

November 15, 2018

CIRCULAR LETTER TO ALL MEMBER COMPANIES

Re: Workers Compensation Insurance
2018 Medical Data Report – North Carolina
Opioid Utilization Supplement – North Carolina

The North Carolina Rate Bureau is pleased to provide you with a copy the 2018 Medical Data Report and the Opioid Utilization Supplement for the state of North Carolina. These reports have been compiled by the National Council on Compensation Insurance to provide insight into the medical cost drivers that impact the workers compensation system in North Carolina.

The reports are based on data collected on a calendar year basis and represent medical transactions for service year 2017. This data considers transactions for medical services provided on all workers compensation claims less than 30 years old from January 1, 2017 through December 31, 2017. The data shows that in service year 2017, over \$244 million was paid on 76,300 claims. This represents 89% of data from the workers compensation premium written, which includes experience for large deductible policies. Lump-sum settlements are not required to be reported. Self-insured data is not included.

This year's Medical Data Report illustrates the breakdown of services by category as follows:

- Physician
- Hospital
- Ambulatory Surgical Centers
- Drugs
- Durable Medical Equipment (DME), Supplies, and Implants
- Other

The Opioid Utilization Supplement Report includes sections on:

- Prescription Drug Statistics
- Opioid Claim Statistics
- Concurrent Usage of Opioids and Benzodiazepines
- Changes in Opioid Prescribing Patterns
- Oxycodone Pill Equivalents

We trust that these reports will provide additional insight into the workers compensation cost drivers in North Carolina. A copy of each report is attached for your review.

If you have questions, contact the NCRB Information Center at 919-582-1056 or via email at support@ncrb.org.

Sincerely,

Joanna Biliouris

Chief Operating Officer

JB:ko
Attachment
C-18-27



Medical Data Report

For the state of

NORTH CAROLINA

October 2018



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Introduction

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

This publication is a data source for regulators and others who are interested in the driving forces behind increasing medical costs in workers compensation 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 threaten the financial soundness of the workers compensation system.

Knowing how payments for different services contribute to workers compensation 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 (DME), Supplies, and Implants
- Other

Next, the report drills down into these categories to show which particular procedures represent the greatest share of payments and which are performed the most.

Additionally, this report provides detail on payments for prescription drugs, including which drugs are being prescribed the most and which ones represent the greatest share of drug payments, as well as information on controlled substances.

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.

Unless otherwise noted, the source for all data in this report is NCCI's Medical Data Call, Service Year 2017. Region includes data from the following states: AL, AR, FL, GA, KY, LA, MS, SC, TN, VA, and WV. 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, NJ, NM, NV, OK, OR, RI, SC, SD, TN, UT, VA, VT, WI, and WV.

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



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Medical Cost Statistics

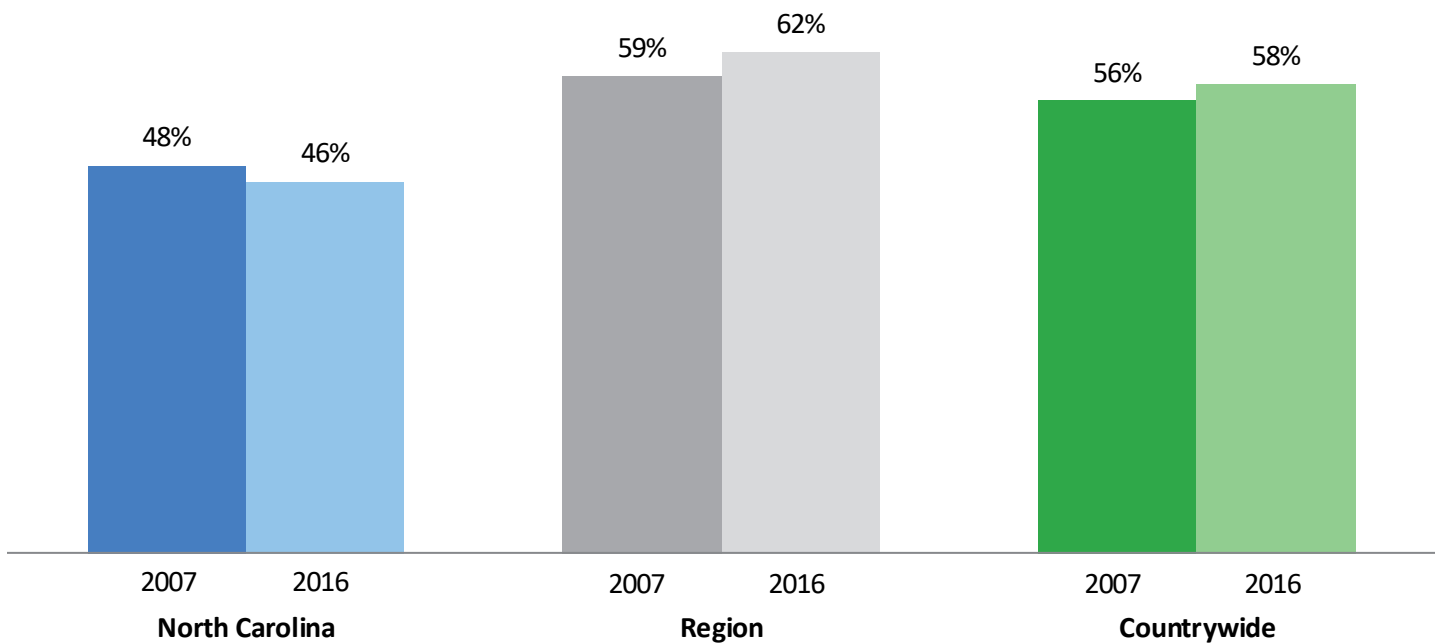
Traditional workers compensation policies cover two types of benefit payments: medical benefits and indemnity (lost wages) benefits.

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 local share of medical benefit costs may vary. 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 North Carolina, the region, and countrywide for Accident Years (AY) 2007 and 2016.

Chart 1

Medical Share of Total Benefit Costs by Accident Year



Source: NCCI's Calendar-Accident Year Call for Compensation Experience. Region includes AL, AR, FL, GA, KY, LA, MS, SC, TN, VA, and WV. 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.



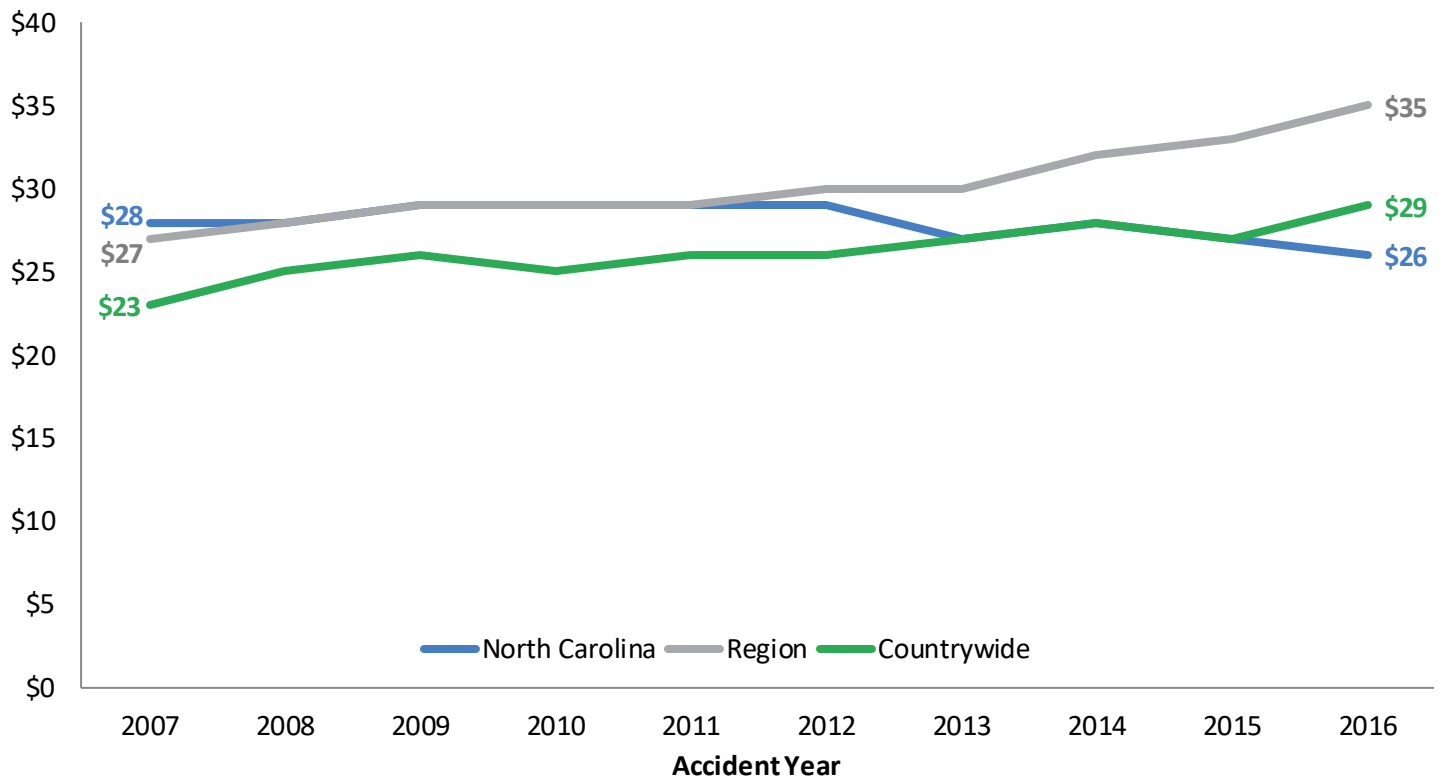
The countrywide overall medical average cost per claim has seen moderate increases in recent years, averaging 3% from Accident Years 2007 to 2016; this has tracked annual growth for the United States Personal Healthcare Spending per capita.¹ Chart 2 displays the historical overall medical average cost per case (per lost-time claim) for the most recent 10 accident years. Results are displayed for North Carolina, 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 all medical losses 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 North Carolina 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 AL, AR, FL, GA, KY, LA, MS, SC, TN, and VA. 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.

¹ State of the Line Report, *Annual Issues Symposium*, May 2018, www.ncci.com/Articles/Documents/AIS2018-SOTL-Presentation.pdf.



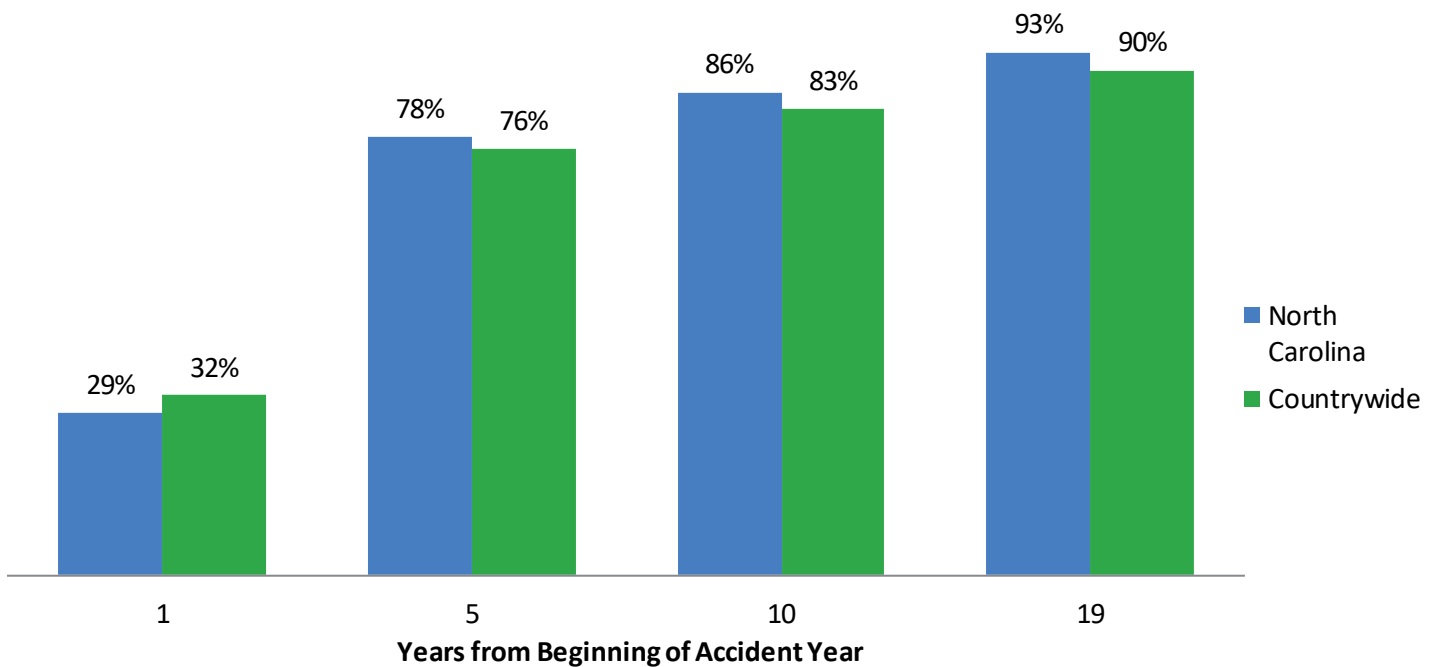
One factor that impacts medical costs is the time over which medical services are used. Payments on a workers compensation claim often continue for many years. Recent NCCI research has found that it is likely that more than 10% of the cost of medical benefits for workplace injuries that occur this year 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 North Carolina and countrywide.

Chart 3

Percentage of Medical Paid by Claim Maturity



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, OK, OR, RI, SC, SD, TN, 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.

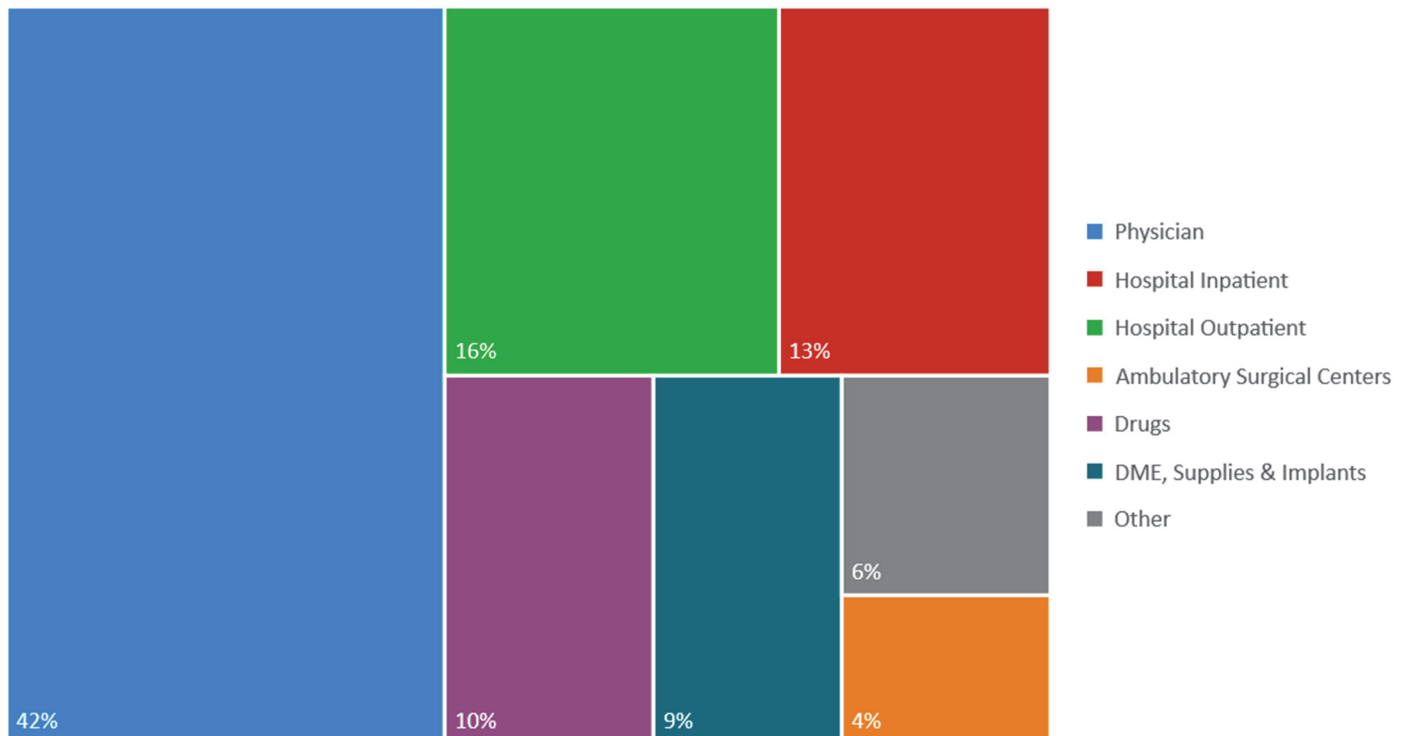
Payments are categorized as Drugs; Durable Medical Equipment (DME), Supplies, and Implants; and Other (includes home health, transportation, vision, and dental services), based on the procedure code reported. Payments are mapped to these categories regardless of who provides the service or where the 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; see Glossary
- 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, ambulatory surgical center)

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

Chart 4

Distribution of Medical Payments for North Carolina



Physicians

Results from NCCI’s study, [“The Price Impact of Physician Fee Schedules”](#) (April 2014), show that the median workers compensation price for a physician service is always at, or very near, the maximum allowable reimbursement (MAR) amount set by the fee schedule. 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.

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

The chart below shows the average percentage of Medicare schedule reimbursement² amounts for physician payments by category for North Carolina, the region, and countrywide. Note that “all physician services” in Chart 5 below refers only to the four categories listed in the chart.

Chart 5

Physician Payments as a Percentage of Medicare

Physician Service Category	North Carolina	Region	Countrywide
Surgery	176%	215%	275%
Radiology	184%	193%	236%
General and Physical Medicine	119%	112%	131%
Evaluation and Management	130%	122%	141%
All Physician Services	137%	140%	167%

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

Chart 6 displays the percentage of medical payments for physician services for North Carolina, the region, and countrywide.

Chart 6

Distribution of Medical Payments for Physicians

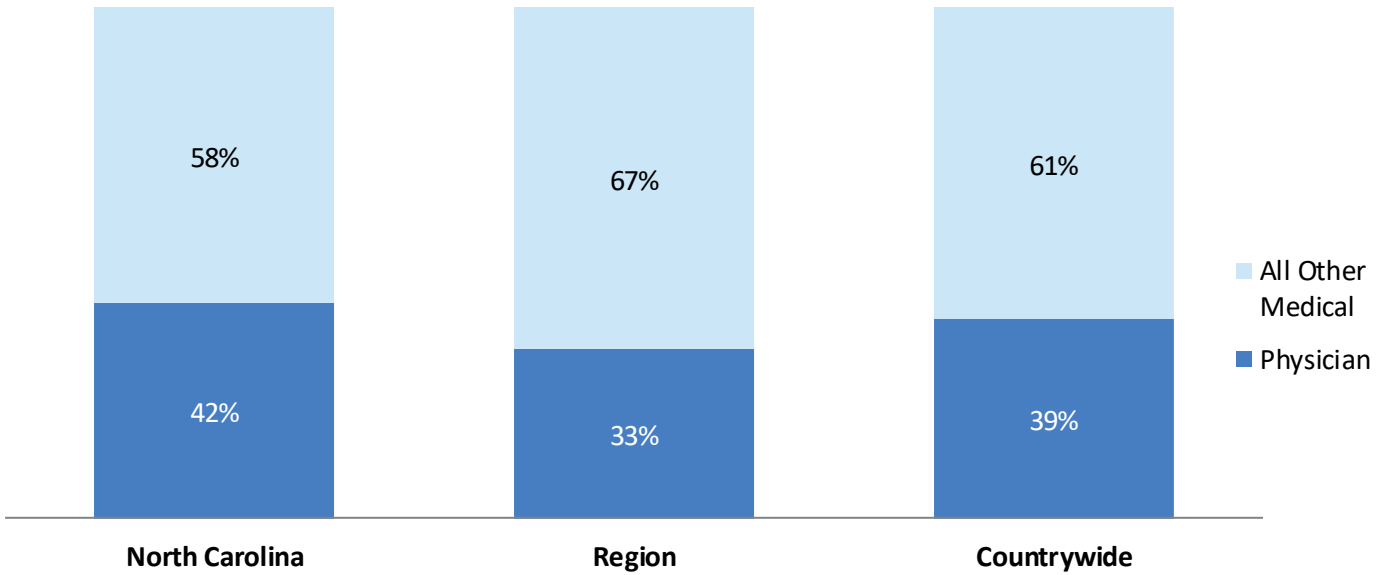
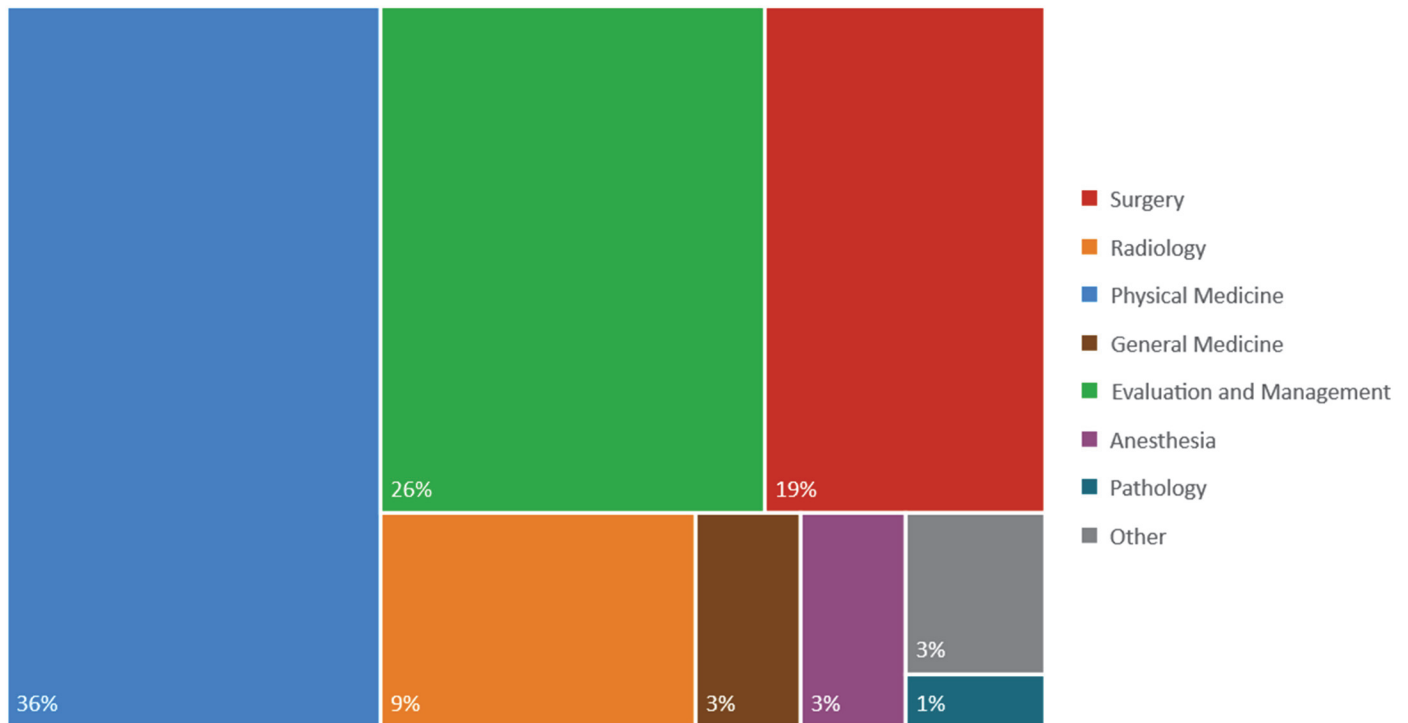


Chart 7 shows the distribution of physician payments by service category. Service categories are defined by the American Medical Association (AMA). Services involving office visits and consultations are included in the Evaluation and Management category. The Other category includes any codes not included in the AMA service categories, such as state-defined codes.

Since many states' medical fee schedule payment levels vary by service categories, an analysis of physician payments provides insights into the effectiveness of the fee schedule. For example, if the share of payments is high for a particular category compared to other states, a driver of the higher share could be higher maximum payment levels for that service category provided in the fee schedule.

Chart 7

Distribution of Physician Payments by AMA Service Category for North Carolina





Physicians typically use current procedure 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. Charts 8 through 16 display the top 10 procedure codes reported by physicians for the following service categories: 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.

The charts also include the average amount paid per transaction (PPT) for these codes in North Carolina, in the region, and across the country. The average amount paid per transaction 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 Top 10 charts rank the procedure codes for each service category using two different methods. The first method ranks procedure codes by total payments. 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.

The second method ranks procedure codes by total count of transactions. The procedure code with the highest total transaction count is ranked first, the procedure code with the second highest total transaction count is ranked second, and so on. This method reveals the most frequently used procedures.

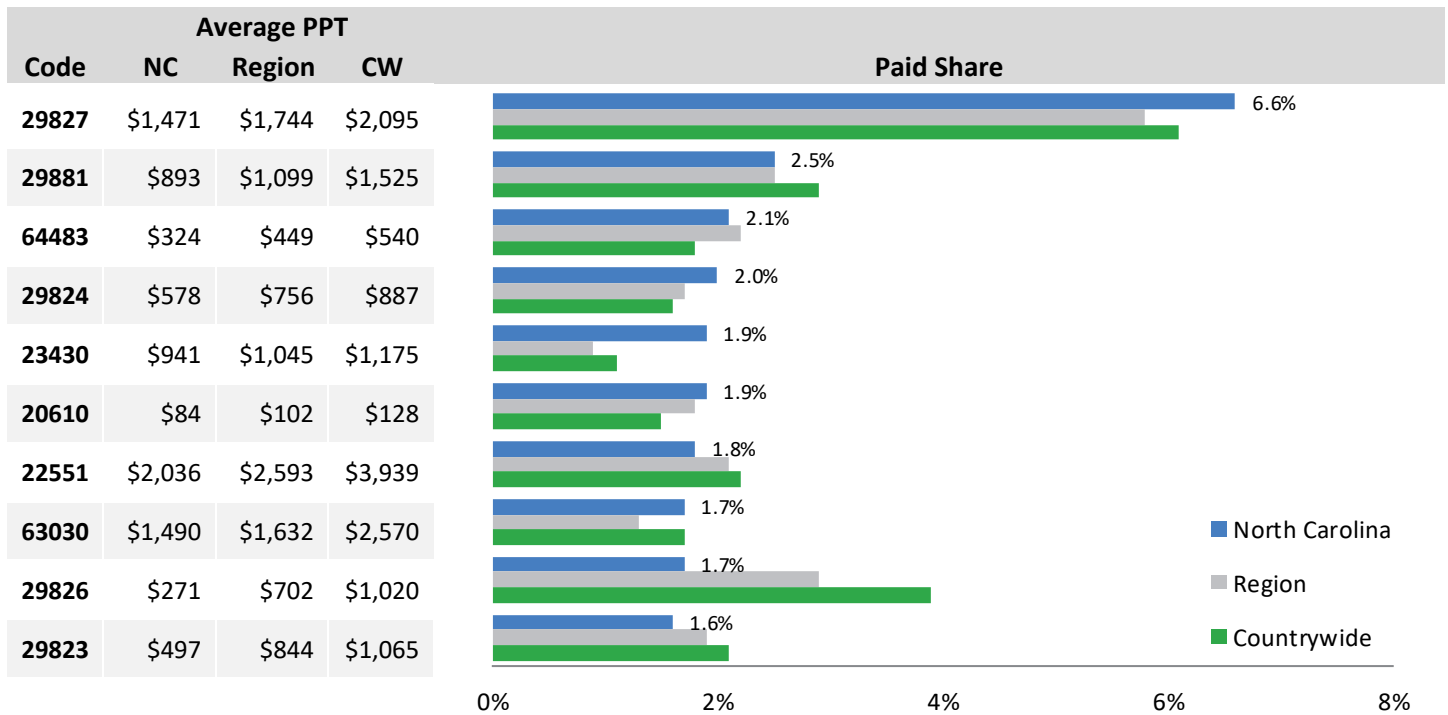
Results from NCCI's study, ["The Price Impact of Physician Fee Schedules"](#) (April 2014), show that the influence of fee schedules is quite different between the high-volume Evaluation and Management (E&M) service category and the small-volume Surgery category. For Surgery, many workers compensation payments are well below the MAR but are considerably above group health payments. In contrast, for E&M, workers compensation payments are closer to the MAR than those for Surgery and are more in line with those for group health.



In North Carolina, physician payments for surgery services provided in 2017 are, on average, 176% of Medicare scheduled reimbursement amounts, compared to 215% in the region and 275% countrywide. Payments for these services comprise 19% of physician payments, compared to 23% in the region and 25% countrywide.

