* is a system used by physicians and other healthcare providers to classify and code all diagnoses, symptoms, and procedures recorded in conjunction with hospital care in the United States.

Hospital Inpatient Service: Services for a patient who is admitted to a hospital for treatment that requires at least one overnight stay (more than 24 hours in a hospital).

Hospital Inpatient Stay: A hospital admission of a patient requiring hospitalization of at least one 24-hour period.

Hospital Outpatient Service: Any type of medical or surgical care, performed at a hospital, that is not expected to result in an overnight hospital stay (less than 24 hours in a hospital).

International Statistical Classification of Diseases and Related Health Problems (ICD-10): A classification of diseases and other health problems based on a diagnosis maintained by the World Health Organization (WHO).

Length of Stay: The amount of time, in days, between admission to a hospital and discharge.

Major Surgery Visit: A visit in which at least one surgery procedure is performed based on the reported procedure code, and where the surgical procedure is not an injection and has a global follow-up period of 90 days, as defined by the Centers for Medicare & Medicaid Services, or the procedure involves spine/spinal cord neurostimulators.

Medical Data Call: Captures transaction-level detail for medical billings that were processed on or after July 1, 2010. All medical transactions with the jurisdiction state in any applicable Medical Data Call state are reportable. This includes all workers compensation claims, including medical-only claims.

National Drug Code (NDC): A universal product identifier for human drugs in the United States. Each NDC code uniquely identifies a drug product based on key characteristics, such as the labeler (manufacturer/distributor), active ingredients, strength, dosage form, and package form.

Opioids: A class of drugs used to treat moderate to severe pain, particularly chronic intractable pain.

Other Outpatient Visit: A nonemergency outpatient visit where no major surgery services are performed.

Prescription: NCCI defines a "prescription" to be synonymous with a transaction. Therefore, a refill on a prescribed drug is considered a separate prescription.

(Paid) Procedure Code: A code from the jurisdiction-approved code table that identifies the procedure associated with the reimbursement. Examples include CPT code or revenue code.

Revenue Code: A numeric coding system used in hospital billings that provides broad classifications of the types of services provided. Some examples are emergency room, operating room, recovery room, room and board, and supplies.

Service Year: A loss accounting definition where experience is summarized by the calendar year in which a medical service was provided.

Taxonomy Code: A code that identifies the type of provider that billed for, and is being paid for, a medical service. Data reporters are instructed to use the provider taxonomy list of standard codes maintained by the National Uniform Claim Committee.

Time to Treatment (TTT): The amount of time, measured in days, between the date on which an accident occurs and the date on which the first medical service in a given category is provided.

Transaction: A line item of a medical bill.

Units: The number of units of service performed or the quantity of drugs dispensed. For Paid Procedure Codes related to medications, the quantity/units depend on the type of drug:

- For tablets, capsules, suppositories, nonfilled syringes, etc., *units* represent the actual number of the drug provided. For example, a bottle of 30 pills would have 30 units.
- For liquids, suspensions, solutions, creams, ointments, bulk powders, etc., dispensed in standard packages, the units
 are specified by the procedure code. For example, a cream is dispensed in a standard tube, which is defined as a
 single unit.
- For liquids, suspensions, solutions, creams, ointments, bulk powders, etc., that are not dispensed in standard packages, the number of units is the amount provided in its standard unit of measurement, such as milliliters, grams, or ounces. For example, codeine cough syrup dispensed by a pharmacist into a four-ounce bottle would be reported as four units.

Visit: Any hospital outpatient or ASC service or set of services provided to a claimant on a specific date. Any visit may have more than one procedure performed, and any claimant may have more than one visit.

Appendix

The data contained in this report is reported under the jurisdiction state—the state under whose workers compensation act the claimant's benefits are being paid. Medical transactions must continue to be reported until the transactions no longer occur (i.e., the claim is closed) or 30 years from the accident date. There are nearly 30 data elements reported.

Wherever possible, standard industry codes are used because they provide a clear definition of the data, improve its accuracy and quality, and increase efficiency of computer systems.

Carriers differ in their handling of medical data reporting. Some carriers retain all medical claims handling internally and submit the data themselves. Others use business partners for various aspects of medical claim handling, such as third party administrators or medical bill review vendors. It is possible for a carrier to authorize its vendor to report the data on its behalf. Some carriers may use a combination of direct reporting and vendors. Although data may have been provided by an authorized vendor on behalf of a carrier, the quality, timeliness, and completeness of the data is the responsibility of the carrier.

Before a medical data provider can send files, each submitter's electronic data file must pass certification testing. This ensures that all connections, data files, and systems are functioning and processing correctly. Each medical data provider within a reporting group is required to pass certification testing. If a medical data provider reports data for more than one reporting group, that data must be certified for each group.

For more information about the Medical Data Call, please refer to the **Medical Data Call Reporting Guidebook** on **ncci.com**.

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