Chart 8

Top 10 Surgery Procedure Codes by Amount Paid

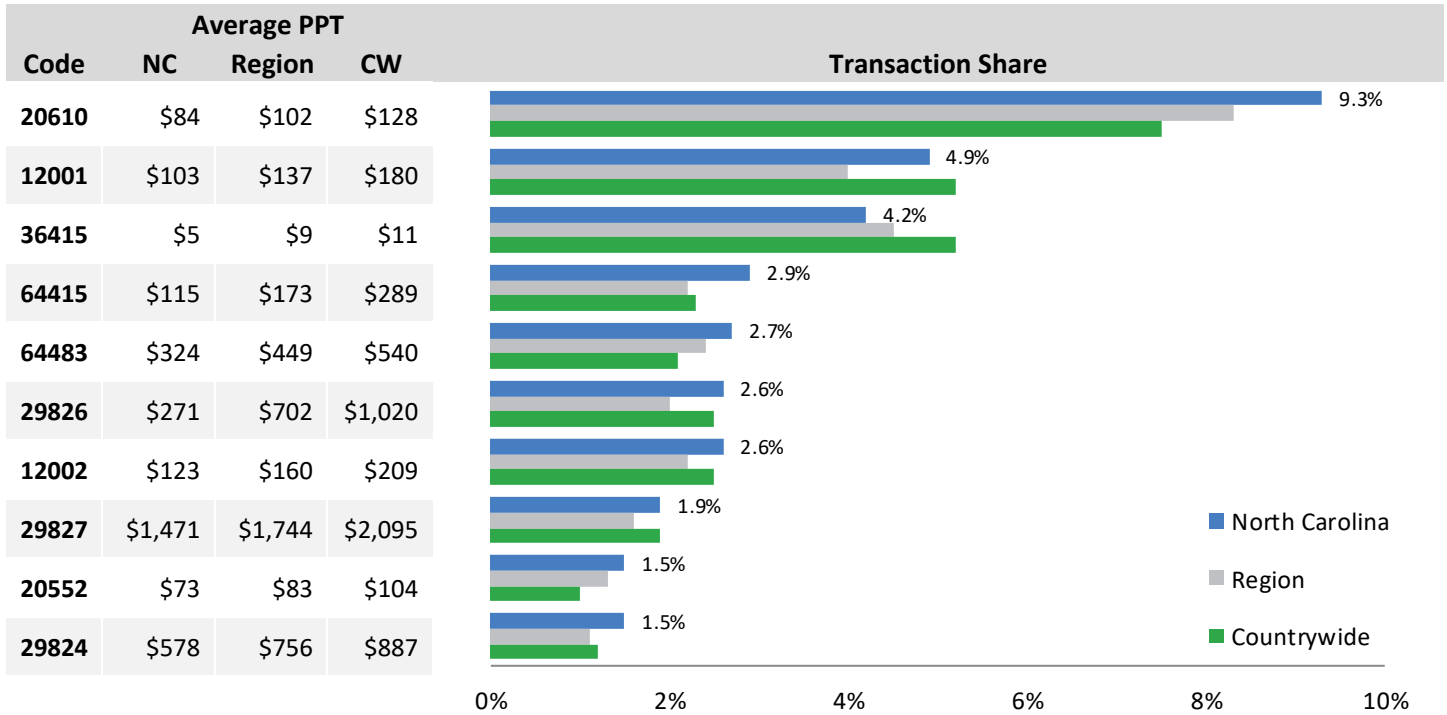


Code	Description
29827	Arthroscopy, shoulder, surgical; with rotator cuff repair
29881	Arthroscopy, knee, surgical; with meniscectomy (medial or lateral including any meniscal shaving), including debridement/shaving of articular cartilage
64483	Injection(s), anesthetic agent, and/or steroid, transforaminal epidural, with imaging guidance (fluoroscopy or computed tomography (CT)); lumbar or sacral, single level
29824	Arthroscopy, shoulder, surgical; distal claviclectomy including distal articular surface (Mumford procedure)
23430	Tenodesis of long tendon of biceps
20610	Arthrocentesis, aspiration, and/or injection; major joint or bursa (e.g., shoulder, hip, knee, joint, subacromial bursa)
22551	Arthrodesis, anterior interbody, including disc space preparation, discectomy, osteophyctomy and decompression of spinal cord and/or nerve roots; cervical below C2
63030	Laminotomy (hemilaminectomy) with decompression of nerve root(s) including partial facetectomy, foraminotomy, and/or excision of herniated intervertebral disc; 1 interspace lumbar
29826	Arthroscopy, shoulder, surgical; decompression of subacromial space with partial acromioplasty, with coracoacromial ligament (i.e., arch) release when performed
29823	Arthroscopy, shoulder, surgical; debridement extensive



Chart 9

Top 10 Surgery Procedure Codes by Transaction Counts



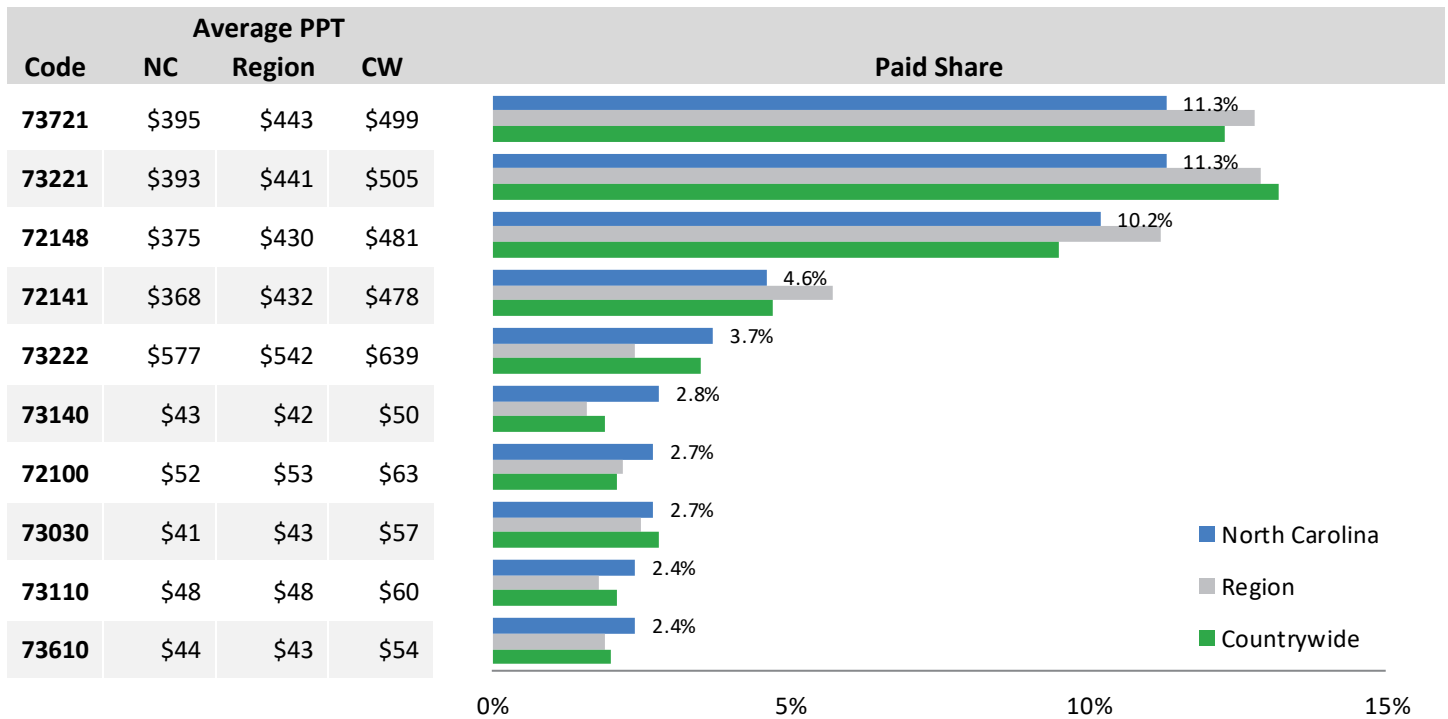
Code	Description
20610	Arthrocentesis, aspiration, and/or injection; major joint or bursa (e.g., shoulder, hip, knee, joint, subacromial bursa)
12001	Simple repair of superficial wounds of scalp, neck, axillae, external genitalia, trunk, and/or extremities (including hands and feet); 2.5 cm or less
36415	Collection of venous blood by venipuncture
64415	Injection, anesthetic agent; brachial plexus, single
64483	Injection(s), anesthetic agent, and/or steroid, transforaminal epidural, with imaging guidance (fluoroscopy or computed tomography (CT)); lumbar or sacral, single level
29826	Arthroscopy, shoulder, surgical; decompression of subacromial space with partial acromioplasty, with coracoacromial ligament (i.e., arch) release when performed
12002	Simple repair of superficial wounds of scalp, neck, axillae, external genitalia, trunk, and/or extremities (including hands and feet); 2.6 cm to 7.5 cm
29827	Arthroscopy, shoulder, surgical; with rotator cuff repair
20552	Injection(s); single or multiple trigger point(s), 1 or 2 muscle(s)
29824	Arthroscopy, shoulder, surgical; distal claviclectomy including distal articular surface (Mumford procedure)



In North Carolina, physician payments for radiology services provided in 2017 are, on average, 184% of Medicare scheduled reimbursement amounts, compared to 193% in the region and 236% countrywide. Payments for these services comprise 9% of physician payments, compared to 11% in the region and 9% countrywide.

Chart 10

Top 10 Radiology Procedure Codes by Amount Paid

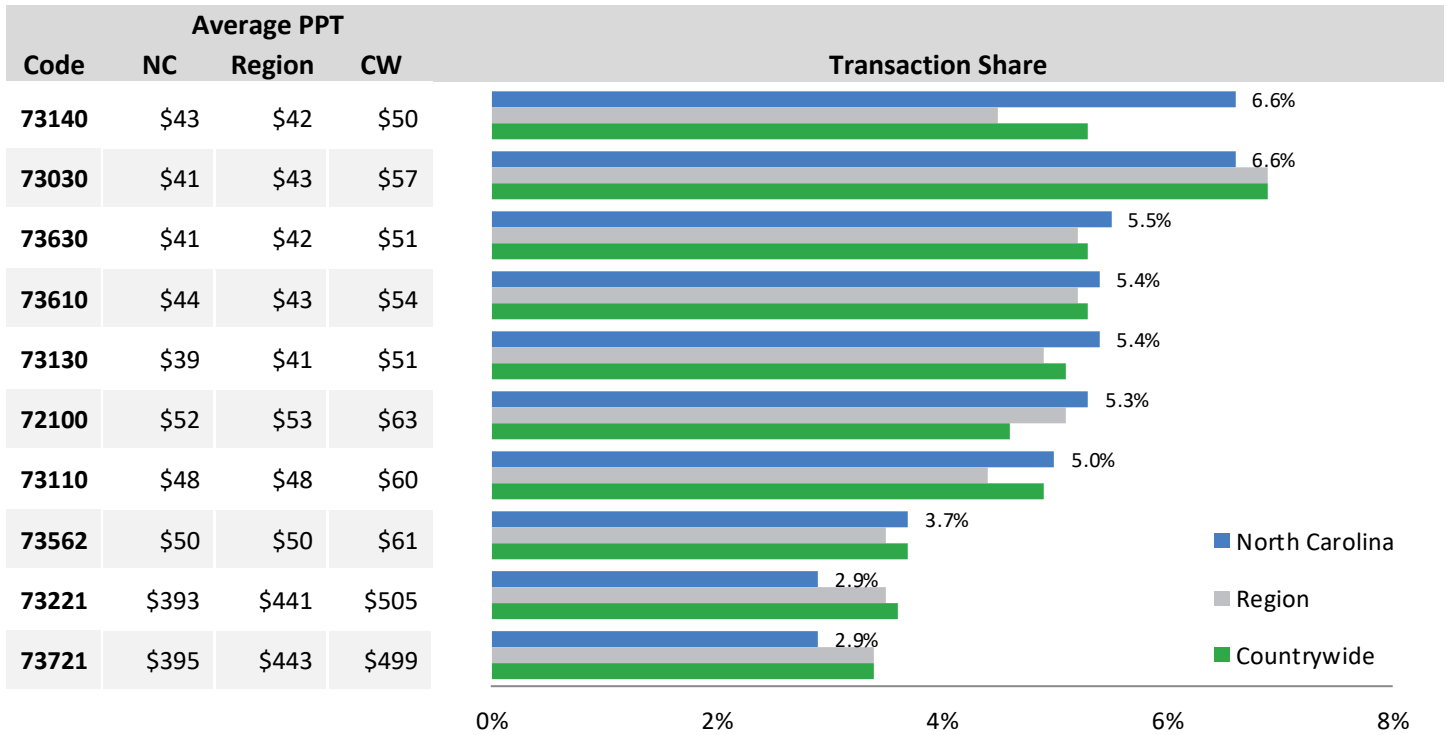


Code	Description
73721	Magnetic resonance (e.g., proton) imaging, any joint of lower extremity; without contrast material
73221	Magnetic resonance (e.g., proton) imaging, any joint of upper extremity; without contrast material
72148	Magnetic resonance (e.g., proton) imaging, spinal canal and contents, lumbar; without contrast material
72141	Magnetic resonance (e.g., proton) imaging, spinal canal and contents, cervical; without contrast material
73222	Magnetic resonance (e.g., proton) imaging, any joint of upper extremity; with contrast material
73140	Radiologic examination, finger(s); minimum of 2 views
72100	Radiologic examination, spine, lumbosacral; 2 or 3 views
73030	Radiologic examination, shoulder; complete minimum of 2 views
73110	Radiologic examination, wrist; complete minimum of 3 views
73610	Radiologic examination, ankle; complete minimum of 3 views



Chart 11

Top 10 Radiology Procedure Codes by Transaction Counts



Code	Description
73140	Radiologic examination, finger(s); minimum of 2 views
73030	Radiologic examination, shoulder; complete minimum of 2 views
73630	Radiologic examination, foot; complete minimum of 3 views
73610	Radiologic examination, ankle; complete minimum of 3 views
73130	Radiologic examination, hand; minimum of 3 views
72100	Radiologic examination, spine, lumbosacral; 2 or 3 views
73110	Radiologic examination, wrist; complete minimum of 3 views
73562	Radiologic examination, knee; 3 views
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



Radiology procedures consist of two components. There is a technical component, which is the performance of the examination, and a professional component for the interpretation of the results. Radiology services may be billed for the entire procedure, or they may be billed separately for each component. If billed by component, a modifier is typically reported along with the CPT code. These modifiers may be “26” for the professional component or “TC” for the technical component. In North Carolina, 4% of radiology payments are reported with a TC modifier, 12% of payments are reported with a 26 modifier, and 84% of payments are reported with no TC or 26 modifier.

Chart 12 shows the average payment for the identified top 10 radiology procedures, by amount paid, in North Carolina.

Chart 12

Average Amount Paid per Transaction by Modifier Code for North Carolina

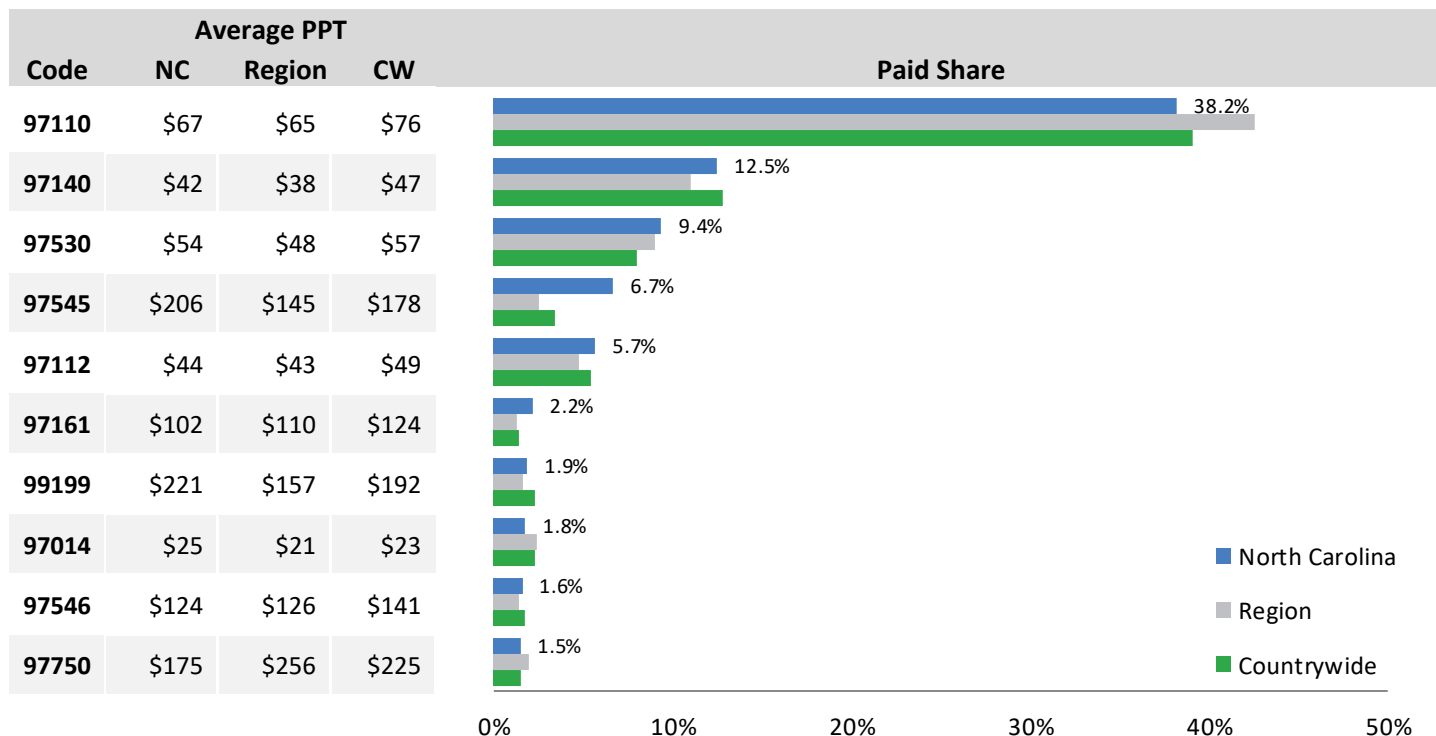
Code	No TC or 26 Modifier	Professional	Technical
73721	\$433	\$119	\$314
73221	\$430	\$122	\$301
72148	\$416	\$129	\$289
72141	\$415	\$125	\$274
73222	\$662	\$137	\$542
73140	\$51	\$12	\$40
72100	\$60	\$20	\$38
73030	\$48	\$17	\$31
73110	\$57	\$15	\$40
73610	\$52	\$16	\$35



In North Carolina, physician payments for physical and general medicine services provided in 2017 are, on average, 119% of Medicare scheduled reimbursement amounts, compared to 112% in the region and 131% countrywide. Payments for these services comprise 39% of physician payments, compared to 33% in the region and 34% countrywide.

Chart 13

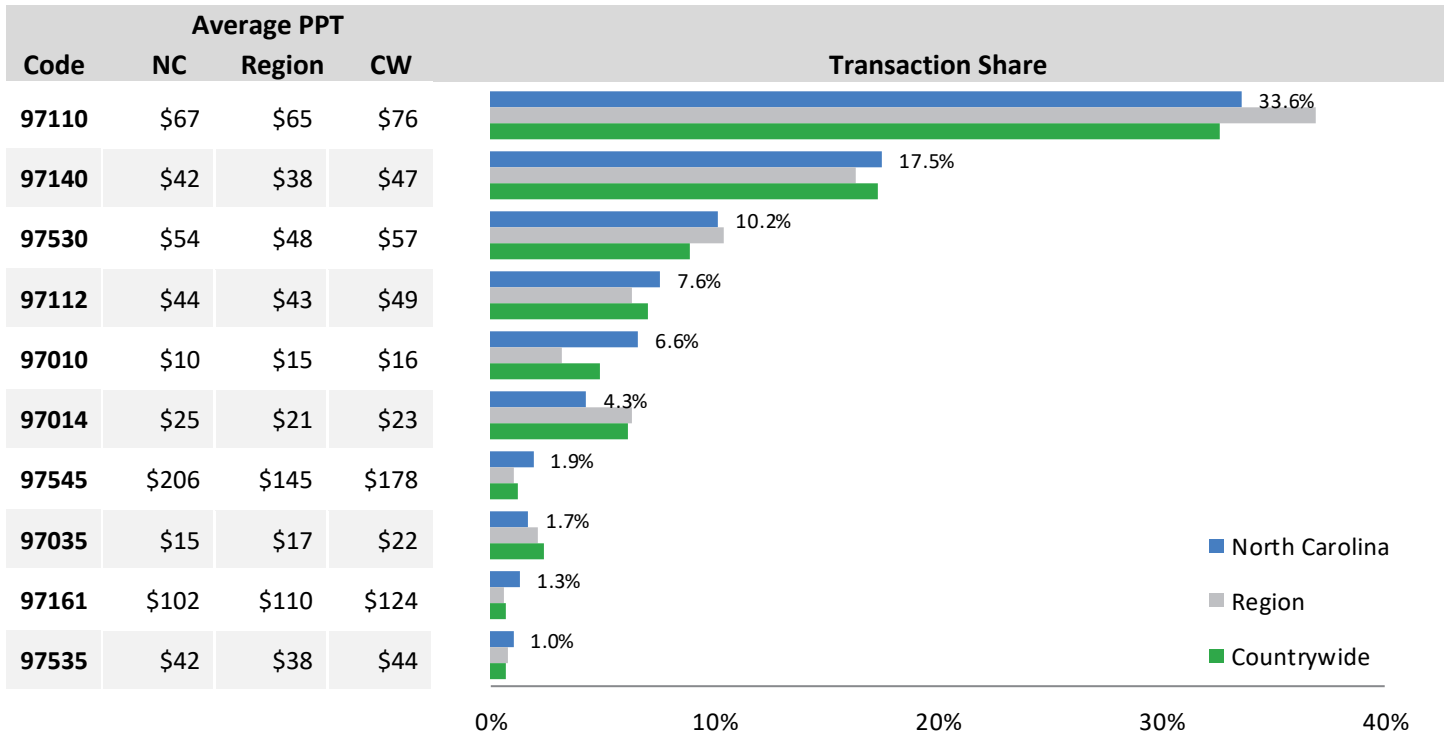
Top 10 Physical and General Medicine Procedure Codes by Amount Paid



Code	Description
97110	Therapeutic procedure, 1 or more areas, each 15 minutes; therapeutic exercises to develop strength and endurance, range of motion, and flexibility
97140	Manual therapy techniques (e.g., mobilization/manipulation, manual lymphatic drainage, manual traction), 1 or more regions, each 15 minutes
97530	Therapeutic activities, direct (one-on-one) patient contact by the provider (use of dynamic activities to improve functional performance), each 15 minutes
97545	Work hardening/conditioning; initial 2 hours
97112	Therapeutic procedure, 1 or more areas, each 15 minutes; neuromuscular reeducation of movement, balance, coordination, kinesthetic sense, posture, and/or proprioception for sitting and/or standing activities
97161	Physical therapy evaluation of low complexity; typically, 20 minutes are spent with the patient and/or family
99199	Unlisted special service procedure or report
97014	Application of a modality to 1 or more areas; electrical stimulation (unattended)
97546	Work hardening/conditioning; each additional hour
97750	Physical performance test or measurement (e.g., musculoskeletal functional capacity), with written report, each 15 minutes

Chart 14

Top 10 Physical and General Medicine Procedure Codes by Transaction Counts



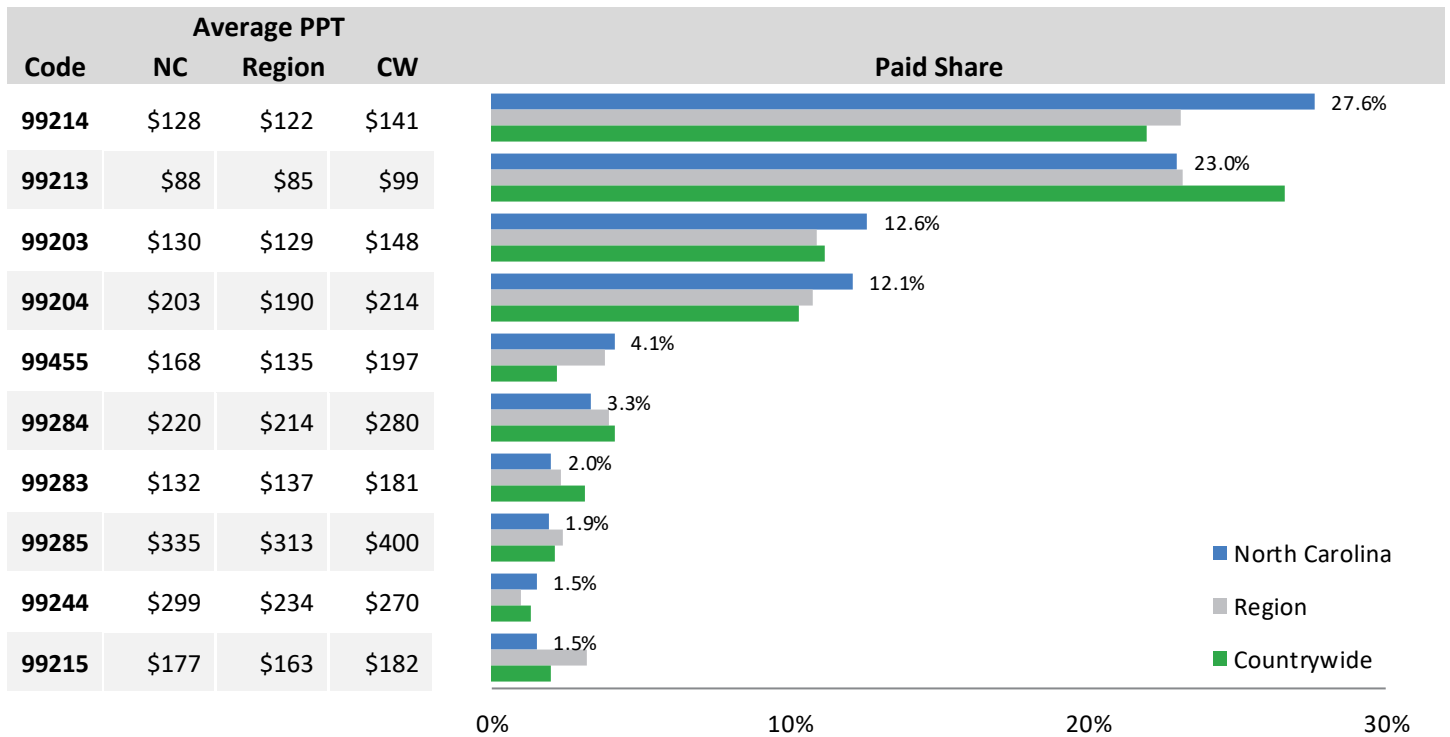
Code	Description
97110	Therapeutic procedure, 1 or more areas, each 15 minutes; therapeutic exercises to develop strength and endurance, range of motion, and flexibility
97140	Manual therapy techniques (e.g., mobilization/manipulation, manual lymphatic drainage, manual traction), 1 or more regions, each 15 minutes
97530	Therapeutic activities, direct (one-on-one) patient contact by the provider (use of dynamic activities to improve functional performance), each 15 minutes
97112	Therapeutic procedure, 1 or more areas, each 15 minutes; neuromuscular reeducation of movement, balance, coordination, kinesthetic sense, posture, and/or proprioception for sitting and/or standing activities
97010	Application of a modality to 1 or more areas; hot or cold packs
97014	Application of a modality to 1 or more areas; electrical stimulation (unattended)
97545	Work hardening/conditioning; initial 2 hours
97035	Application of a modality to 1 or more areas; ultrasound, each 15 minutes
97161	Physical therapy evaluation of low complexity; typically, 20 minutes are spent with the patient and/or family
97535	Self-care/home management training, direct one-on-one contact, each 15 minutes



In North Carolina, physician payments for evaluation and management services provided in 2017 are, on average, 130% of Medicare scheduled reimbursement amounts, compared to 122% in the region and 141% countrywide. Payments for these services comprise 26% of physician payments, compared to 25% in the region and 23% countrywide.

Chart 15

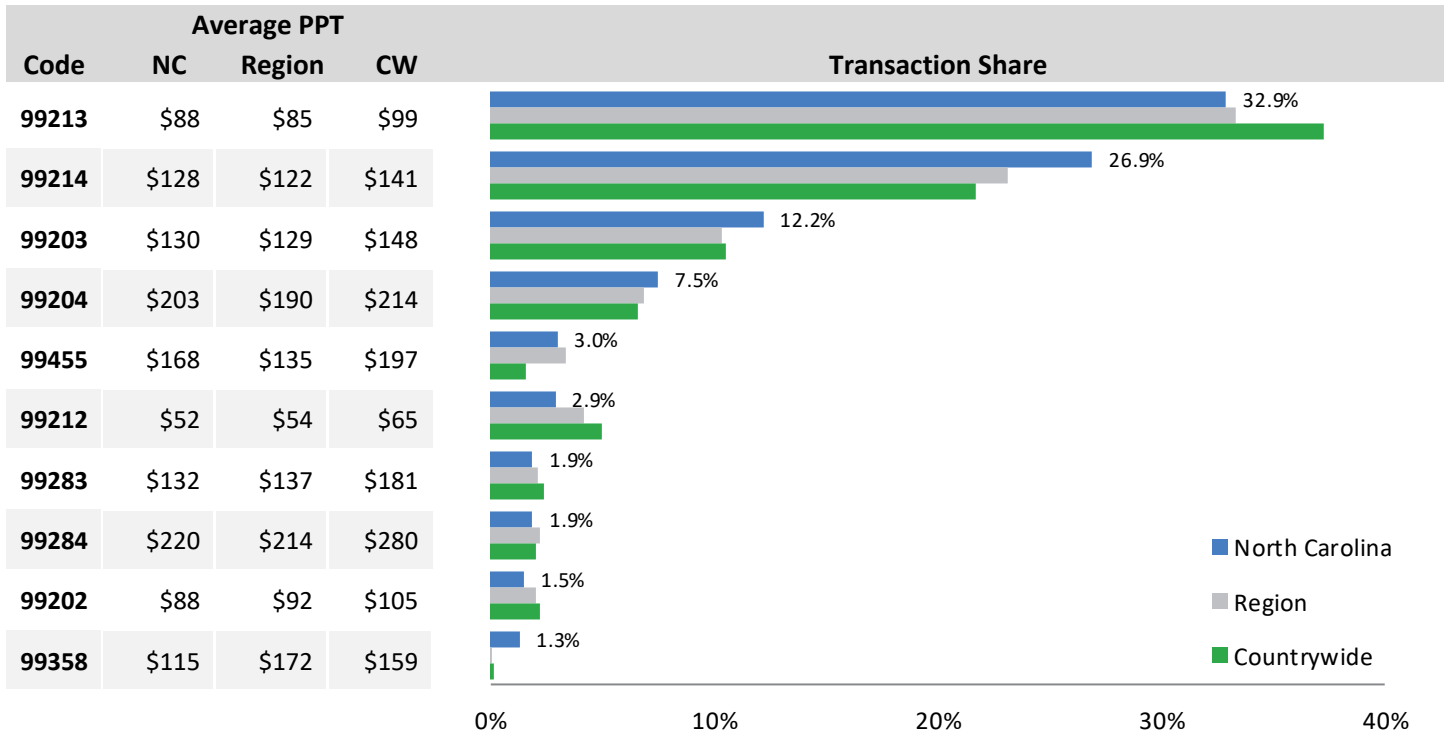
Top 10 Evaluation and Management Procedure Codes by Amount Paid



Code	Description
99214	Office or other outpatient visit for the evaluation and management of an established patient. Usually the presenting problem(s) are of moderate to high severity. Physicians typically spend 25 minutes face-to-face with the patient and/or family.
99213	Office or other outpatient visit for the evaluation and management of an established patient. Usually the presenting problem(s) are of low to moderate severity. Physicians typically spend 15 minutes face-to-face with the patient and/or family.
99203	Office or other outpatient visit for the evaluation and management of a new patient. Usually the presenting problem(s) are of moderate severity. Physicians typically spend 30 minutes face-to-face with the patient and/or family.
99204	Office or other outpatient visit for the evaluation and management of a new patient. Usually the presenting problem(s) are of moderate to high severity. Physicians typically spend 45 minutes face-to-face with the patient and/or family.
99455	Work related or medical disability examination by the treating physician.
99284	Emergency department visit. Usually the presenting problem(s) are of high severity and require urgent evaluation by the physician but do not pose an immediate significant threat to life or physiologic function.
99283	Emergency department visit. Usually the presenting problem(s) are of moderate severity.
99285	Emergency department visit. Usually the presenting problem(s) are of high severity and pose an immediate significant threat to life or physiologic function.
99244	Office consultation for a new or established patient. Usually the presenting problem(s) are of moderate to high severity. Physicians typically spend 60 minutes face-to-face with the patient and/or family.
99215	Office or other outpatient visit for the evaluation and management of an established patient. Usually the presenting problem(s) are of moderate to high severity. Physicians typically spend 40 minutes face-to-face with the patient and/or family.

Chart 16

Top 10 Evaluation and Management Procedure Codes by Transaction Counts



Code	Description
99213	Office or other outpatient visit for the evaluation and management of an established patient. Usually the presenting problem(s) are of low to moderate severity. Physicians typically spend 15 minutes face-to-face with the patient and/or family.
99214	Office or other outpatient visit for the evaluation and management of an established patient. Usually the presenting problem(s) are of moderate to high severity. Physicians typically spend 25 minutes face-to-face with the patient and/or family.
99203	Office or other outpatient visit for the evaluation and management of a new patient. Usually the presenting problem(s) are of moderate severity. Physicians typically spend 30 minutes face-to-face with the patient and/or family.
99204	Office or other outpatient visit for the evaluation and management of a new patient. Usually the presenting problem(s) are of moderate to high severity. Physicians typically spend 45 minutes face-to-face with the patient and/or family.
99455	Work related or medical disability examination by the treating physician.
99212	Office or other outpatient visit for the evaluation and management of an established patient. Usually the presenting problem(s) are self limited or minor. Physicians typically spend 10 minutes face-to-face with the patient and/or family.
99283	Emergency department visit. Usually the presenting problem(s) are of moderate severity.
99284	Emergency department visit. Usually the presenting problem(s) are of high severity and require urgent evaluation by the physician but do not pose an immediate significant threat to life or physiologic function.
99202	Office or other outpatient visit for the evaluation and management of a new patient. Usually the presenting problem(s) are of low to moderate severity. Physicians typically spend 20 minutes face-to-face with the patient and/or family.
99358	Prolonged evaluation and management service before and/or after direct patient care; first hour

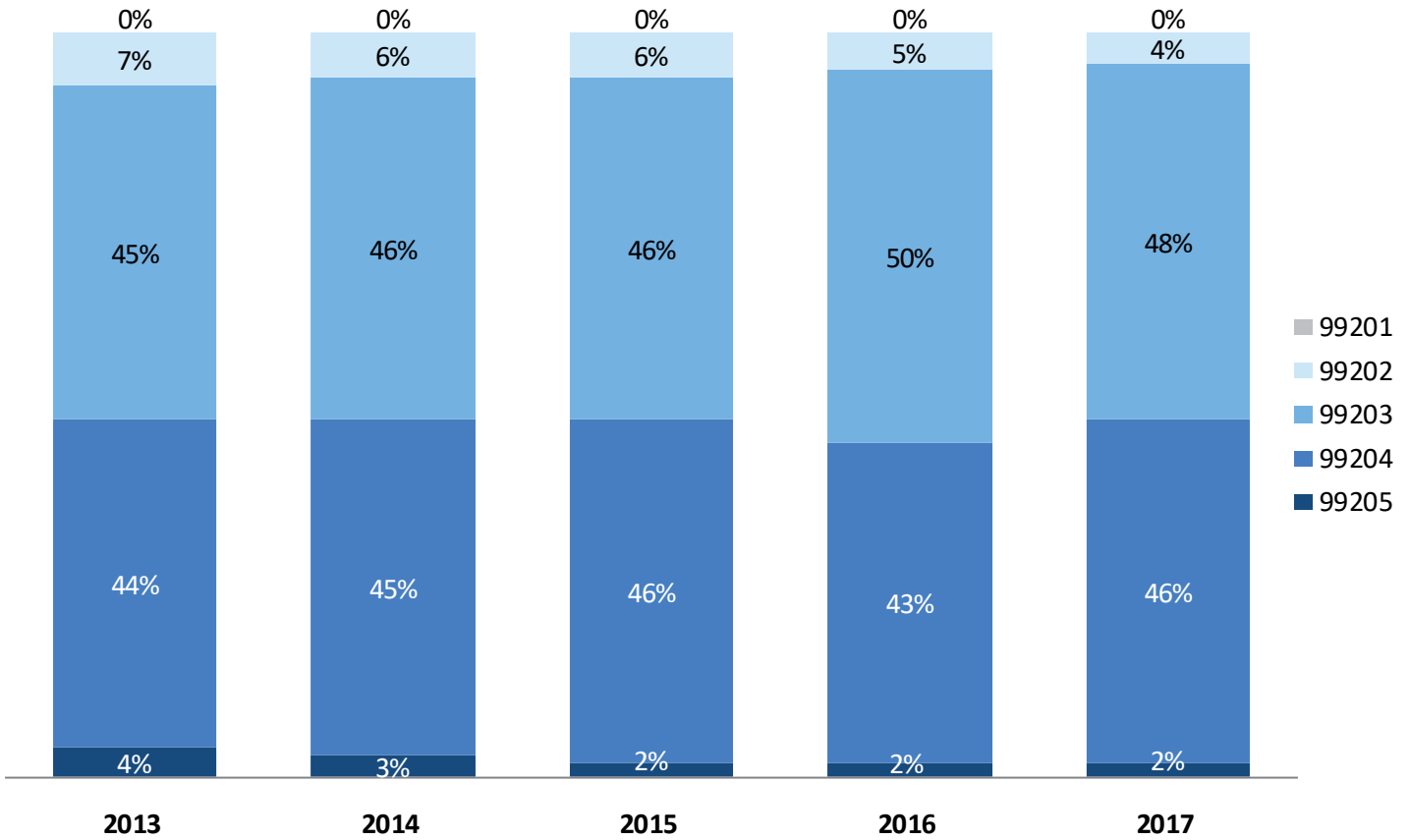


Evaluation and Management services consist largely of office or outpatient visits for a new patient or an established patient.

There are five periods of time spent with a *new* patient, ranging from 10 minutes for Procedure Code 99201 to 60 minutes for Procedure Code 99205. Chart 17 shows a five-year snapshot of experience for each procedure type and the average amount paid per transaction.

Chart 17

Office or Other Outpatient Visit for the Evaluation and Management of a New Patient for North Carolina



Source: NCCI's Medical Data Call, Service Years 2013 to 2017.

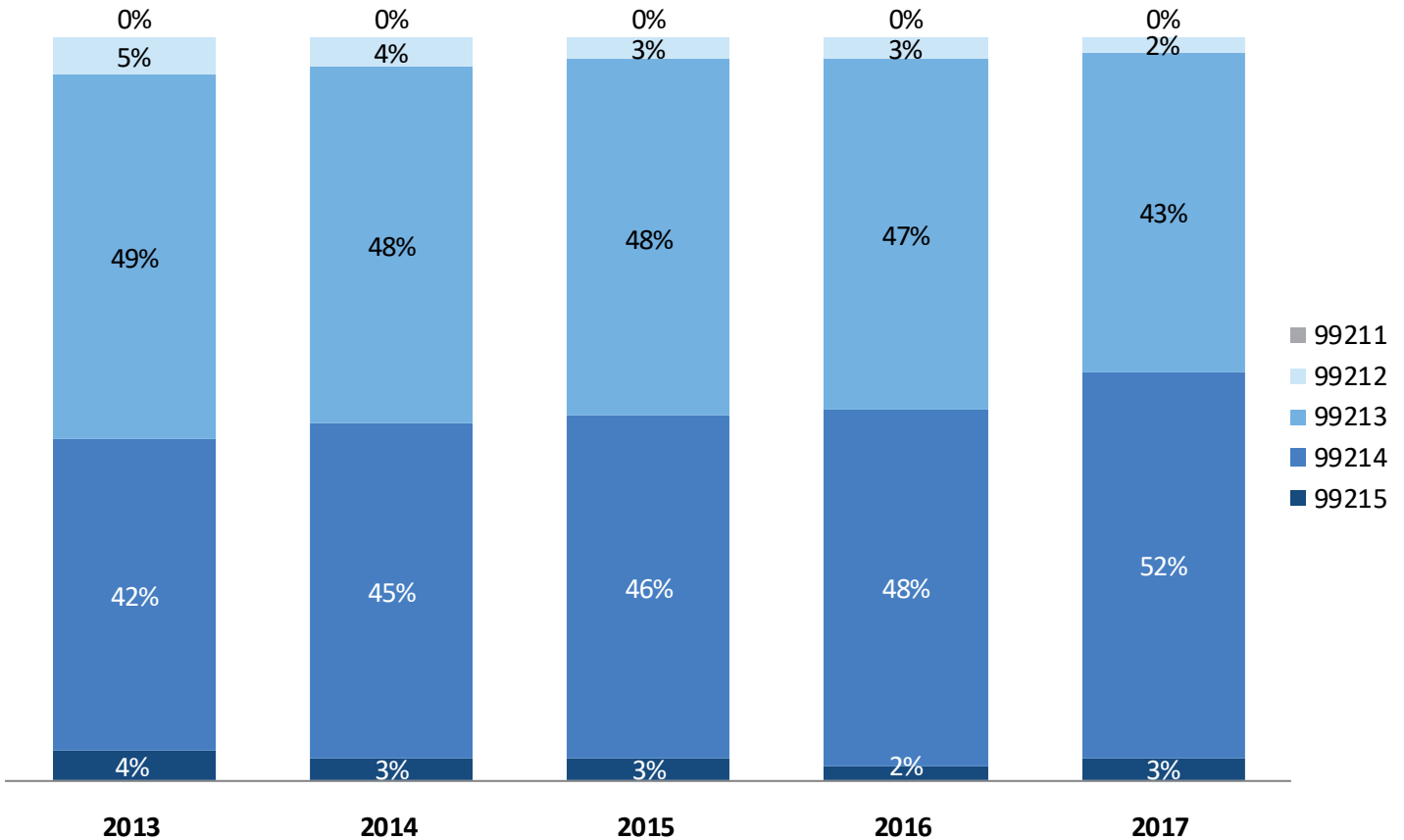
Code	Severity/Time	Average PPT				
		2013	2014	2015	2016	2017
99201	Low to Moderate; 10 minutes with patient	\$53	\$50	\$52	\$54	\$51
99202	Low to Moderate; 20 minutes with patient	\$79	\$79	\$83	\$88	\$88
99203	Moderate; 30 minutes with patient	\$110	\$112	\$123	\$130	\$130
99204	Moderate to High; 45 minutes with patient	\$164	\$167	\$179	\$201	\$203
99205	Moderate to High; 60 minutes with patient	\$209	\$214	\$231	\$245	\$261



Similarly, for established patients, there are five periods of time spent with the patient, ranging from five minutes for Procedure Code 99211 to 40 minutes for Procedure Code 99215. Chart 18 shows a five-year snapshot of experience for each procedure type and the average amount paid per transaction.

Chart 18

Office or Other Outpatient Visit for the Evaluation and Management of an Established Patient for North Carolina



Source: NCCI's Medical Data Call, Service Years 2013 to 2017.

Code	Severity/Time	Average PPT				
		2013	2014	2015	2016	2017
99211	Low to Moderate; 5 minutes with patient	\$27	\$66	\$63	\$24	\$25
99212	Low to Moderate; 10 minutes with patient	\$45	\$46	\$48	\$51	\$52
99213	Moderate; 15 minutes with patient	\$63	\$64	\$74	\$88	\$88
99214	Moderate to High; 25 minutes with patient	\$96	\$98	\$111	\$128	\$128
99215	Moderate to High; 40 minutes with patient	\$148	\$151	\$158	\$177	\$177



One measure of the availability of medical services is time until first treatment. Time to treatment (TTT) is measured by the number of days between date of injury and the date on which the worker first received medical services. Charts 19 through 22 show the median and 75th percentile³ TTT by physician service category for North Carolina, the region, and countrywide. No adjustment has been made to account for injuries that may take time to develop, such as an occupational disease, that may extend the time between the date a work-related injury or disease is reported to a workers compensation insurer and the first medical treatment an insurer is responsible for.

Chart 19

Time Until First Treatment for Major Surgery⁴ (in Days)

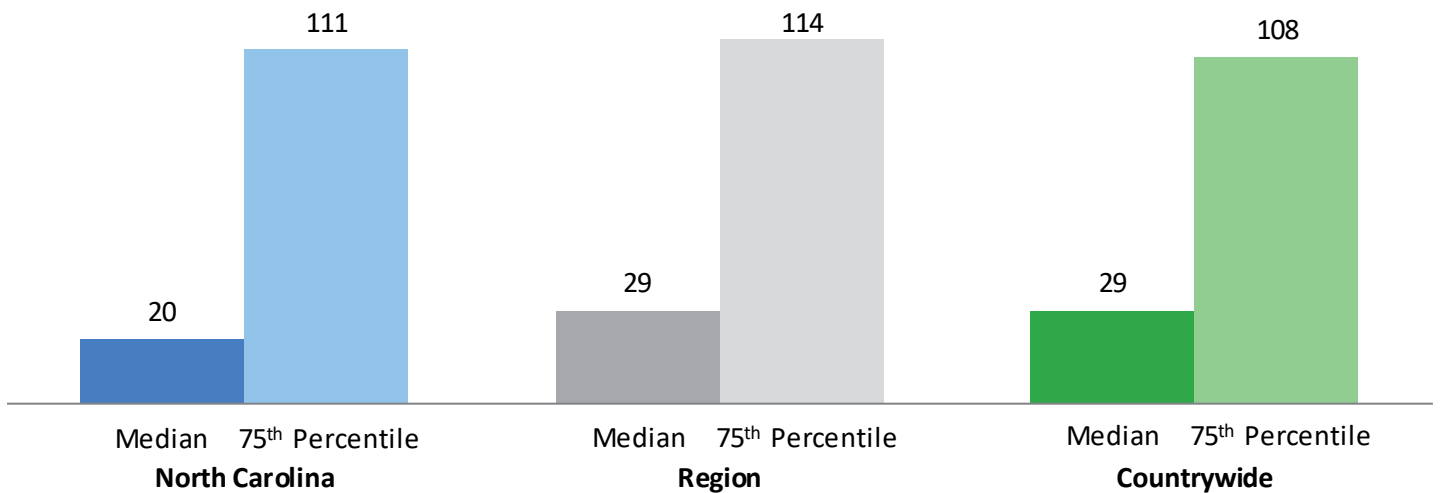
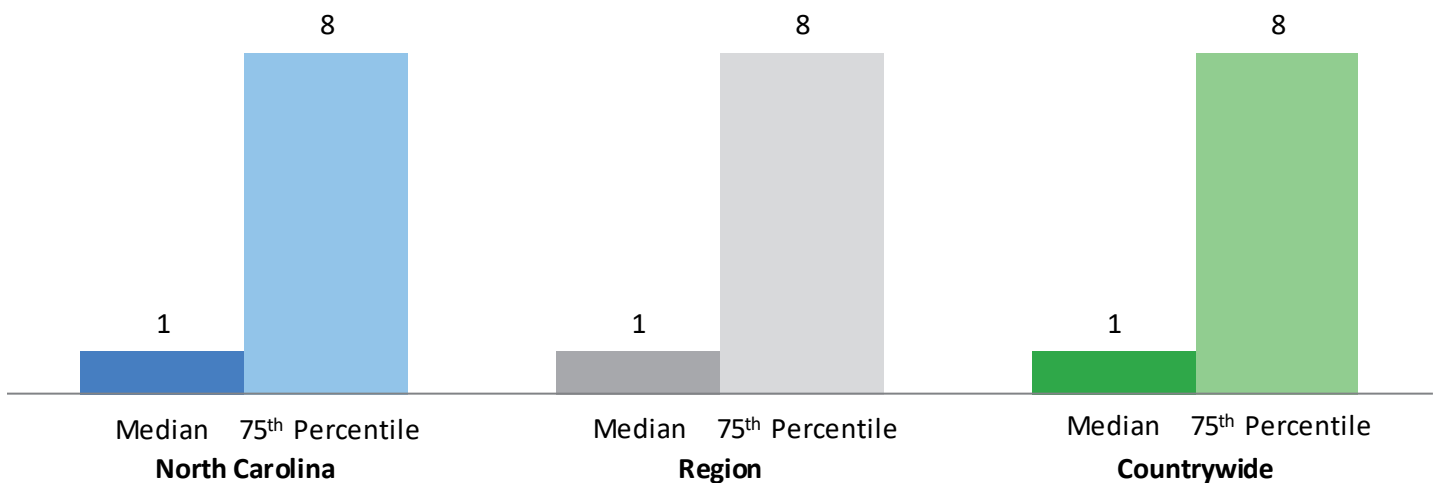


Chart 20

Time Until First Treatment for Radiology (in Days)



Source: NCCI's Medical Data Call for Accident Year 2016 and Service Years 2016 and 2017.

³ 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 19 indicates that out of 100 claimants, 75 will receive major surgical treatment within 111 days of their accident date. Comparing the median to the 75th percentile illustrates the variation in TTT between claims.

⁴ A surgical service is defined as "major surgery" or "minor surgery" within the surgical category as defined by the AMA.

Chart 21

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

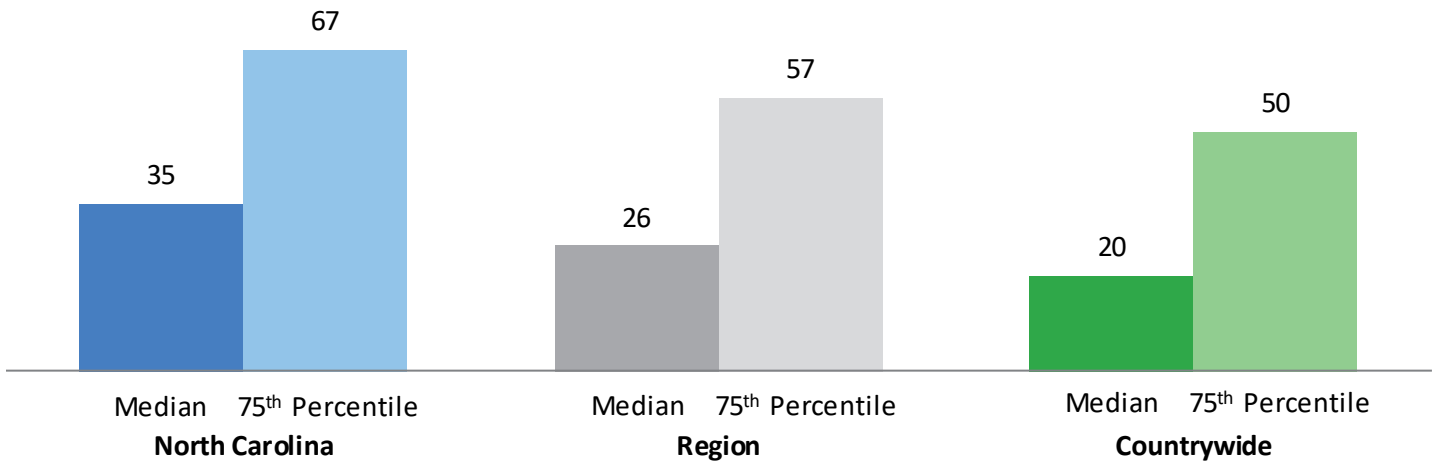
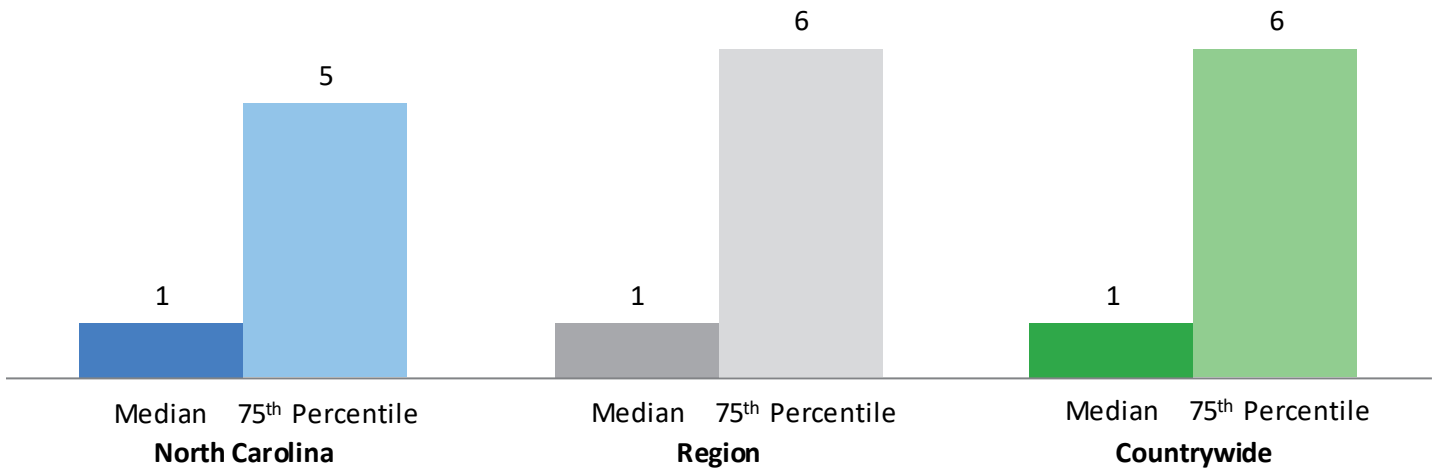


Chart 22

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



Source: NCCI's Medical Data Call for Accident Year 2016 and Service Years 2016 and 2017.



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 were mostly established in the last decade. Several states remain without such regulation today. Unlike physician fee schedules, hospital inpatient fee schedules vary a great deal. Some are based on Medicare, others reflect a discount off the charge master established by the hospitals, and yet others are based on per diem rates.

A hospital inpatient stay is typically reported with one of two types of codes: a diagnosis-related group (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 North Carolina, 51% of hospital inpatient payments are reported with a DRG code.

Due to differences in fee schedules, which may result in varied reporting of codes across jurisdictions, the region, and countrywide, comparisons by procedure code for inpatient costs should be interpreted with caution. 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.

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 schedule reimbursement amounts for hospital inpatient payments for North Carolina, the region, and countrywide.

Chart 23

Hospital Inpatient Payments as a Percentage of Medicare

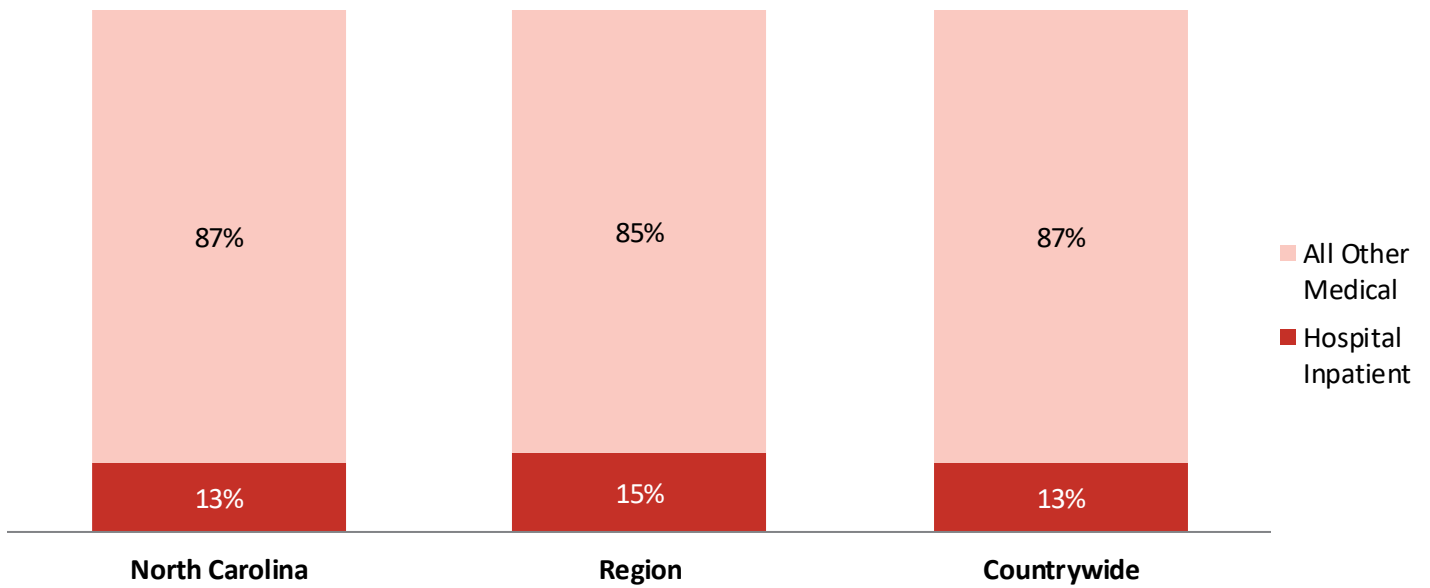
Medical Cost Category	North Carolina	Region	Countrywide
Hospital Inpatient	146%	218%	191%

Source: NCCI's Medical Data Call for Service Year 2017. Region includes AL, AR, FL, GA, KY, LA, MS, SC, TN, VA, and WV. 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, NJ, NM, NV, OK, OR, RI, SC, SD, TN, UT, VA, VT, WI, and WV.

Chart 24 displays the percentage of medical payments for hospital inpatient services for North Carolina, the region, and countrywide.

Chart 24

Distribution of Medical Payments for Hospital Inpatient





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 25 displays the average amount paid per stay for hospital inpatient services, while Chart 26 displays the average amount paid per day for hospital inpatient services for North Carolina, the region, and countrywide. Note that there are no controls for mix of diagnosis or severity of claims between jurisdictions.

Chart 25

Average Inpatient Amount Paid per Stay for Hospital Inpatient Services

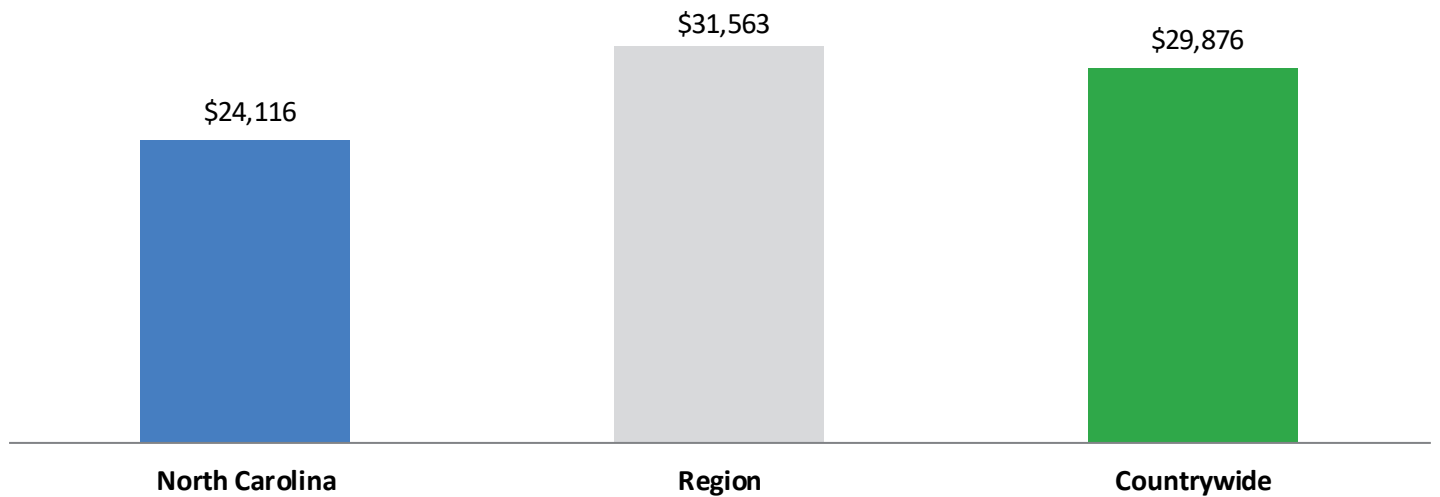


Chart 26

Average Inpatient Amount Paid per Day for Hospital Inpatient Services

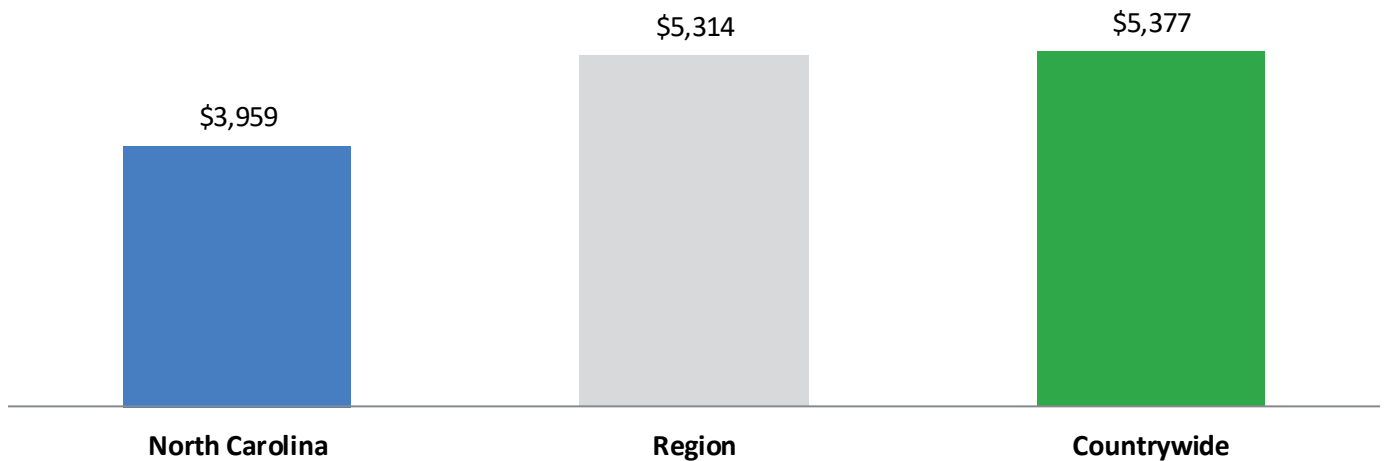




Chart 27 displays the average number of hospital inpatient stays per 1,000 active claims in 2017 for North Carolina, the region, and countrywide. An active claim is a workers compensation claim for which there is at least one medical service provided during that service year. Chart 28 displays the average and median length of stay for hospital inpatient services for North Carolina, the region, and countrywide. Note that there are no controls for mix of diagnosis or severity of claims between jurisdictions.

Chart 27

Average Number of Inpatient Stays per 1,000 Active Claims

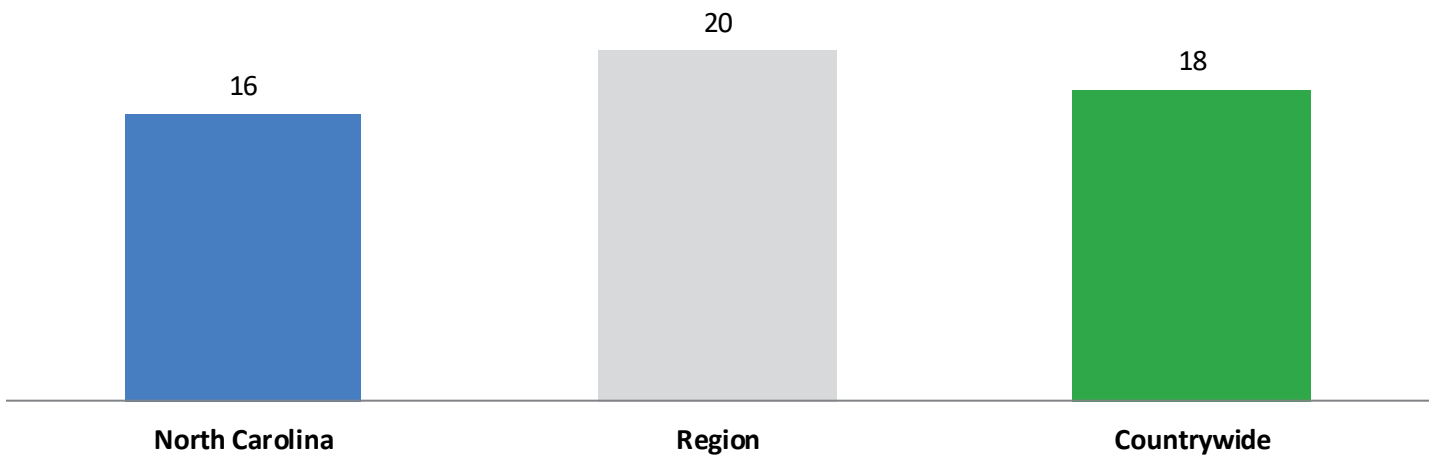


Chart 28

Length of Stay for Hospital Inpatient Services

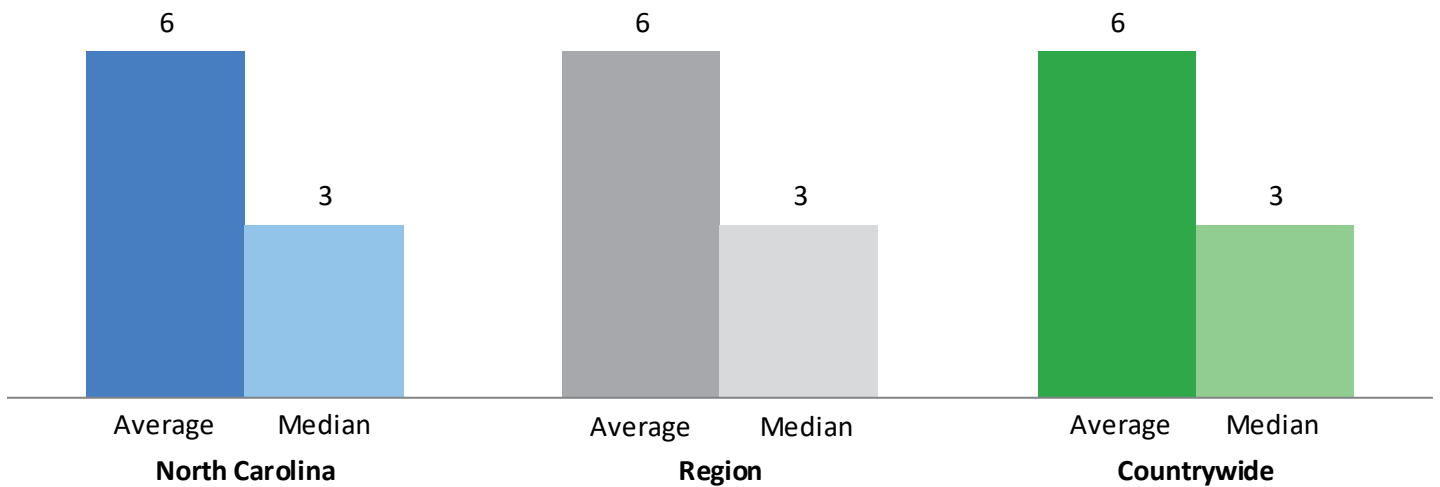
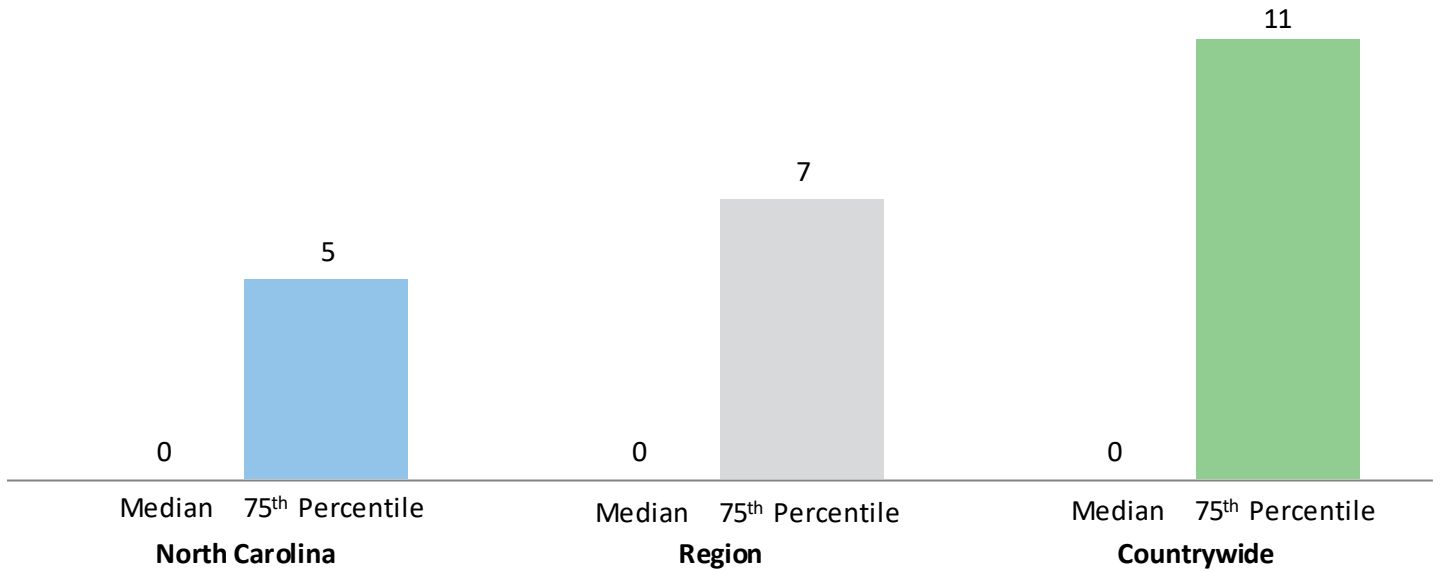




Chart 29 shows the median and 75th percentile time until first treatment for inpatient stays, other than emergency room visits, for North Carolina, the region, and countrywide.

Chart 29

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



Source: NCCI's Medical Data Call for Accident Year 2016 and Service Years 2016 and 2017.



Charts 30 and 31 display the top 10 diagnosis groups and top 10 DRG codes for hospital inpatient services, revealing the most prevalent types of hospital inpatient stays. Diagnosis group and body system are identified for each visit based on ICD-10 (International Classification of Diseases) code. The diagnosis groups and DRG codes are ranked based on total payments in North Carolina. A brief description of each DRG code is displayed in the table below chart 31.

Chart 30

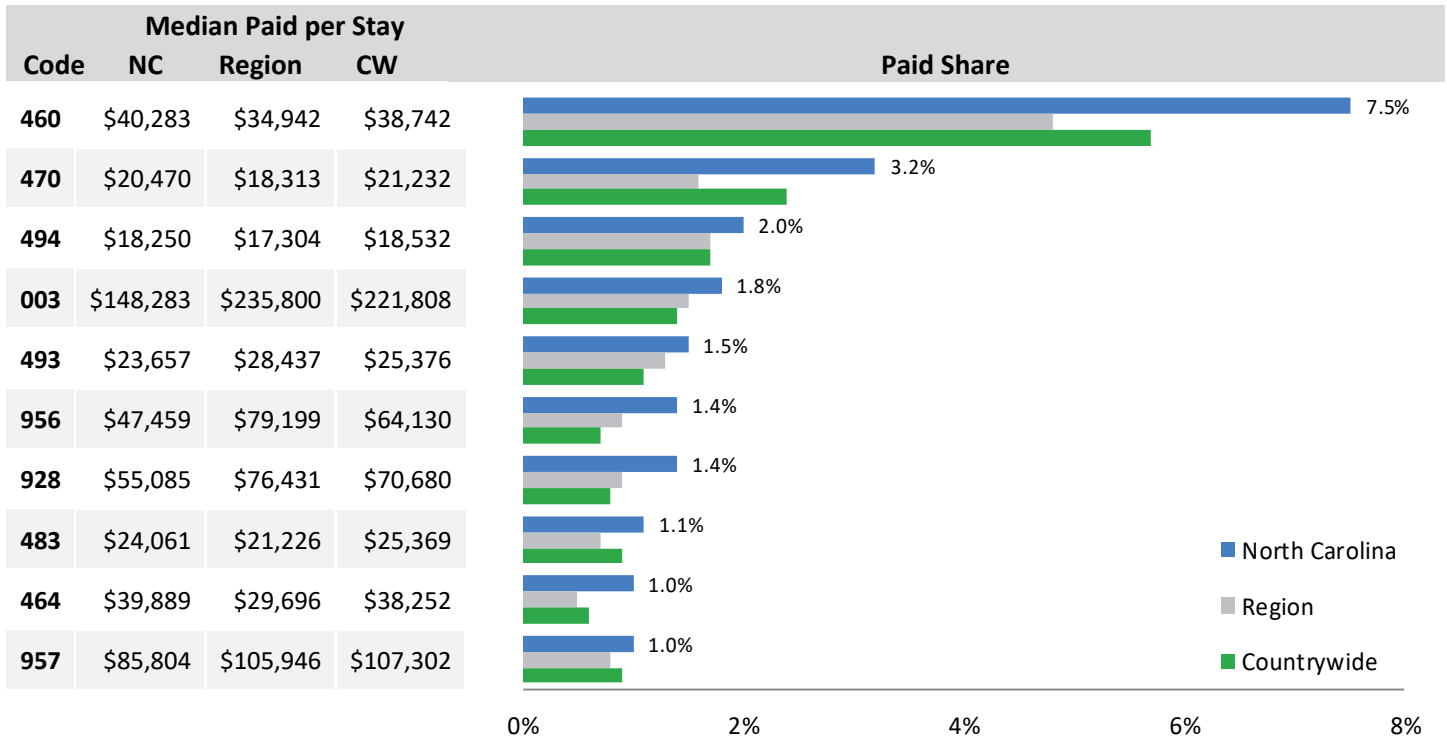
Top 10 Diagnosis Groups by Amount Paid for Hospital Inpatient Services

Diagnosis Group	Paid Share	Median Amount Paid per Stay		
		North Carolina	Region	Countrywide
Intracranial injury	7.8%	\$18,012	\$22,500	\$21,210
Fracture of lower leg, including ankle	7.0%	\$17,582	\$18,085	\$18,514
Lumbar spine degeneration	6.8%	\$36,218	\$29,452	\$30,504
Hip/pelvis fracture/major trauma	5.8%	\$17,626	\$17,456	\$19,257
Lumbosacral intervertebral disc disorders	4.3%	\$35,437	\$22,430	\$25,084
Fracture of rib(s), sternum and thoracic spine	4.3%	\$14,498	\$13,783	\$16,118
Knee degenerative/overuse injuries	3.4%	\$19,038	\$16,198	\$18,562
Fracture of lumbar spine and pelvis	2.8%	\$19,174	\$17,419	\$18,820
Fracture of skull and facial bones	2.2%	\$16,748	\$20,343	\$20,885
Fracture of forearm	2.0%	\$16,388	\$19,241	\$19,044

Source: NCCI's Medical Data Call for Service Years 2016 and 2017

Chart 31

Top 10 DRG Codes by Amount Paid for Hospital Inpatient Services



Code	Description
460	Spinal fusion, except cervical, without major complications or comorbidities
470	Major joint replacement or reattachment of lower extremity without major complications or comorbidities
494	Lower extremity and humerus procedures except hip, foot, and femur without complications or comorbidities/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
493	Lower extremity and humerus procedures except hip, foot, and femur with complications or comorbidities
956	Limb reattachment, hip, and femur procedures for multiple significant trauma
928	Full thickness burn with skin graft or inhalation injury with complications or comorbidities/major complications or comorbidities
483	Major joint/limb reattachment procedure of upper extremities
464	Wound debridement and skin graft except hand for musculo-connective tissue disorders with complications or comorbidities
957	Other operation room procedures for multiple significant trauma with major complications or comorbidities

Source: NCCI's Medical Data Call for Service Years 2016 and 2017



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 procedure 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.

Due to these differences in fee schedules, which may result in varied reporting of codes across jurisdictions, the region, and countrywide, comparisons by procedure code for outpatient benefits should be interpreted with caution. 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. A surgical visit includes at least one surgical service, while a nonsurgical visit does not. A surgical service is defined as “major surgery” or “minor surgery” within the surgical category defined by the AMA. In this section, we provide measures of hospital outpatient payments that take into account the type of visit because the level of reimbursement varies considerably by type of visit.

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 schedule reimbursement amounts for hospital outpatient payments for North Carolina, the region, and countrywide.

Chart 32

Hospital Outpatient Payments as a Percentage of Medicare

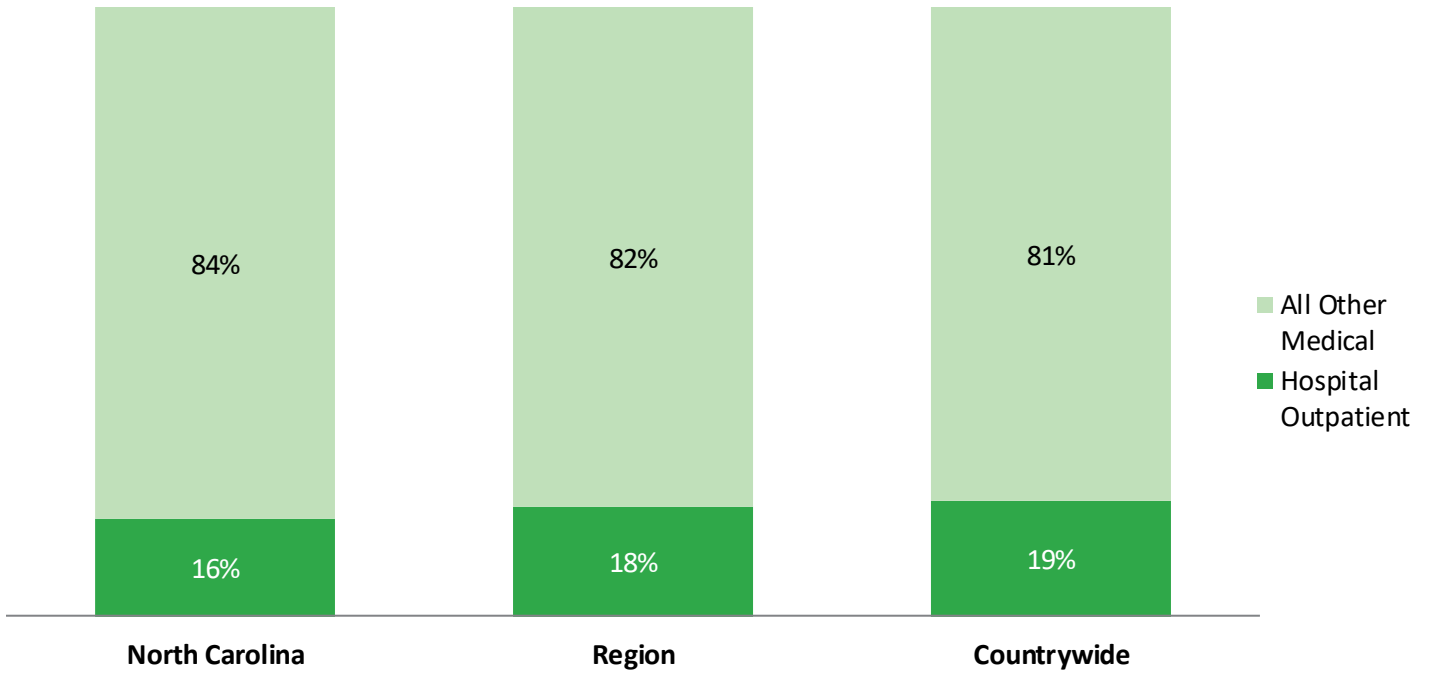
Medical Cost Category	North Carolina	Region	Countrywide
Hospital Outpatient	176%	282%	256%

Source: NCCI’s Medical Data Call for Service Year 2017. Region includes AL, AR, FL, GA, KY, LA, MS, SC, TN, VA, and WV. 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, NJ, NM, NV, OK, OR, RI, SC, SD, TN, UT, VA, VT, WI, and WV.

Chart 33 displays percentage of medical payments for hospital outpatient services for North Carolina, the region, and countrywide.

Chart 33

Distribution of Medical Payments for Hospital Outpatient





Surgical services represent 60% of hospital outpatient payments in North Carolina. Chart 34 displays the average amount paid per visit for hospital outpatient surgical services, while Chart 35 displays the average number of visits per year per 1,000 active claims for hospital outpatient surgical services for North Carolina, the region, and countrywide. Note that there are no controls for mix of diagnosis or severity of claims between jurisdictions.

Chart 34

Average Amount Paid per Surgical Visit for Hospital Outpatient Services

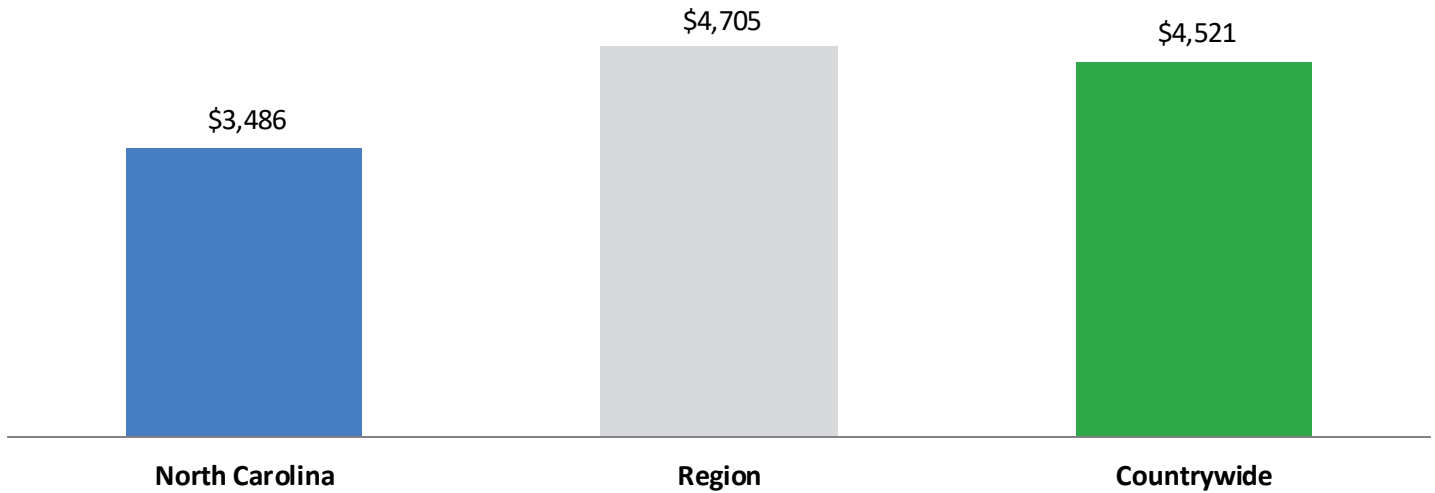
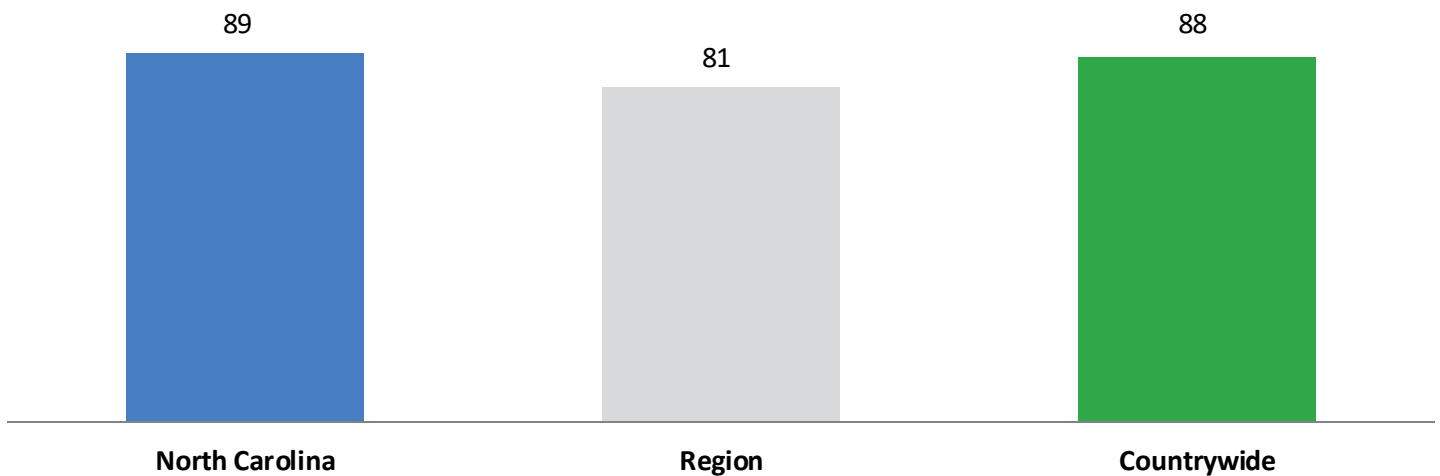


Chart 35

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





Nonsurgical services (such as physical therapy) represent 40% of hospital outpatient payments in North Carolina. Chart 36 displays the average amount paid per visit for hospital outpatient nonsurgical services, while Chart 37 displays the average number of visits per year per 1,000 active claims for hospital outpatient nonsurgical services for North Carolina, the region, and countrywide. Note that there are no controls for mix of diagnosis or severity of claims between jurisdictions.

Chart 36

Average Amount Paid per Nonsurgical Visit for Hospital Outpatient Services

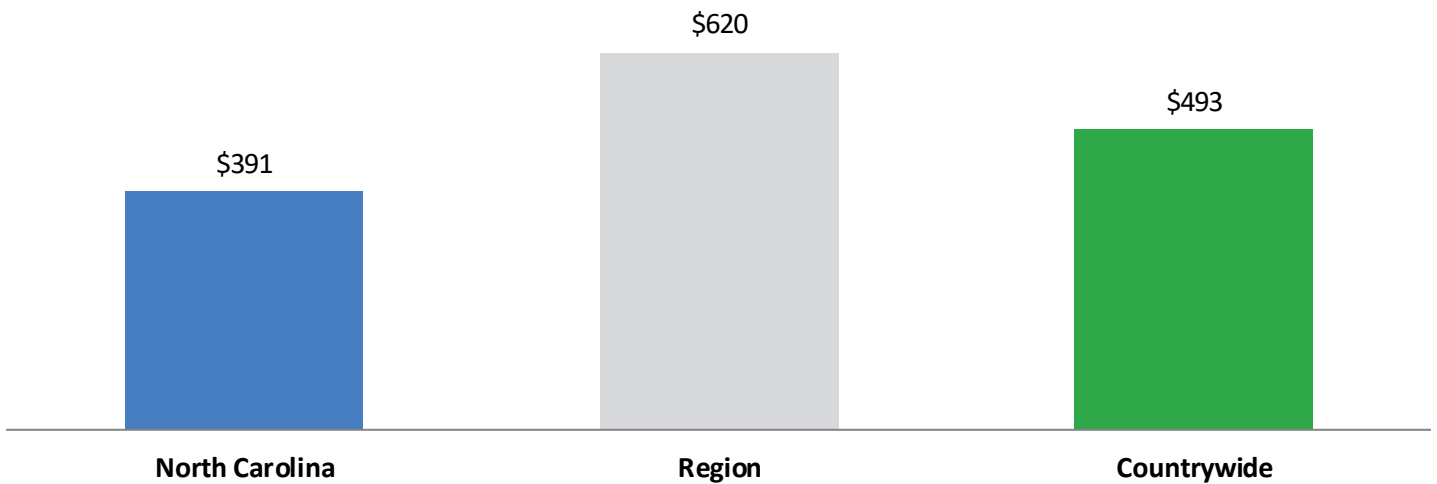


Chart 37

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

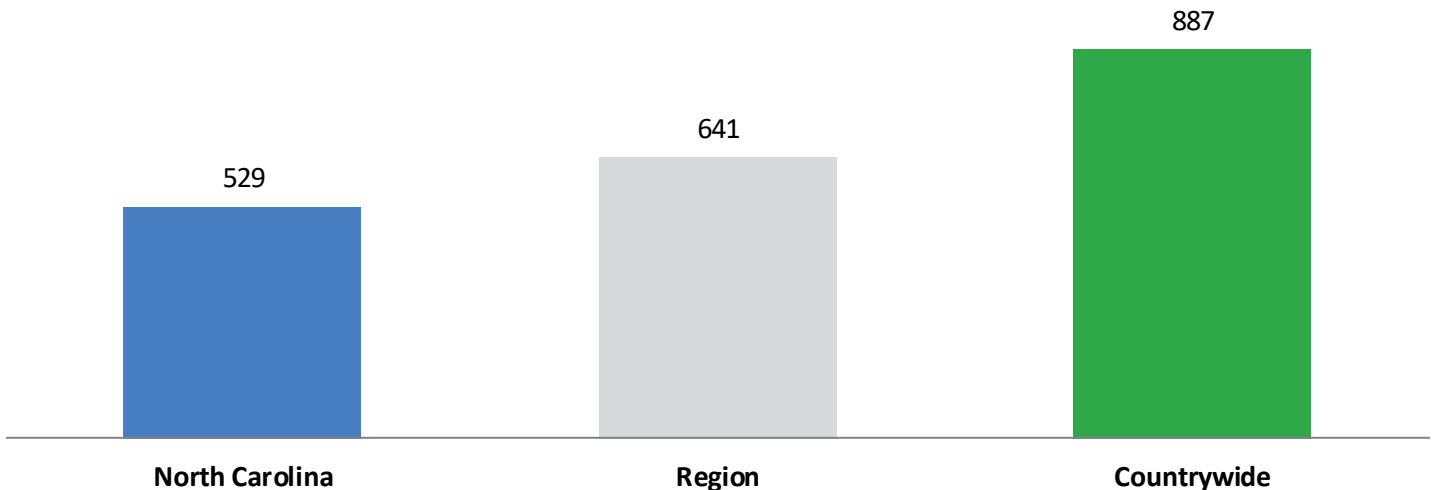
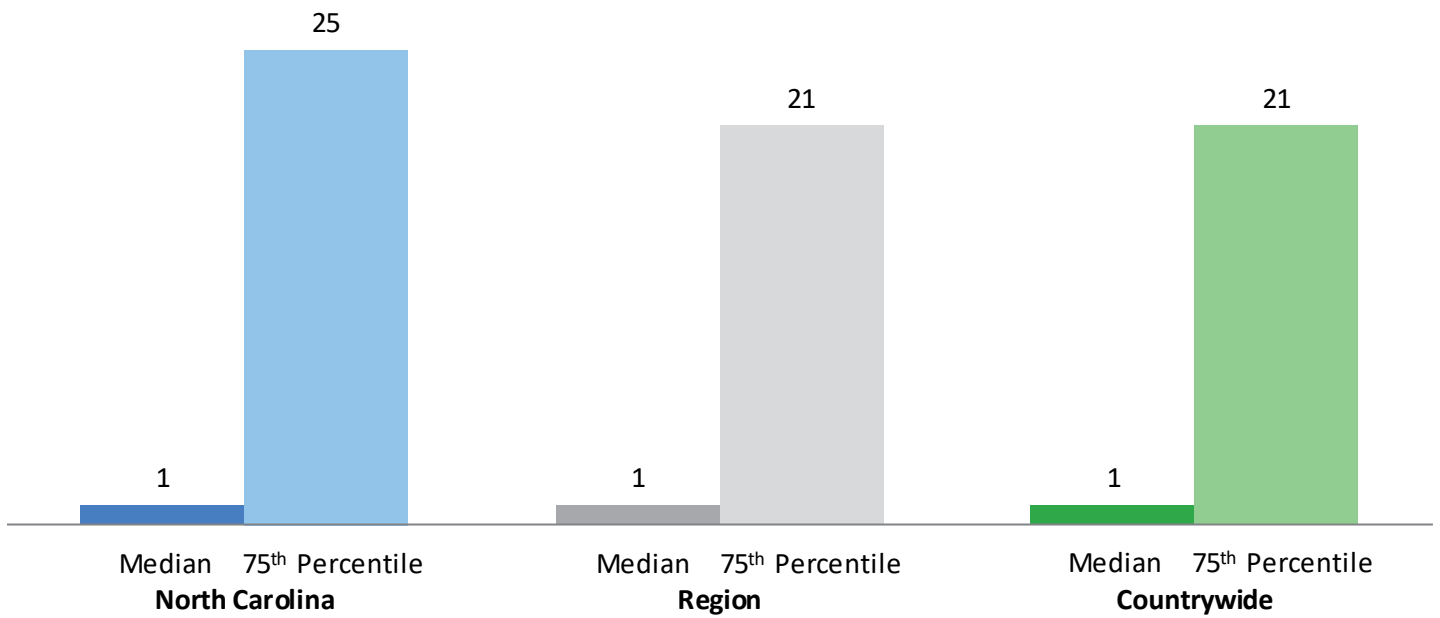




Chart 38 shows the median and 75th percentile time until first treatment for outpatient visits, other than emergency room visits, for North Carolina, the region, and countrywide.

Chart 38

Time Until First Treatment for Outpatient Visits (in Days)



Source: NCCI's Medical Data Call for Accident Year 2016 and Service Years 2016 and 2017.



Chart 39 displays the median amount paid per visit for outpatient services in North Carolina, the region, and countrywide for the top 10 diagnosis groups in North Carolina. The diagnosis groups are ranked based on total payments in North Carolina.

Chart 39

Top 10 Diagnosis Groups by Amount Paid for Hospital Outpatient Services

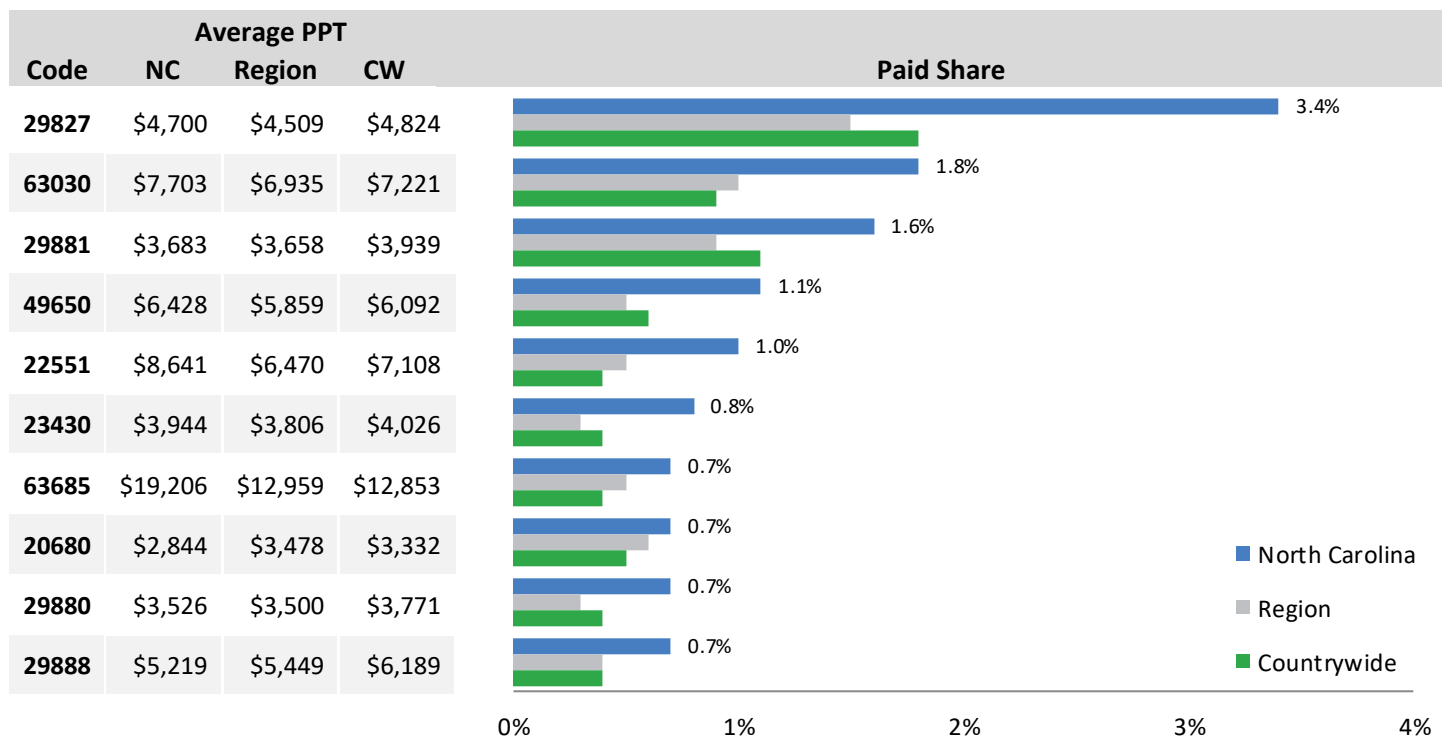
Diagnosis Group	Paid Share	Median Amount Paid Per Visit		
		North Carolina	Region	Countrywide
Rotator cuff tear	4.8%	\$204	\$172	\$204
Open wound of wrist, hand and fingers	3.8%	\$449	\$532	\$507
Fracture of lower leg, including ankle	3.8%	\$308	\$204	\$224
Fracture of forearm	3.6%	\$392	\$259	\$248
Fracture at wrist and hand level	2.9%	\$455	\$370	\$292
Other joint disorder, not elsewhere classified	2.4%	\$133	\$150	\$183
Minor hand/wrist injuries	2.4%	\$168	\$225	\$226
Knee internal derangement - meniscus injury	2.4%	\$2,091	\$329	\$333
Lumbosacral intervertebral disc disorders	2.3%	\$224	\$302	\$304
Inguinal hernia	2.1%	\$4,969	\$3,788	\$3,755



Charts 40 and 41 display the average amount paid per visit for outpatient services in North Carolina, the region, and countrywide for the top 10 surgery CPT and nonsurgery CPT codes in North Carolina. In 2017, 86% of Hospital Outpatient costs were reported with a CPT code. The codes are ranked based on total payments in North Carolina. A brief description of each code is displayed in the table below.

Chart 40

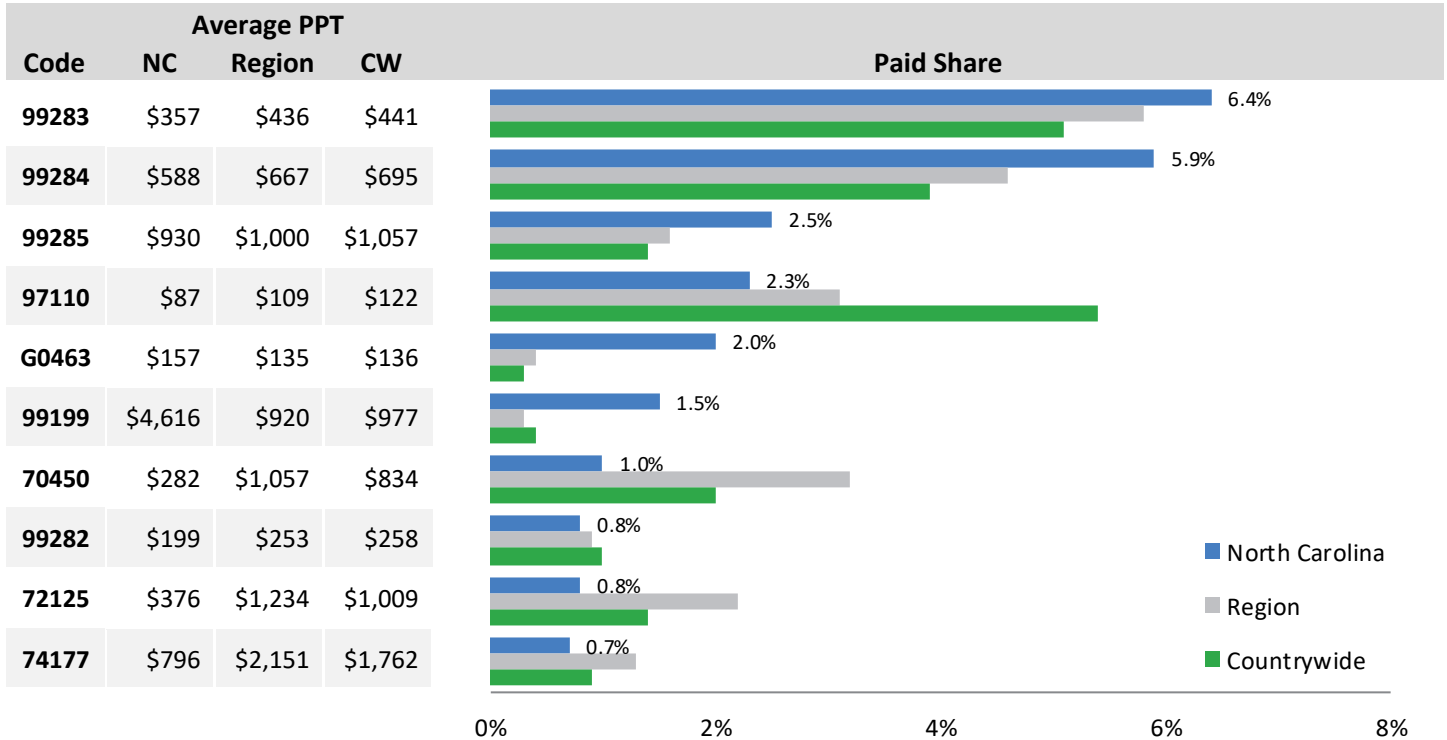
Top 10 Surgery Procedure Codes by Amount Paid for Hospital Outpatient Services



Code	Description
29827	Arthroscopy, shoulder, surgical; with rotator cuff repair
63030	Laminotomy (hemilaminectomy) with decompression of nerve root(s) including partial facetectomy, foraminotomy, and/or excision of herniated intervertebral disc; 1 interspace lumbar
29881	Arthroscopy, knee, surgical; with meniscectomy (medial or lateral including any meniscal shaving), including debridement/shaving of articular cartilage
49650	Laparoscopy, surgical; repair initial inguinal hernia
22551	Arthrodesis, anterior interbody, including disc space preparation, discectomy, osteophyctomy and decompression of spinal cord and/or nerve roots; cervical below C2
23430	Tenodesis of long tendon of biceps
63685	Insertion or replacement of spinal neurostimulator pulse generator or receiver, direct or inductive coupling
20680	Removal of implant; deep (e.g., buried wire, pin, screw, metal, band, nail, rod or plate)
29880	Arthroscopy, knee, surgical; with meniscectomy (medial and lateral including any meniscal shaving), including debridement/shaving of articular cartilage
29888	Arthroscopically aided anterior cruciate ligament repair/augmentation or reconstruction

Chart 41

Top 10 Nonsurgery Procedure Codes by Amount Paid for Hospital Outpatient Services



Code	Description
99283	Emergency department visit. Usually the presenting problem(s) are of moderate severity.
99284	Emergency department visit. Usually the presenting problem(s) are of high severity and require urgent evaluation by the physician but do not pose an immediate significant threat to life or physiologic function.
99285	Emergency department visit. Usually the presenting problem(s) are of high severity and pose an immediate significant threat to life or physiologic function.
97110	Therapeutic procedure, 1 or more areas, each 15 minutes; therapeutic exercises to develop strength and endurance, range of motion, and flexibility
G0463	Hospital outpatient clinic visit for assessment and management of a patient
99199	Unlisted special service procedure or report
70450	Computed tomography (CT), head or brain; without contrast material
99282	Emergency department visit. Usually the presenting problem(s) are of low to moderate severity.
72125	Computed tomography (CT), cervical spine; without contrast material
74177	Computed tomography (CT), abdomen and pelvis; with contrast material



In North Carolina, 18% of the payments associated with facilities (ASC, hospital outpatient, and hospital inpatient) are for emergency room payments, compared to 18% countrywide.

Chart 42 displays the average amount paid per visit for emergency room services for North Carolina, the region, and countrywide. The average amount paid includes all payments for an emergency room visit such as payments for facility services, physician services, and drugs. Note that there are no controls for mix of diagnosis or severity of claims between jurisdictions. Chart 43 displays the number of visits per year per 1,000 active claims for emergency room services for North Carolina, as well as for the region and countrywide.

Chart 42

Average Amount Paid per Emergency Room Visit

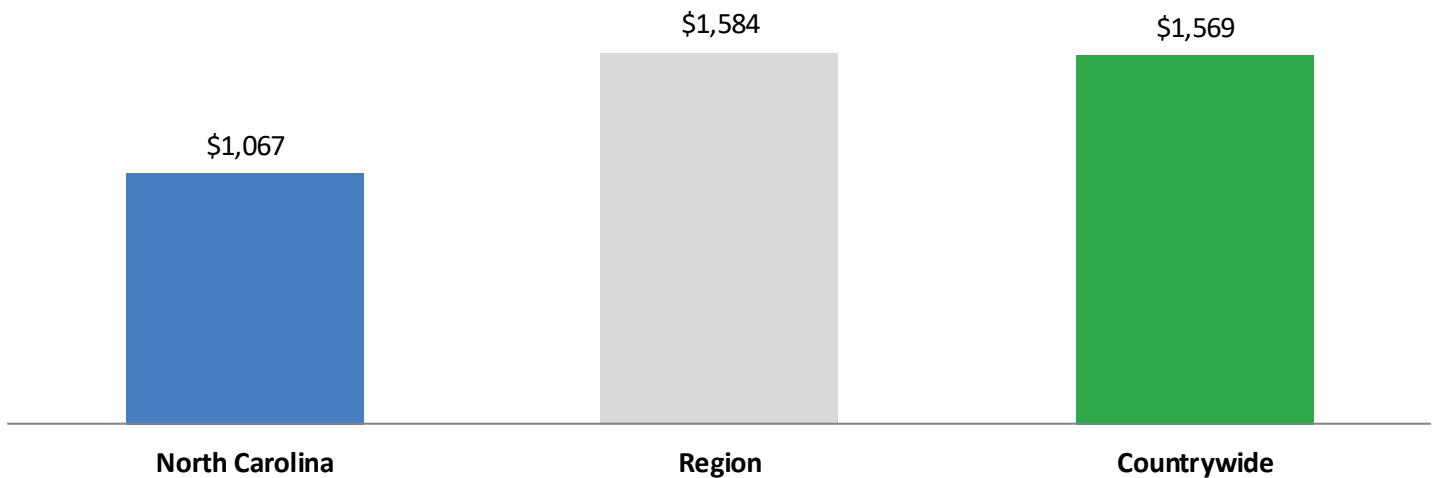
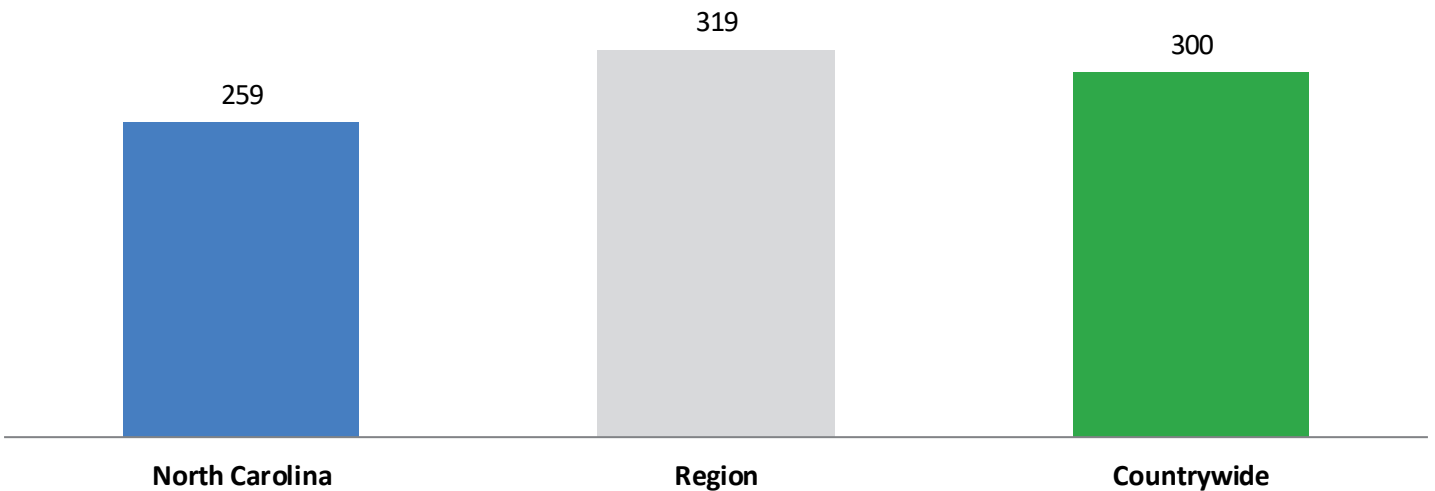


Chart 43

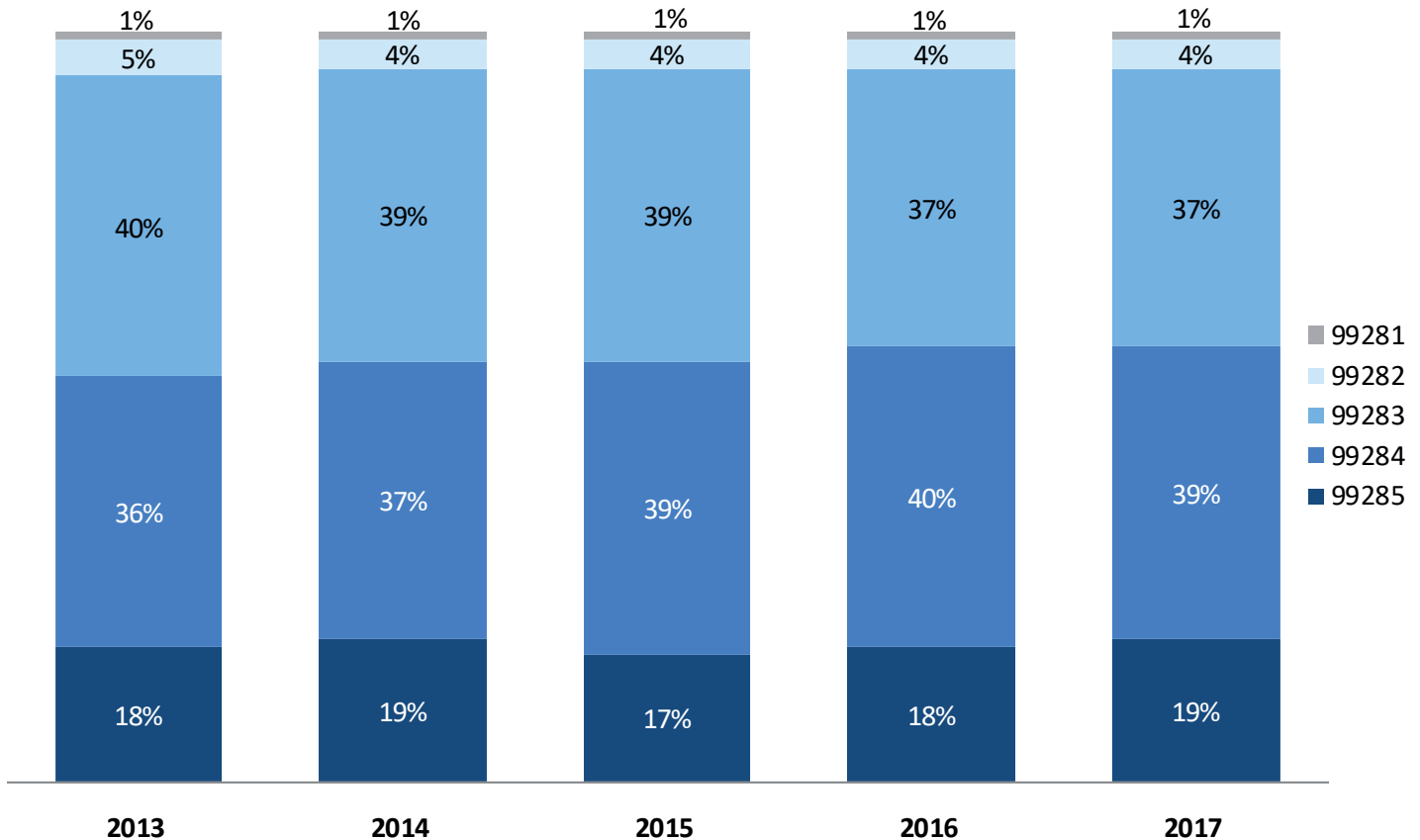
Average Number of Emergency Room Visits per 1,000 Active Claims



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. Chart 44 shows a five-year snapshot of experience for each procedure type and the average payment per transaction.

Chart 44

Emergency Room Payments by Procedure Code for North Carolina



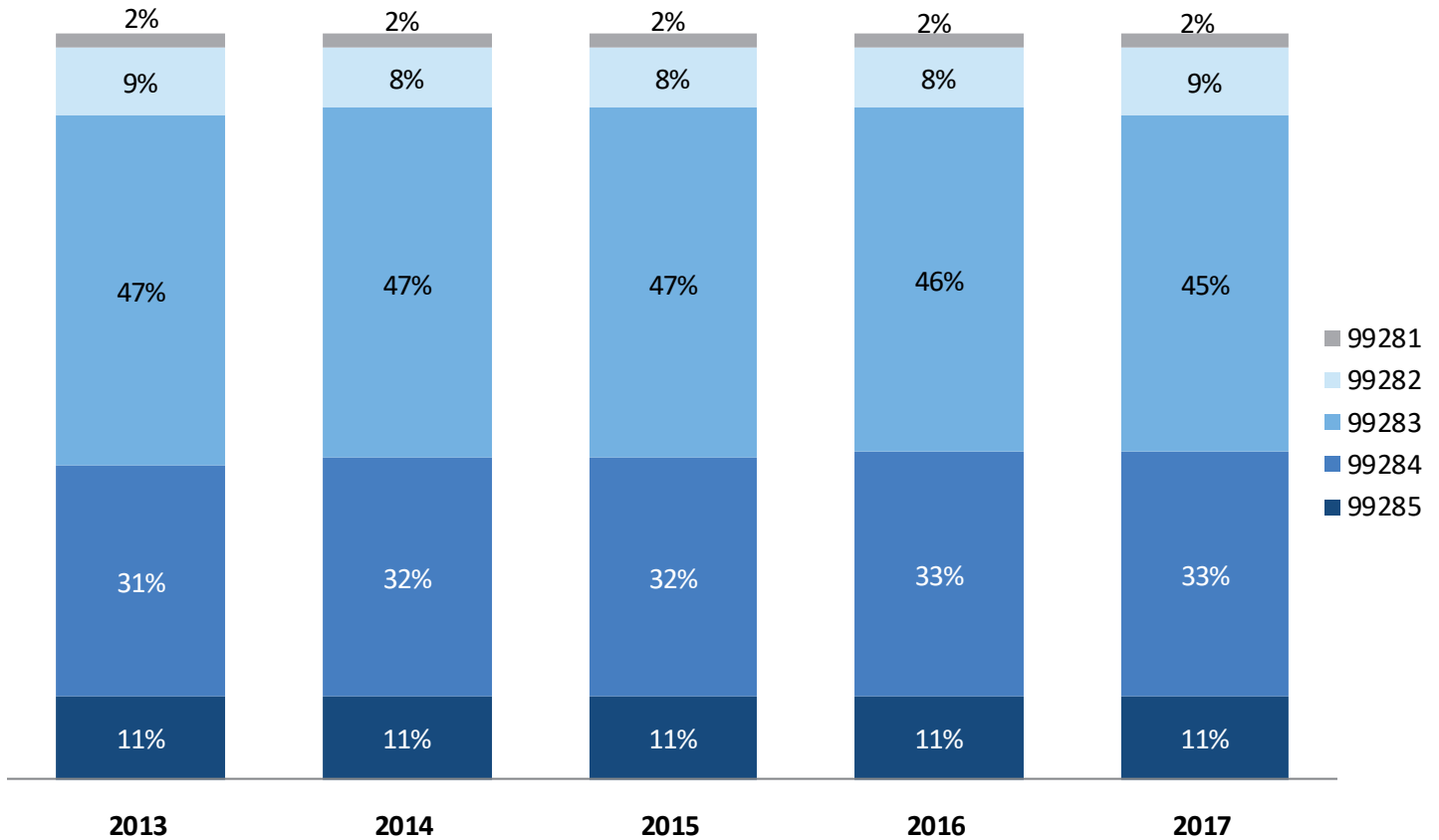
Source: NCCI's Medical Data Call, Service Years 2013 to 2017.

Code	Severity	Average PPT				
		2013	2014	2015	2016	2017
99281	Minor	\$93	\$95	\$92	\$91	\$91
99282	Low to moderate	\$191	\$198	\$183	\$175	\$175
99283	Moderate	\$270	\$301	\$276	\$272	\$276
99284	High	\$374	\$419	\$418	\$410	\$403
99285	High and immediately life-threatening	\$545	\$616	\$563	\$579	\$580

Chart 45 shows a five-year snapshot of experience for each procedure type per service year.

Chart 45

Emergency Room Transactions by Procedure Code for North Carolina



Source: NCCI's Medical Data Call, Service Years 2013 to 2017.

Code	Severity
99281	Minor
99282	Low to moderate
99283	Moderate
99284	High
99285	High and immediately life-threatening



Ambulatory Surgical Centers

Ambulatory surgical centers are often used as an alternative facility to hospitals for conducting outpatient surgeries. 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 schedule reimbursement amounts for ASC payments for North Carolina, the region, and countrywide.

Chart 46

ASC Payments as a Percentage of Medicare

Medical Cost Category	North Carolina	Region	Countrywide
Ambulatory Surgical Center	181%	304%	285%

Source: NCCI's Medical Data Call for Service Year 2017. Region includes AL, AR, FL, GA, KY, LA, MS, SC, TN, VA, and WV. 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, NJ, NM, NV, OK, OR, RI, SC, SD, TN, UT, VA, VT, WI, and WV.

Chart 47 displays percentage of medical payments for ASC services for North Carolina, the region, and countrywide.

Chart 47

Distribution of Medical Payments for ASC

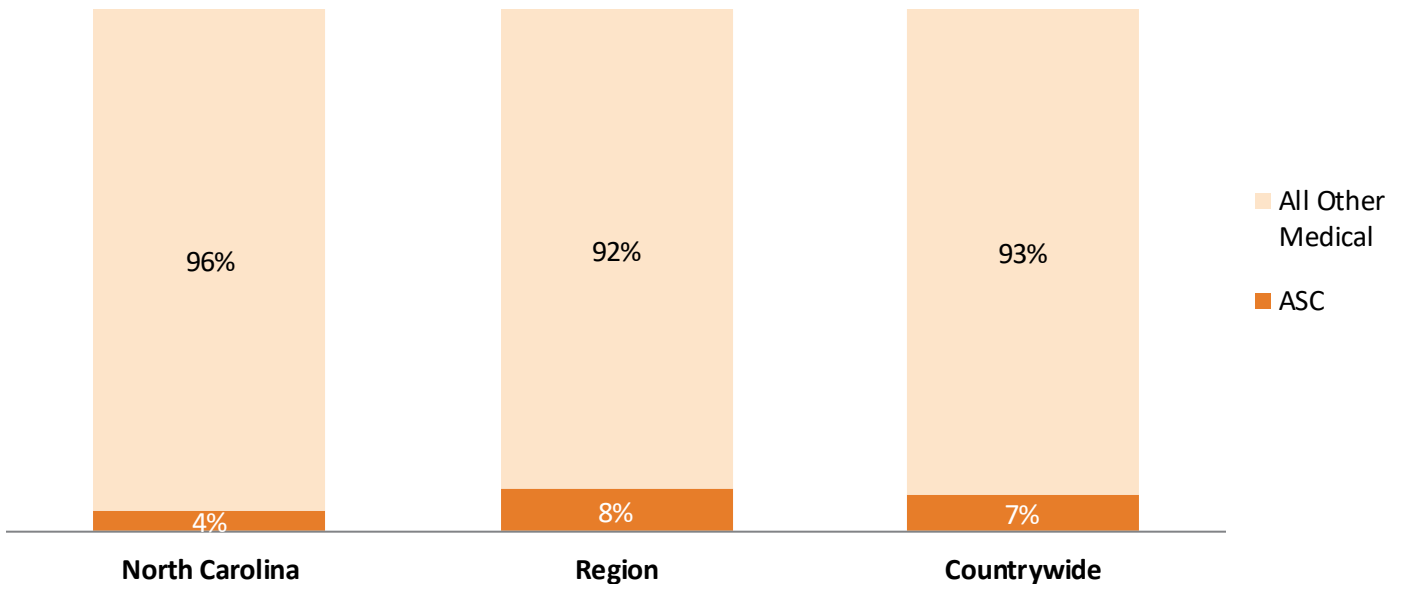




Chart 48 displays the average amount paid per visit for ASC services for North Carolina, the region, and countrywide. Note that there are no controls for mix of diagnosis or severity of claims between jurisdictions. Chart 49 displays the number of ASC visits per year per 1,000 active claims for North Carolina, the region, and countrywide.

Chart 48

Average Amount Paid per Visit for ASC Services

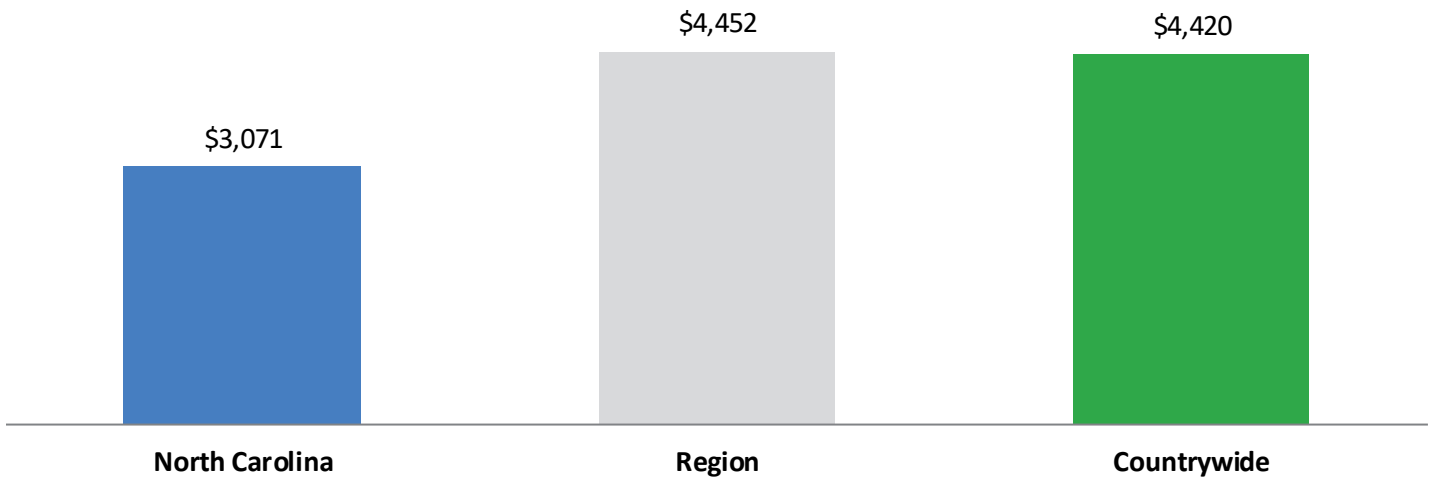


Chart 49

Average Number of ASC Visits per 1,000 Active Claims

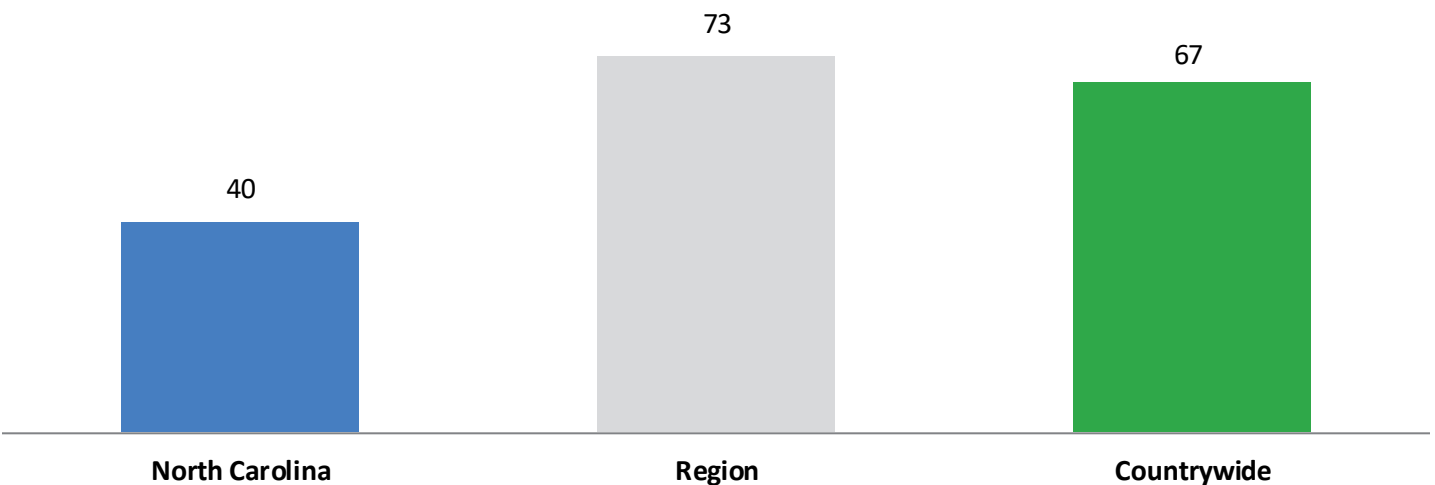
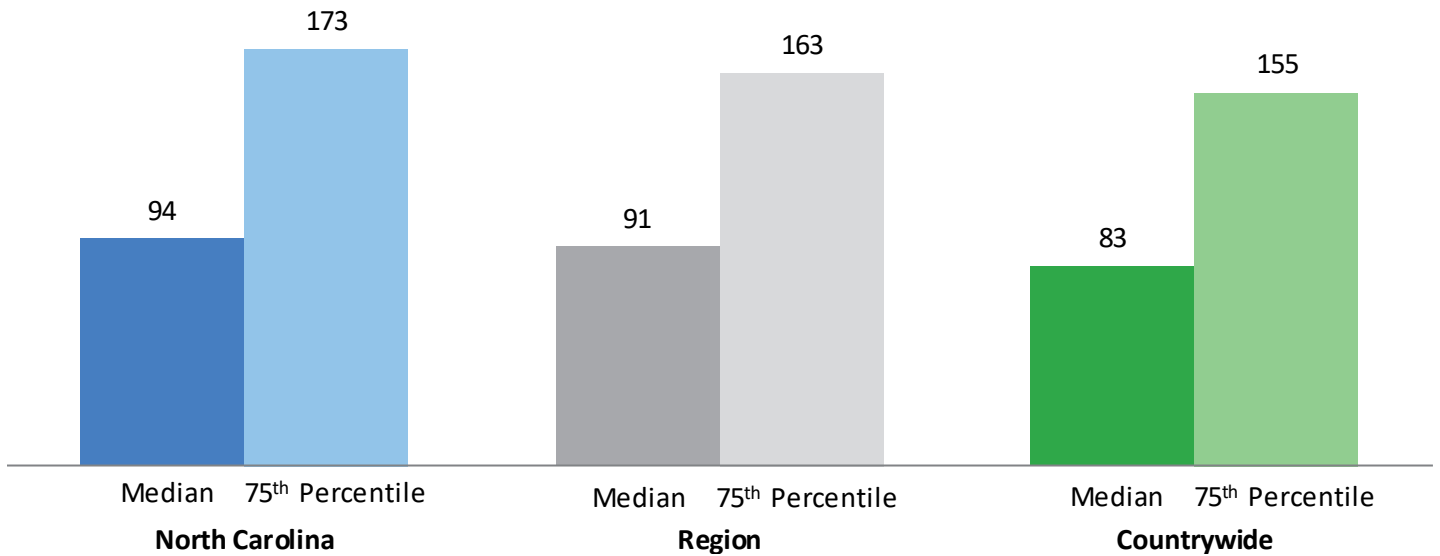




Chart 50 shows the median and 75th percentile time until first treatment for ASC visits for North Carolina, the region, and countrywide.

Chart 50

Time Until First Treatment for ASC Visits (in Days)



Source: NCCI's Medical Data Call for Accident Year 2016 and Service Years 2016 and 2017.



Chart 51 displays the top 10 diagnosis groups for ASC visits. The diagnosis groups are ranked based on total payments in North Carolina.

Chart 51

Top 10 Diagnosis Groups by Amount Paid for ASC Services

Diagnosis Group	Paid Share	Median Amount Paid per Visit		
		North Carolina	Region	Countrywide
Rotator cuff tear	10.6%	\$5,482	\$9,139	\$8,684
Knee internal derangement - meniscus injury	6.4%	\$2,215	\$3,658	\$3,692
Other and unspecified osteoarthritis	5.9%	\$5,697	\$8,321	\$8,025
Fracture of forearm	4.1%	\$5,733	\$7,311	\$6,843
Fracture of lower leg, including ankle	3.9%	\$4,903	\$6,391	\$5,370
Other specific joint derangements	3.6%	\$3,347	\$6,764	\$5,847
Superior labral tear from anterior to posterior (SLAP) lesion	3.2%	\$5,921	\$8,539	\$7,676
Fracture at wrist and hand level	3.1%	\$2,331	\$3,976	\$3,694
Shoulder impingement syndrome	3.0%	\$4,415	\$7,864	\$7,374
Minor shoulder injury	3.0%	\$4,574	\$6,213	\$5,676

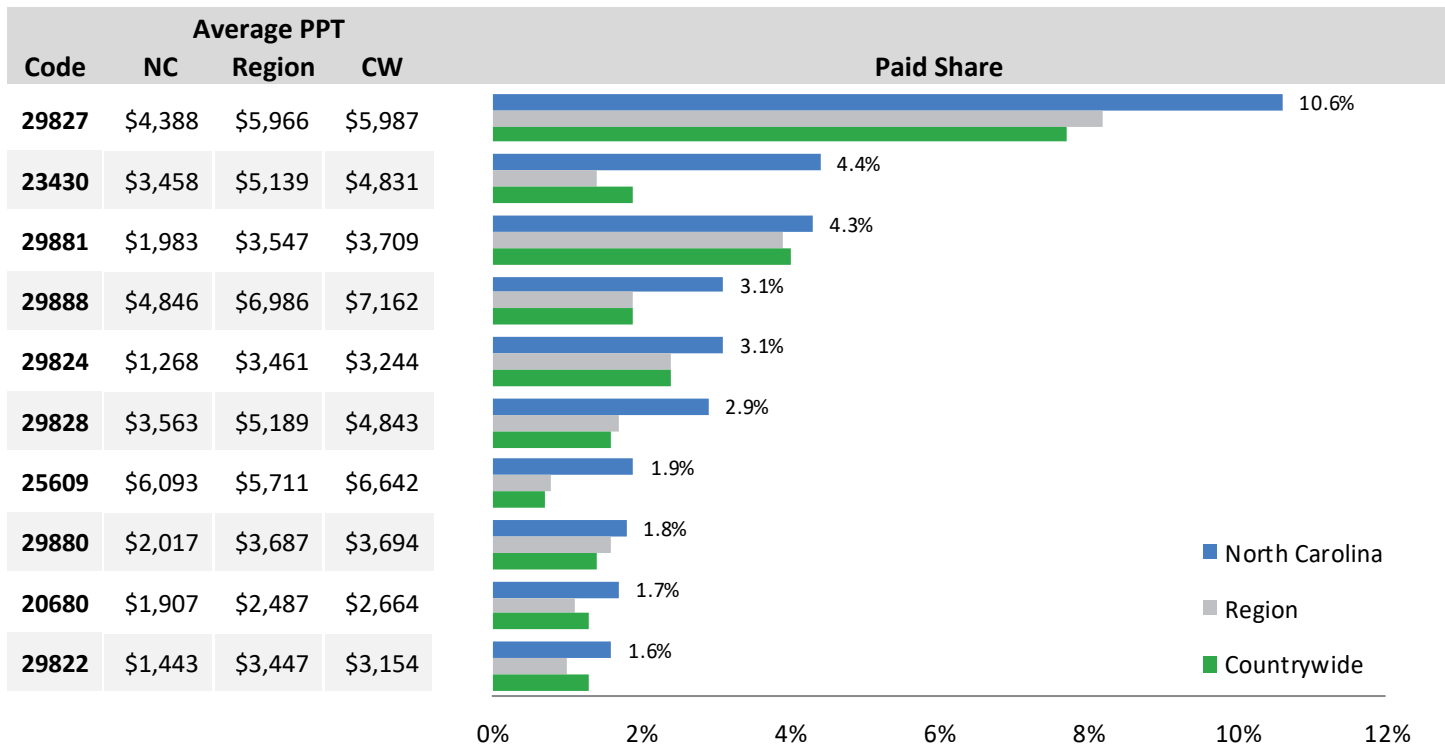


Typically, only surgery-related services are performed in ASCs. The most prevalent procedure code types reported are CPT codes and revenue codes. The predominant revenue code reported for ASC services is code 0490—Ambulatory Surgical Care. In North Carolina, code 0490 represents 85% of ASC payments reported by revenue codes.

Chart 52 displays the top 10 surgery CPT codes for ASC services. The procedure codes are ranked based on total payments in North Carolina. A brief description of each procedure code is displayed in the table below.

Chart 52

Top 10 Surgery Procedure Codes by Amount Paid for ASC Services



Code	Description
29827	Arthroscopy, shoulder, surgical; with rotator cuff repair
23430	Tenodesis of long tendon of biceps
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
29824	Arthroscopy, shoulder, surgical; distal claviclectomy including distal articular surface (Mumford procedure)
29828	Arthroscopy, shoulder, surgical; biceps tenodesis
25609	Open treatment of distal radial intra-articular fracture or epiphyseal separation; with internal fixation of 3 or more fragments
29880	Arthroscopy, knee, surgical; with meniscectomy (medial and lateral including any meniscal shaving), including debridement/shaving of articular cartilage
20680	Removal of implant; deep (e.g., buried wire, pin, screw, metal, band, nail, rod or plate)
29822	Arthroscopy, shoulder, surgical; debridement limited

Prescription Drugs

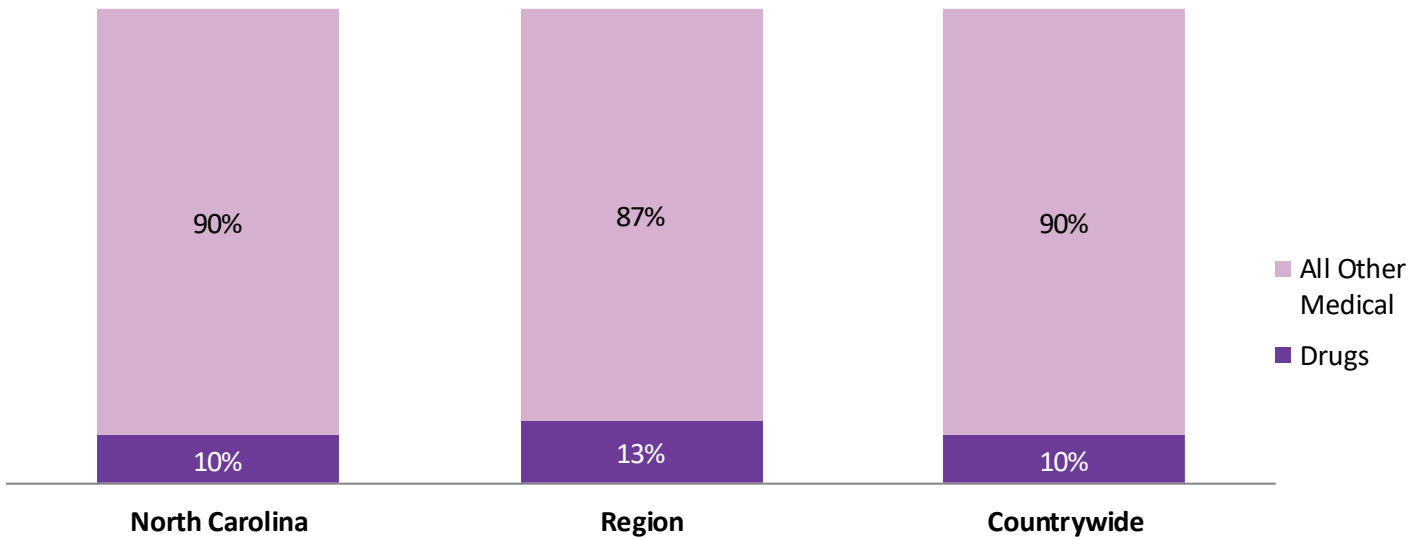
According to NCCI’s research⁵, the narcotics oxycodone and hydrocodone bitartrate-acetaminophen (commonly known as Oxycontin® and Vicodin®, respectively) were among the most widely prescribed drugs in workers compensation for Service Year 2016.

Drugs are uniquely identified by a national drug code (NDC). Charts 54 through 58 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.

Chart 53 displays percentage of medical payments for drugs for North Carolina, the region, and countrywide.

Chart 53

Distribution of Medical Payments for Drugs



⁵ "Opioids—Killer Pain Relief", presented at *Annual Issues Symposium*, May 2018

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 North Carolina, the share of claims observed in Service Year 2017 with at least one controlled substance was 15%. This compares to the region and countrywide shares of 17% and 14% , respectively. In 2017, North Carolina spent \$5.1M on Schedule II and Schedule III drugs for workers compensation claims.

Chart 54 shows the distribution of prescription drug payments by CSA schedule in North Carolina, the region and countrywide.

Chart 54

Distribution of Prescription Drug Payments by CSA Schedule

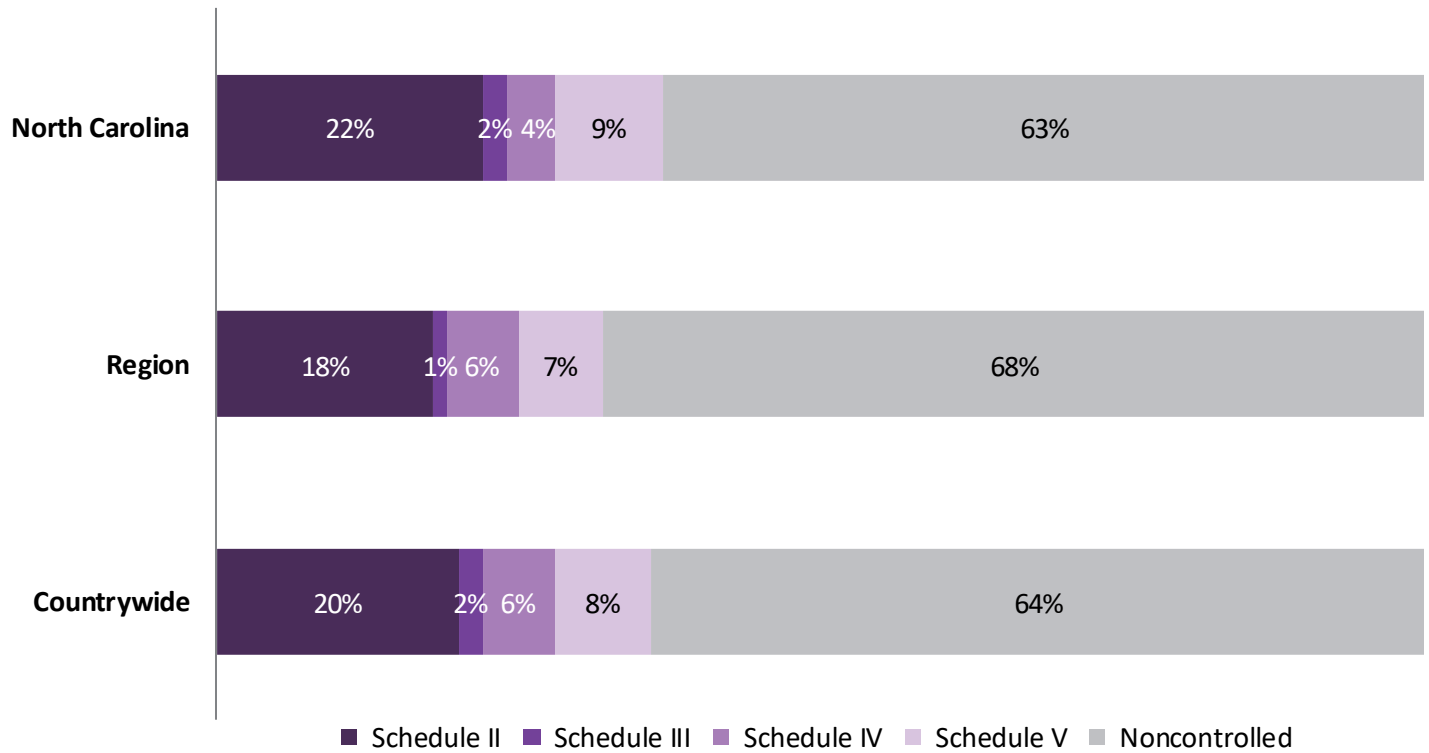




Chart 55 displays the shares of the payments of prescription medication for the top 10 drugs used in workers compensation treatment, by amount paid in North Carolina. This chart also indicates whether the drugs are generic (G) or brand name (B); for generic drugs, a commonly used brand name equivalent 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 Glossary for the definition of *unit*.)

Chart 55

Top 10 Workers Compensation Drugs by Amount Paid

Drug Name	Average PPU			North Carolina Paid Share
	NC	Region	CW	
Lyrica®	\$7.00	\$7.12	\$7.10	8.4%
Gabapentin	\$1.03	\$1.27	\$1.18	3.9%
Oxycontin®	\$8.51	\$9.12	\$8.84	3.2%
Oxycodone HCl-Acetaminophen	\$1.50	\$1.82	\$1.70	3.2%
Duloxetine HCl	\$5.07	\$5.54	\$5.18	2.9%
Nucynta®	\$6.77	\$6.80	\$6.74	2.7%
Meloxicam	\$2.59	\$3.41	\$3.25	2.5%
Lidocaine	\$6.02	\$7.42	\$7.04	2.5%
Diclofenac Sodium	\$1.05	\$1.40	\$1.28	2.5%
Celecoxib	\$4.53	\$5.52	\$5.09	2.0%

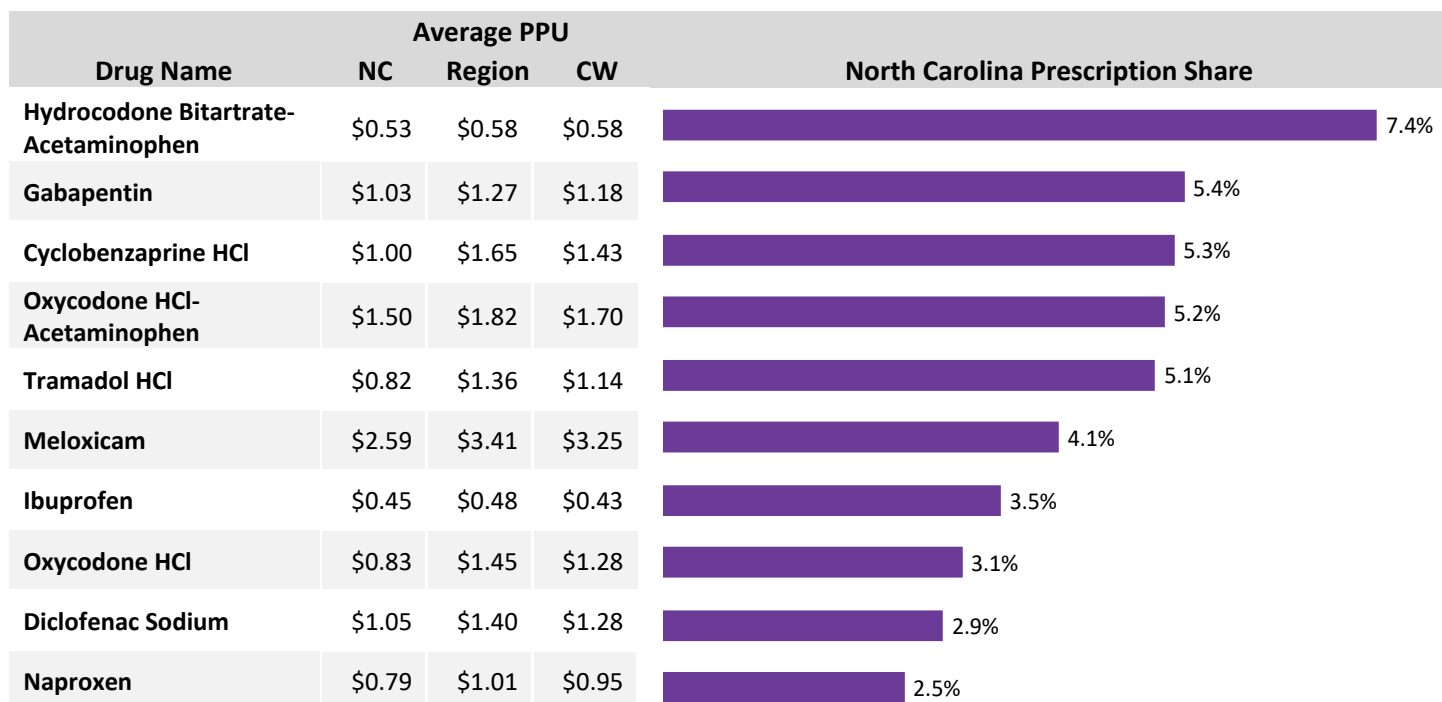
Drug Name	B/G	Common Brand Name	Category	CSA Schedule	CW Rank
Lyrica®	B	N/A	Miscellaneous Central Nervous System Agents	V	1
Gabapentin	G	Neurontin®	Anticonvulsants	None	3
Oxycontin®	B	N/A	Analgesics/Antipyretics	II	2
Oxycodone HCl-Acetaminophen	G	Percocet®	Analgesics/Antipyretics	II	4
Duloxetine HCl	G	Cymbalta®	Psychotherapeutic Agents	None	7
Nucynta®	B	N/A	Analgesics/Antipyretics	II	19
Meloxicam	G	Mobic®	Analgesics/Antipyretics	None	5
Lidocaine	G	Lidoderm®	Antipruritics/Local Anesthesia, Skin/Mucous Membrane	None	6
Diclofenac Sodium	G	Voltaren®	Analgesics/Antipyretics	None	13
Celecoxib	G	Celebrex®	Analgesics/Antipyretics	None	8



Chart 56 displays the top 10 drugs used in workers compensation treatment, according to the number of prescriptions in North Carolina. This chart reveals the most frequently prescribed drugs and the average PPU.

Chart 56

Top 10 Workers Compensation Drugs by Prescription Counts

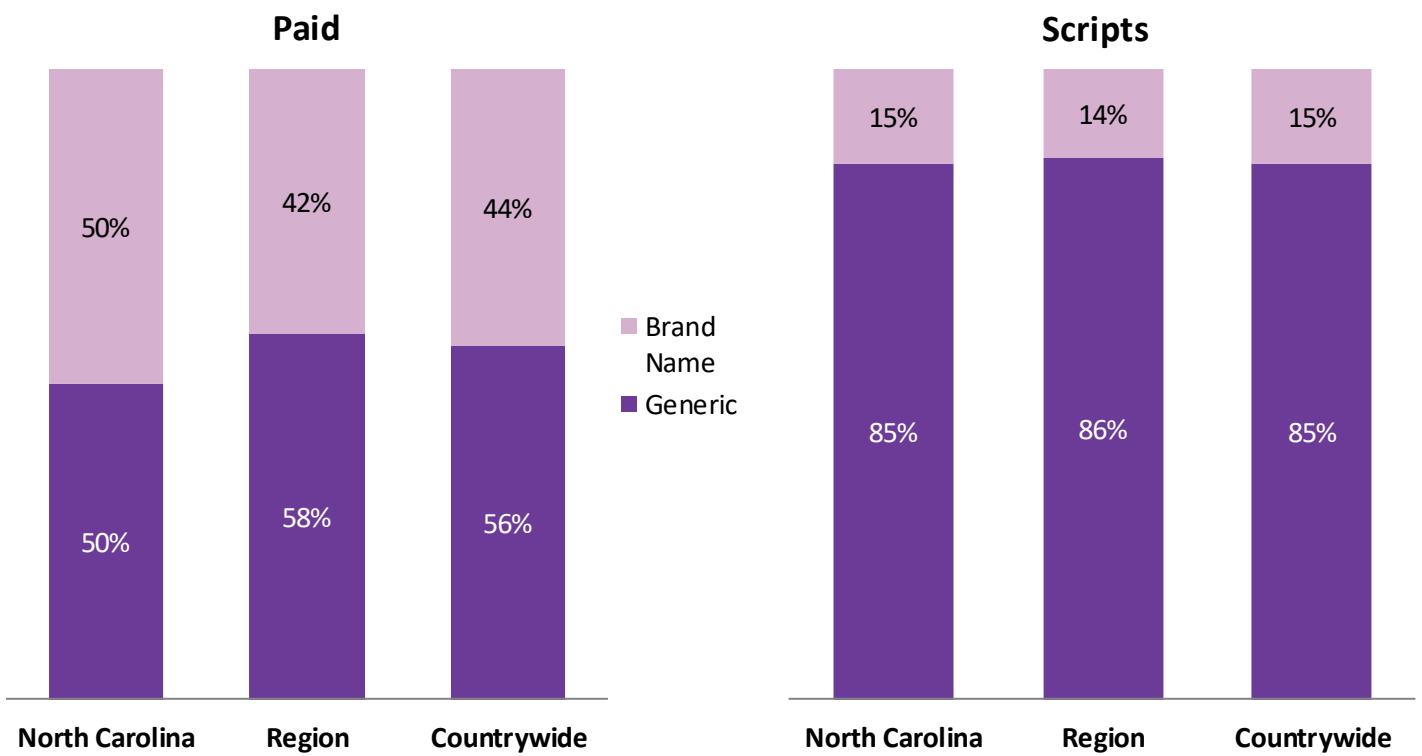


Drug Name	B/G	Common Brand Name	Category	CSA Schedule	CW Rank
Hydrocodone Bitartrate-Acetaminophen	G	Vicodin®	Analgesics/Antipyretics	II	1
Gabapentin	G	Neurontin®	Anticonvulsants	None	2
Cyclobenzaprine HCl	G	Flexeril®	Muscle Relaxants, Skeletal	None	3
Oxycodone HCl-Acetaminophen	G	Percocet®	Analgesics/Antipyretics	II	5
Tramadol HCl	G	Ultram®	Analgesics/Antipyretics	IV	4
Meloxicam	G	Mobic®	Analgesics/Antipyretics	None	6
Ibuprofen	G	Advil®	Analgesics/Antipyretics	None	7
Oxycodone HCl	G	Oxycontin®	Analgesics/Antipyretics	II	8
Diclofenac Sodium	G	Voltaren®	Analgesics/Antipyretics	None	13
Naproxen	G	Aleve®	Analgesics/Antipyretics	None	9

Chart 57 shows the distribution of prescription drugs by brand name and generics for North Carolina, the region, and countrywide. The share between brand name and generics 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 several states, a prescription drug fee schedule includes rules regarding the dispensing and reimbursement rates for brand name and generic drugs.

Chart 57

Distribution of Drugs by Brand Name and Generic

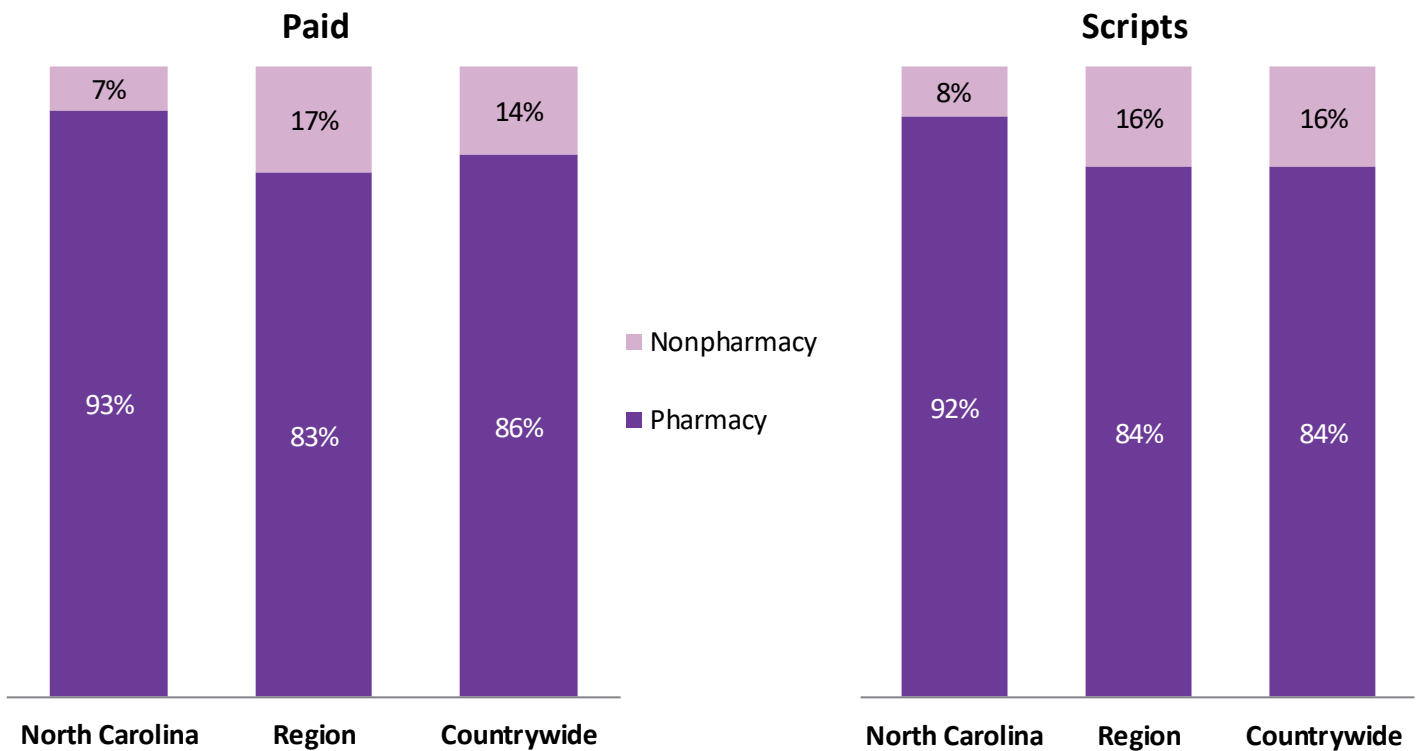


The rules on drug dispensing vary from state to state. Some states allow physician dispensing of drugs, while other states limit or prohibit physician dispensing. Analysis of the share of drugs dispensed from a pharmacy and from a nonpharmacy (e.g., physicians and hospitals) may provide insight into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

Chart 58 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 North Carolina, the region, and countrywide.

Chart 58

Distribution of Drugs by Pharmacy and Nonpharmacy



Durable Medical Equipment, Supplies, and Implants

Chart 59 displays the distribution of medical payments by type of service for Durable Medical Equipment (DME), supplies, and implants for North Carolina, the region, and countrywide.

Chart 59

Distribution of Medical Payments for DME, Supplies, and Implants

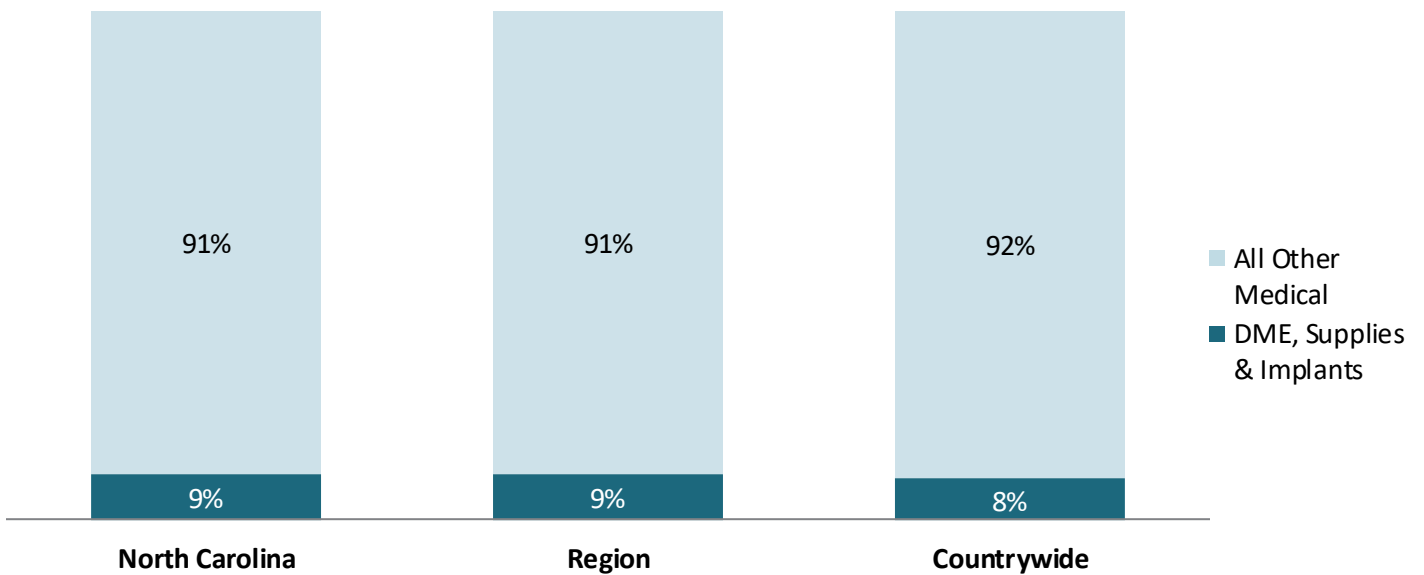


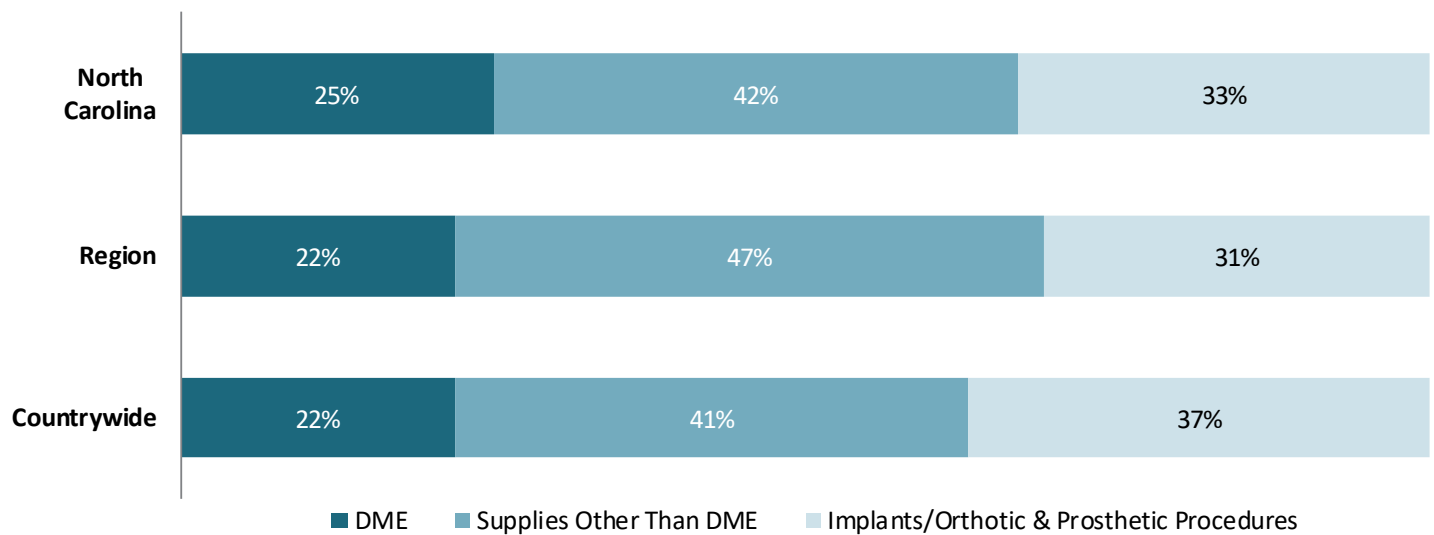
Chart 60 displays the distribution of payments among three separate categories:

- Durable Medical Equipment
- Supplies Other Than DME
- Implants/Orthotics and Prosthetics

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 60

Distribution of Payments by DME, Supplies, and Implants



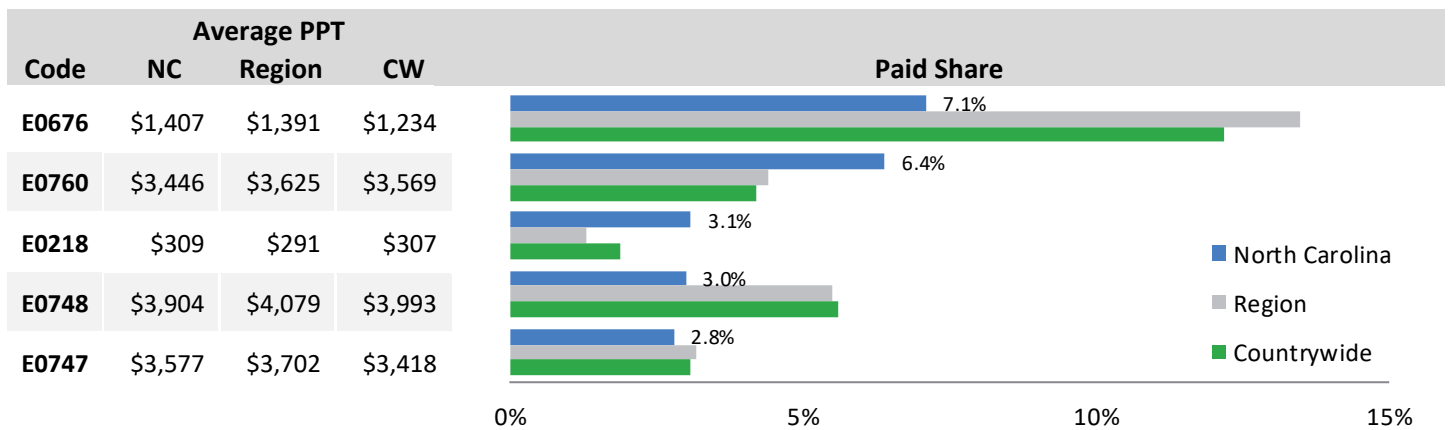


The most prevalent procedure code types reported for DMEs are Healthcare Common Procedure Coding System (HCPCS) codes. The predominant HCPCS code reported for DME is E1399—Durable Medical Equipment, Miscellaneous. In North Carolina, code E1399 represents 48% of DME payments.

Chart 61 displays the top five HCPCS codes for DME other than code E1399. The codes are ranked based on total payments in North Carolina. A brief description of each procedure code is displayed in the table below.

Chart 61

Top Five DME HCPCS Codes by Amount Paid



Code	Description
E0676	Intermittent limb compression device (includes all accessories), not otherwise specified
E0760	Osteogenesis stimulator, low intensity ultrasound, noninvasive
E0218	Water circulating cold pad with pump
E0748	Osteogenesis stimulator, electrical, noninvasive, spinal applications
E0747	Osteogenesis stimulator, electrical, noninvasive, other than spinal applications

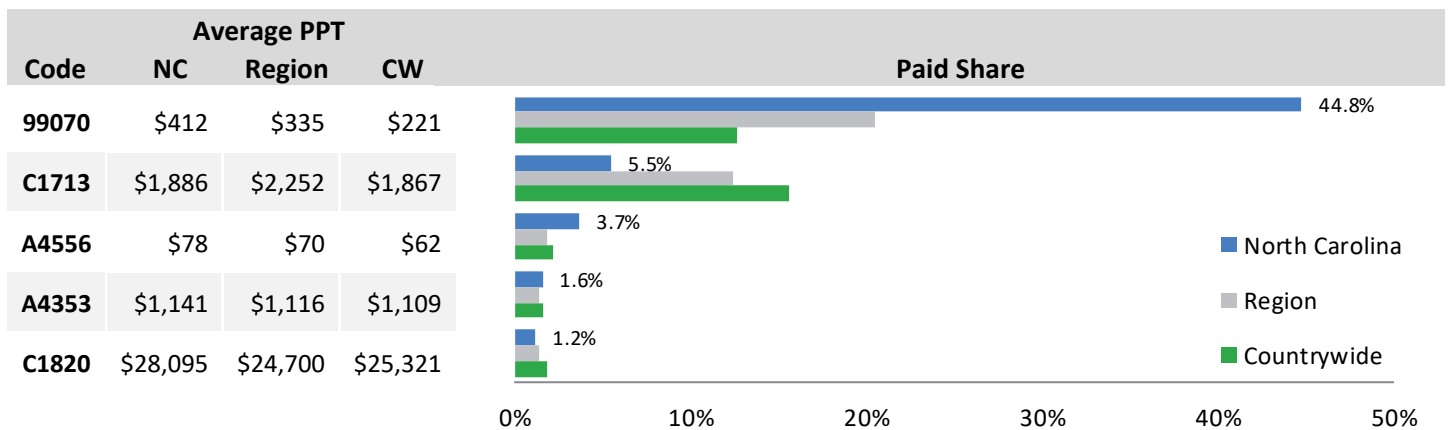


The most prevalent procedure code types reported for Supplies Other than DME are HCPCS codes and revenue codes. HCPCS codes represent 29% of Supplies other than DME payments, while revenue and other codes represent the other 71%.

Chart 62 displays the top five HCPCS codes for Supplies other than DME. The codes are ranked based on total payments in North Carolina. A brief description of each procedure code is displayed in the table below.

Chart 62

Top Five Supplies Other Than DME HCPCS Codes by Amount Paid



Code	Description
99070	Supplies and materials (except spectacles), provided by the physician or other qualified health care professional over and above those usually included with the office visit or other services rendered
C1713	Anchor/screw for opposing bone-to-bone or soft tissue-to-bone (implantable)
A4556	Electrodes (e.g., apnea monitor), per pair
A4353	Intermittent urinary catheter, with insertion supplies
C1820	Generator, neurostimulator (implantable), with rechargeable battery and charging system



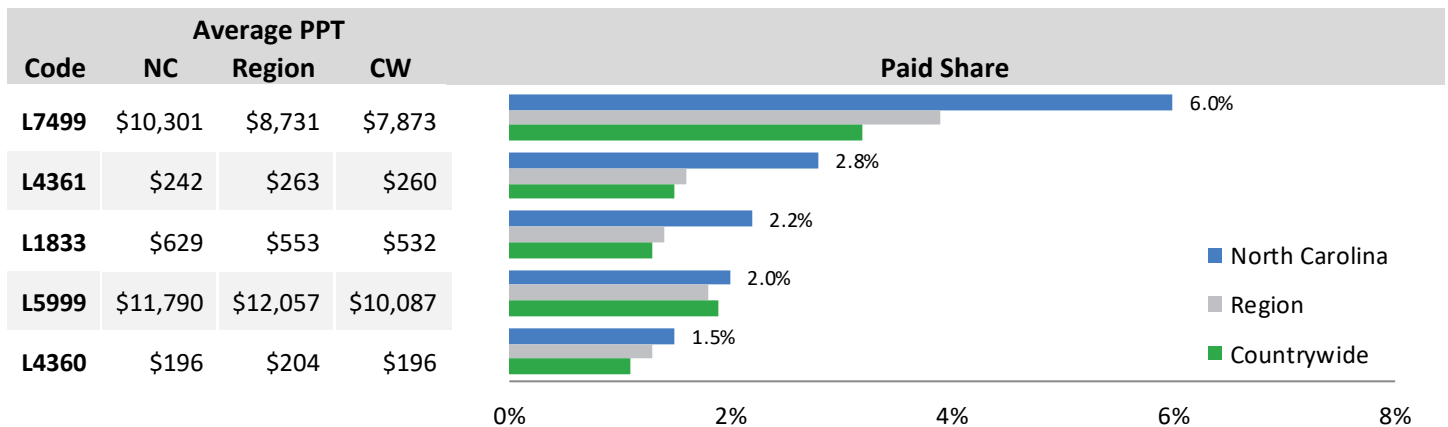
The most prevalent procedure code types reported for Implants/Orthotics and Prosthetics are HCPCS codes and revenue codes. Revenue codes represent 49% of Implants/Orthotics and Prosthetics payments, while HCPCS codes represent 51%.

The predominant revenue code reported for Implants/Orthotics and Prosthetics is code 0278—medical/surgical supplies: other implants. In North Carolina, payments for code 0278 represent 49% of Implants/Orthotics and Prosthetics payments.

Chart 63 displays the top five HCPCS codes for Implants/Orthotics and Prosthetics. The codes are ranked based on total payments in North Carolina. A brief description of each HCPCS code is displayed in the table below.

Chart 63

Top Five Implants/Orthotics and Prosthetics HCPCS Codes by Amount Paid



Code	Description
L7499	Upper extremity prosthesis, not otherwise specified
L4361	Walking boot, pneumatic and/or vacuum, with or without joints, with or without interface material, prefabricated, off-the-shelf
L1833	Knee orthosis, adjustable knee joints (unicentric or polycentric), positional orthosis, rigid support, prefabricated, off-the-shelf
L5999	Lower extremity prosthesis, not otherwise specified
L4360	Walking boot, pneumatic and/or vacuum, with or without joints, with or without interface material; prefabricated, customized for fit



Diagnosis Group and Body System

Charts 64 and 65 display the top 10 body systems and diagnosis groups, respectively. Body system and diagnosis group are identified for each claim based on ICD-10 (International Classification of Diseases) 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 North Carolina. 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, 2016, and December 31, 2016, and they include all reported services provided for those claims through December 31, 2017. As these claims mature, the mix of ICD-10 codes may change, thus impacting the percentage share of payments for a specific code over time. This mix may also affect how costs per code in North Carolina compare to countrywide costs. The state, region, and countrywide average payments per claim are also displayed for each body systems and diagnosis groups.

Chart 64

Top Body Systems by Amount Paid for Dates of Injury in 2016

Body System	Paid Share	Average Amount Paid Per Claim		
		North Carolina	Region	Countrywide
Injury or poisoning not otherwise classified	35.4%	\$2,284	\$3,003	\$2,759
Muscles	10.2%	\$3,556	\$4,623	\$5,108
Shoulder	8.8%	\$5,945	\$7,636	\$8,746
Lumbar spine	7.6%	\$2,490	\$3,361	\$3,699
Hand/wrist	7.4%	\$1,760	\$2,245	\$2,531
Knee	7.2%	\$3,030	\$4,055	\$4,660
Neck	3.7%	\$2,936	\$4,140	\$4,195
Ankle/foot	3.7%	\$1,390	\$1,517	\$1,677
Hip	2.5%	\$6,702	\$6,752	\$7,534
Digestion	1.9%	\$6,483	\$9,425	\$9,203

Chart 65

Top Diagnosis Groups by Amount Paid for Dates of Injury in 2016

Diagnosis Group	Paid Share	Average Amount Paid Per Claim		
		North Carolina	Region	Countrywide
Low back pain	5.3%	\$2,045	\$2,260	\$2,414
Other joint disorder, not elsewhere classified	4.7%	\$3,947	\$3,827	\$5,028
Fracture of lower leg, including ankle	4.4%	\$16,115	\$19,567	\$17,920
Rotator cuff tear	4.2%	\$14,222	\$17,297	\$19,053
Minor knee injury	3.7%	\$1,854	\$1,961	\$2,269
Minor hand/wrist injuries	3.5%	\$1,118	\$1,196	\$1,348
Minor ankle/foot injuries	3.2%	\$1,258	\$1,310	\$1,462
Fracture of forearm	3.1%	\$10,563	\$13,467	\$13,472
Fracture at wrist and hand level	2.8%	\$4,074	\$5,217	\$5,254
Open wound of wrist, hand and fingers	2.6%	\$684	\$1,097	\$1,051



Comparison of Selected Results by Year

The charts in this section provide a comparison of results for North Carolina. 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 for North Carolina (Chart 4)

Medical Category	2013	2014	2015	2016	2017
Physician	32%	32%	36%	40%	42%
Hospital Outpatient	21%	21%	17%	17%	16%
Hospital Inpatient	13%	13%	14%	13%	13%
ASC	6%	6%	5%	4%	4%
Drugs	12%	13%	12%	11%	10%
DME, Supplies, and Implants	11%	10%	10%	9%	9%
Other	5%	5%	6%	6%	6%

Distribution of Physician Payments by AMA Service Category for North Carolina (Chart 7)

AMA Service Category	2013	2014	2015	2016	2017
Anesthesia	3%	3%	3%	3%	3%
Surgery	26%	25%	23%	20%	19%
Radiology	13%	13%	11%	9%	9%
Pathology	2%	2%	2%	1%	1%
Physical Medicine	29%	28%	32%	37%	36%
General Medicine	4%	4%	3%	3%	3%
Evaluation and Management	21%	22%	23%	25%	26%
Other	2%	3%	3%	2%	3%



Median Time Until First Treatment (in Days) (Charts 19–22, 29, 38, and 50)⁶

Medical Category	AY 2012	AY 2013	AY 2014	AY 2015	AY 2016
Physicians - Major Surgery	36	33	30	27	20
Physicians - Radiology	1	1	1	1	1
Physicians - Physical and General Medicine	31	31	34	34	35
Physicians - Evaluation and Management	1	1	1	1	1
Hospital Inpatient	1	1	0	0	0
Hospital Outpatient	0	0	1	1	1
ASC	99	92	94	94	94

75th Percentile of Time Until First Treatment (in Days) (Charts 19–22, 29, 38, and 50)

Medical Category	AY 2012	AY 2013	AY 2014	AY 2015	AY 2016
Physicians - Major Surgery	123	119	119	116	111
Physicians - Radiology	7	7	8	8	8
Physicians - Physical and General Medicine	67	68	69	69	67
Physicians - Evaluation and Management	5	6	6	6	5
Hospital Inpatient	35	23	8	10	5
Hospital Outpatient	13	13	14	20	25
ASC	172	168	182	172	173

Hospital Inpatient Statistics (Charts 25 and 27)

Hospital Inpatient Statistics	2013	2014	2015	2016	2017
Average Amount Paid Per Stay	\$27,869	\$28,639	\$26,371	\$24,303	\$24,116
Number of Stays per 1,000 Active Claims	18	18	19	18	16

Distribution of Hospital Outpatient Payments by Surgery and Nonsurgery (Paragraphs preceding Charts 34 and 36)

Visit Type	2013	2014	2015	2016	2017
Surgery	53%	54%	60%	62%	60%
Nonsurgery	47%	46%	40%	38%	40%

⁶ In the charts displaying the distribution of time until first treatment, data is organized by the year in which the injury occurred, rather than by service year and include services performed within 365 days of the date of injury.



Hospital Outpatient Surgery Statistics (Charts 34 and 35)

Hospital Outpatient Surgery Statistics	2013	2014	2015	2016	2017
Average Amount Paid Per Visit	\$4,392	\$4,509	\$3,857	\$3,637	\$3,486
Number of Visits per 1,000 Active Claims	101	100	101	98	89

Hospital Outpatient Nonsurgery Statistics (Charts 36 and 37)

Hospital Outpatient Nonsurgery Statistics	2013	2014	2015	2016	2017
Average Amount Paid Per Visit	\$573	\$584	\$455	\$414	\$391
Number of Visits per 1,000 Active Claims	673	653	577	539	529

Emergency Room Statistics (Charts 42 and 43)

Emergency Room Statistics	2013	2014	2015	2016	2017
Average Amount Paid Per Visit	\$1,615	\$1,664	\$1,310	\$1,152	\$1,067
Number of Visits per 1,000 Active Claims	278	278	281	273	259

ASC Statistics (Charts 48 and 49)

ASC Statistics	2013	2014	2015	2016	2017
Average Amount Paid Per Visit	\$4,869	\$4,882	\$3,720	\$2,893	\$3,071
Number of Visits per 1,000 Active Claims	46	48	46	43	40

Distribution of Prescription Drug Payments by CSA Schedule (Chart 54)

CSA Schedule	2013	2014	2015	2016	2017
Schedule II	26%	27%	27%	26%	22%
Schedule III	2%	2%	2%	1%	2%
Schedule IV	7%	7%	6%	5%	4%
Schedule V	5%	6%	7%	8%	9%
Non-Controlled	60%	58%	58%	60%	63%

Distribution of Drug Payments by Brand Name and Generic (Chart 57)

Type of Drug	2013	2014	2015	2016	2017
Brand Name	54%	49%	48%	50%	50%
Generic	46%	51%	52%	50%	50%

Distribution of Drug Payments by Pharmacy and Nonpharmacy (Chart 58)

Type of Provider	2013	2014	2015	2016	2017
Pharmacy	93%	93%	95%	94%	93%
Nonpharmacy	7%	7%	5%	6%	7%

Distribution of Payments by DME, Supplies, and Implants (Chart 60)

Category	2013	2014	2015	2016	2017
DME	11%	13%	15%	20%	25%
Supplies Other Than DME	56%	55%	55%	48%	42%
Implants/Orthotic and Prosthetic Procedures	33%	32%	30%	32%	33%



Glossary

75th Percentile: The point on a distribution which 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 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 Procedure 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 classification 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). Also included are data for revenue codes, the Healthcare Common Procedure Code 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 Room Services: Services performed in a hospital for patients requiring immediate attention.

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 Procedure 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

Inpatient Hospital 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).



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

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

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

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.

Outpatient Hospital 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).

(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.

Surgery Visit: A visit in which at least one surgery procedure is performed based on the reported procedure code.

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 (e.g., milliliters, grams, 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 represents medical transactions for Service Year 2017 (medical services delivered from January 1, 2017, to December 31, 2017), except where otherwise noted. Workers compensation insurance carriers must report paid medical transactions if they write at least 1% of the market share in any one state for which NCCI is the advisory organization. Once a carrier meets the eligibility criteria, the carrier is required to report for all applicable states in which it writes workers compensation insurance, even if an individual state's market share is below the 1% threshold. All carriers within an insurance group are required to report, regardless of whether they write less than 1% of the market share in the state.

The data 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.

For the state of North Carolina in Service Year 2017, the reported number of transactions was over 1,571,000, with more than \$244,947,300 paid, for more than 76,300 claims. This represents data from 89% of the workers compensation premium written, which includes experience for large-deductible policies. Lump-sum settlements are not required to be reported. Also, self-insured data is not included.

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**.



Medical Data Report

Opioid Utilization Supplement

For the state of

NORTH CAROLINA

October 2018



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Introduction

Prescription opioids are a class of drugs used to treat moderate to severe pain, particularly chronic intractable pain. Opioid addiction and overdose have reached epidemic levels over the past decade. According to the U.S. Department of Health and Human Services¹, 11.5 million Americans misused prescription opioids in 2016, resulting in 116 deaths from an opioid-related overdose every day. The Centers for Disease Control and Prevention (CDC)² reports that 40% of opioid overdose deaths in 2016 involved a prescription opioid.

The opioid epidemic in the United States has a far-reaching impact on the workers compensation (WC) system. NCCI data shows that the average cost of prescriptions for claims with an opioid prescription is four times the average cost of a nonopioid claim. One quarter of all prescription spending in the WC system is on opioids.

In response to the opioid crisis, many states have established laws and regulations to address opioid prescribing patterns for the population at large as well as in workers compensation. This Opioid Utilization Supplement is a data source for regulators and others who are interested in monitoring opioid utilization in workers compensation. The information in this report provides important benchmarks and gives valuable insight into the opioid prescribing patterns of the WC system.

Each calendar year, NCCI produces, publishes, and delivers the *North Carolina Medical Data Report* to regulators, which is also made available to authenticated users on ncci.com. This publication is a supplement to the Medical Data Report and is intended to serve as a data resource for regulators and others who are interested in the prescription drug component of medical costs in workers compensation claims. Specifically, this report focuses on opioid prescriptions costs and utilization rates at the aggregate level for state, regional, and countrywide analysis. It is delivered to regulators along with the Medical Data Report and is available on ncci.com.

This report has five sections:

- Prescription Drug Statistics
- Opioid Claim Statistics
- Concurrent Use of Opioids and Benzodiazepines
- Changes in Opioid Prescribing Patterns
- Oxycodone Pill Equivalents

The report drills down on these sections to provide details on payments and prescribing patterns.

Unless otherwise noted, the source for all data in this report is the NCCI Medical Data Call, Service Year (SY) 2017. Region includes data from the following states: AL, AR, FL, GA, KY, LA, MS, SC, TN, VA, and WV. 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, NJ, NM, NV, OK, OR, RI, SC, SD, TN, UT, VA, VT, WI, and WV.

One important caveat: Information in this report may not coincide with an analysis of a legislative provision or rule change performed in the future. Such an analysis would require evaluation of the specific drugs covered by the rule, which may be different from the way that payments or prescriptions for the drugs are categorized in this report.

¹ www.hhs.gov/opioids/about-the-epidemic/index.html

² www.cdc.gov/drugoverdose/index.html



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Prescription Drug Statistics

According to NCCI’s research³, the narcotics oxycodone and hydrocodone bitartrate-acetaminophen (commonly known as Oxycontin® and Vicodin®, respectively) were among the most widely prescribed drugs in workers compensation for SY 2016.

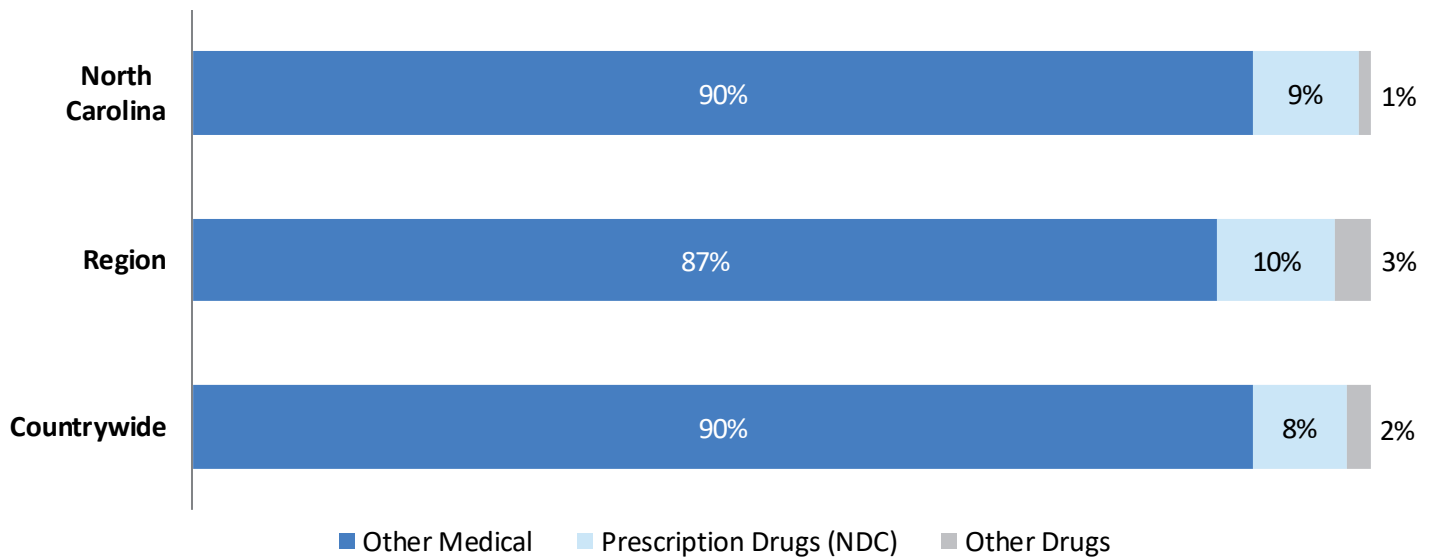
Drugs are uniquely identified by a national drug code (NDC). Charts 1 through 3 provide greater detail on payments for prescription drugs reported with an NDC, whether the drugs were provided in a pharmacy, physician’s office, hospital, or other place of service. Payments are categorized as drugs if the code reported on the transaction is an NDC. Drug payments can also be reported using codes other than NDCs, such as revenue codes, Healthcare Common Procedure Coding System (HCPCS) codes, and other state-specific procedure codes. These are referred to as “Other Drugs” in Chart 1.

For SY 2017, North Carolina spent \$22 million on 145,000 prescriptions for workers compensation claims.

Chart 1 displays the prescription drug shares of medical payments for North Carolina, the region, and countrywide in 2017.

Chart 1

Drug Share of Medical Payments



³ “Opioids—Killer Pain Relief”, presented at (*Annual Issues Symposium*, May 2018)



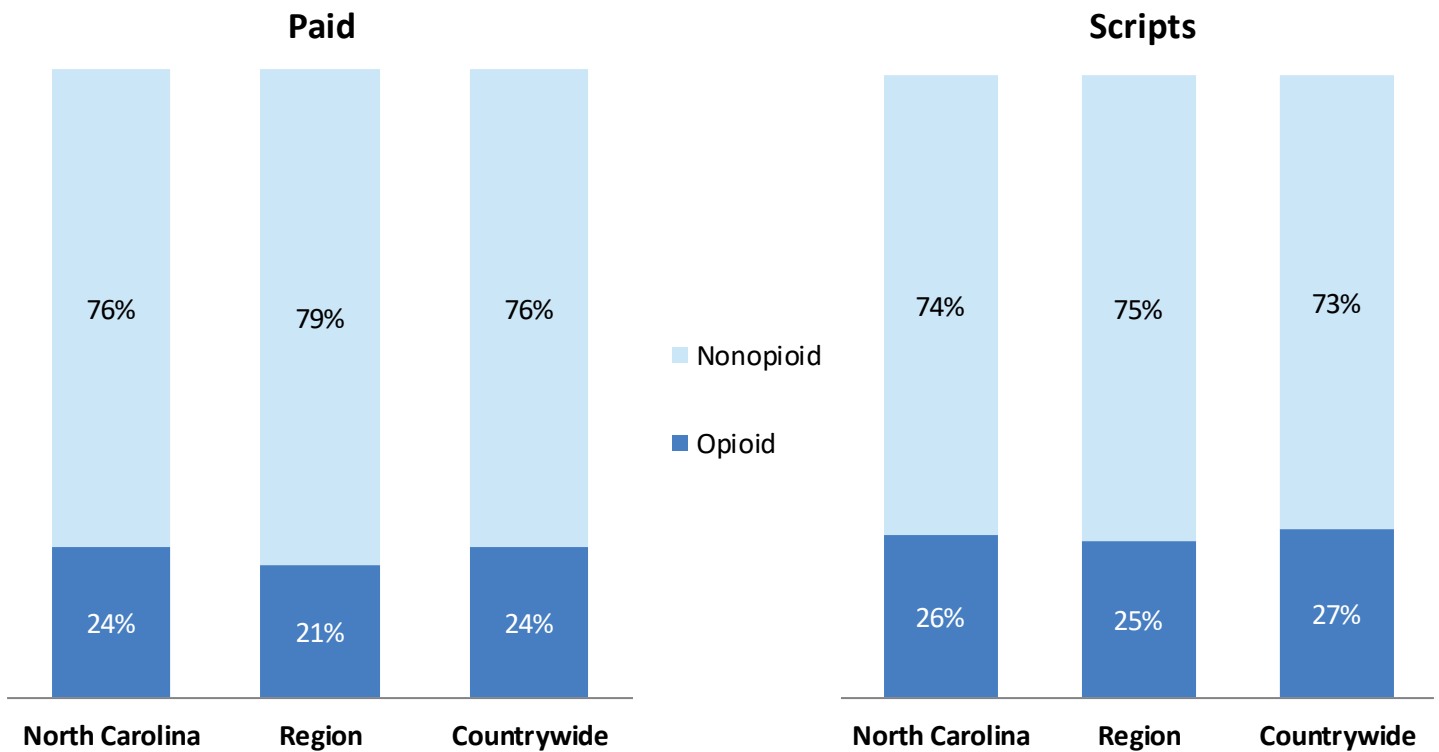
The results in the charts that follow are based only on payments reported with an NDC.

In 2017, North Carolina spent \$5 million on 38,000 opioid prescriptions; 3 of the top 10 drugs by amount paid are opioids and account for 9% of drug payments.

Chart 2 shows the proportion of drug payments and prescription counts for opioids in North Carolina, the region, and countrywide.

Chart 2

Distribution of Drugs by Opioid and Nonopioid



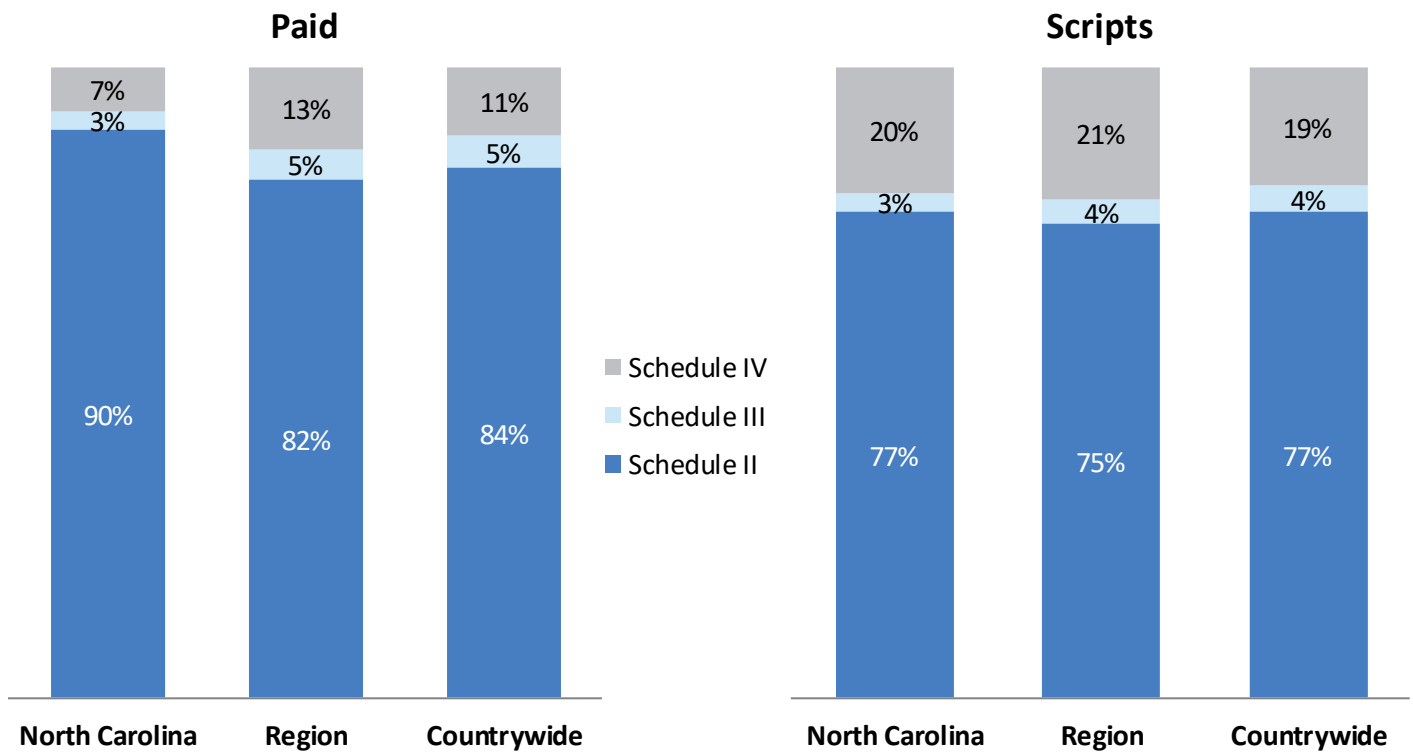
Opioids are subject to the Controlled Substance Act (CSA), passed in 1970 to regulate the manufacture, distribution, possession, and use of certain drugs. Five controlled substance schedules, or groups, are determined by varying qualifications, such as the drug’s medical uses, if any, and its potential for abuse. For example, Schedule V drugs, such as codeine, are defined as having the lowest potential for abuse, while Schedule I drugs, such as heroin, are illegal at the federal level and are defined as having no currently accepted medical uses and a high potential for abuse.

According to the Diversion Control Division of the Drug Enforcement Administration,⁴ schedule drug prescribing must adhere to certain rules. A prescription for a schedule drug must be written in ink or indelible pencil or typewritten and must be manually signed by the practitioner or their designee. A Schedule II prescription must be signed by the practitioner. While prescriptions for Schedules III and IV controlled substances may be refilled up to five times in six months, a Schedule II prescription may not be refilled, requiring a new prescription to be issued each time.

Opioids are largely Schedule II and Schedule III drugs. Chart 3 shows the percentage of opioid payments and opioid prescriptions by schedule⁵ for North Carolina, the region, and countrywide.

Chart 3

Distribution of Opioids by 2018 Drug Schedule



⁴ www.deadiversion.usdoj.gov/faq/prescriptions.htm#rx-2

⁵ Schedule assignment reflects the DEA’s schedule as of 2018.

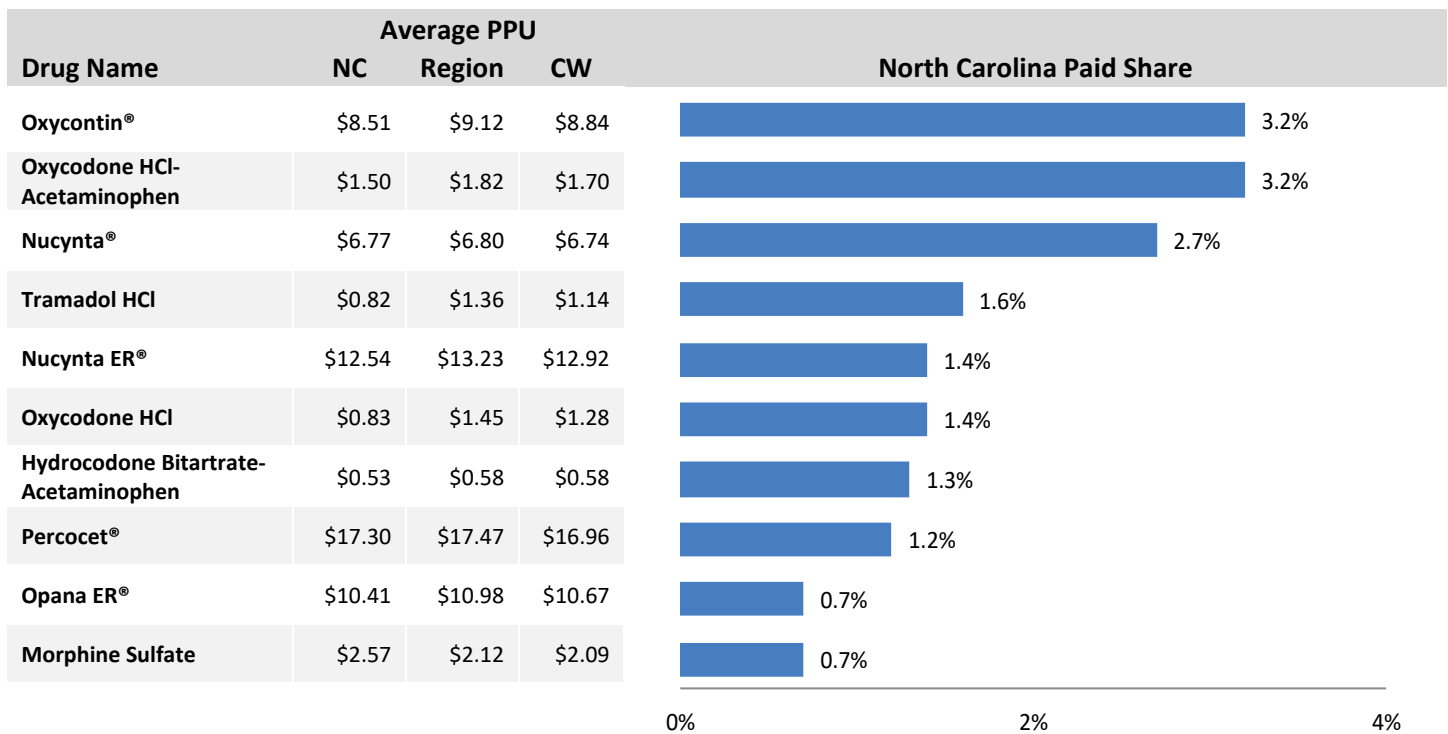


Charts 4 and 5 provide greater detail on payments for opioid prescriptions in North Carolina.

Chart 4 displays the shares of the payments of prescription medication for the top 10 WC opioids and whether the drugs are generic (G) or brand name (B). This ranking method shows which drugs have the highest percentage share of payments. Also included is the amount paid per unit (PPU), common brand name, CSA schedule and countrywide (CW) rank.

Chart 4

Top 10 Workers Compensation Opioid Drugs by Amount Paid for North Carolina



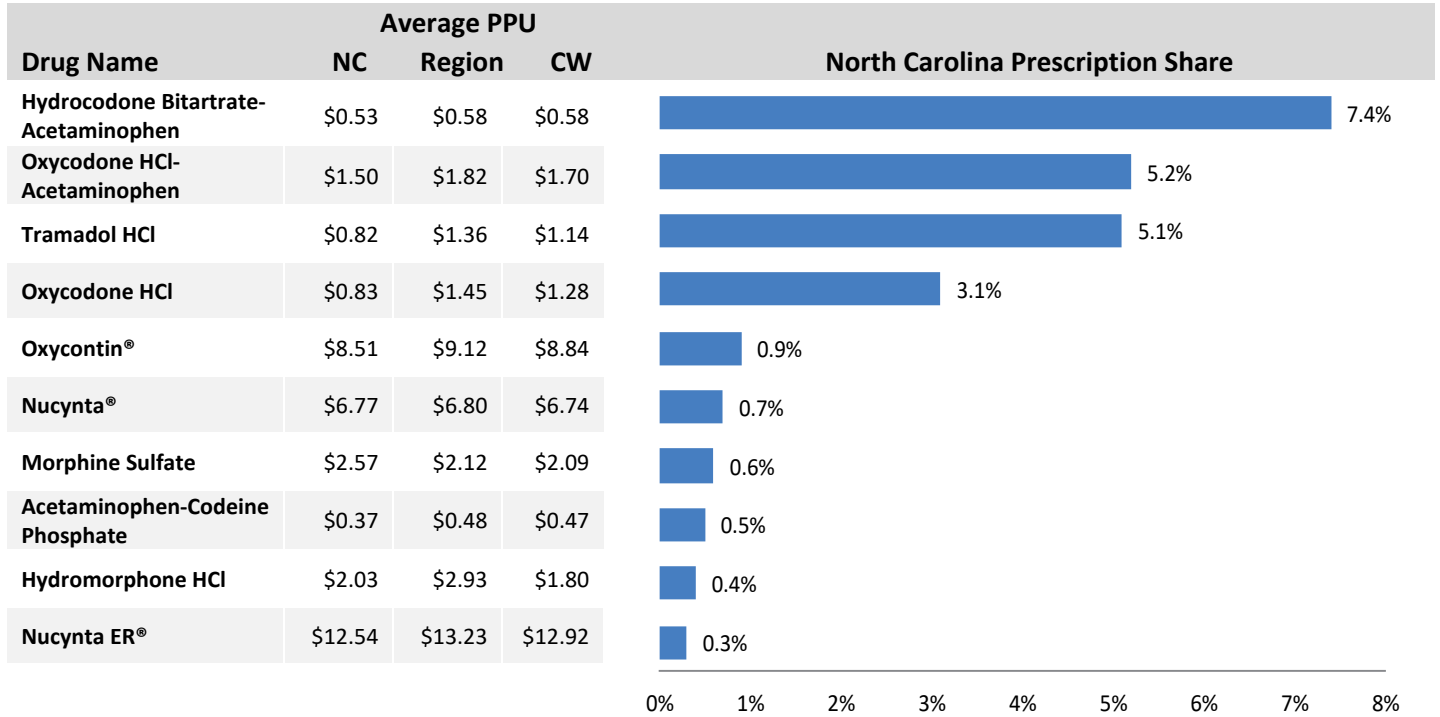
Drug Name	B/G	Common Brand Name	CSA Schedule	CW Rank
Oxycontin®	B	N/A	II	1
Oxycodone HCl-Acetaminophen	G	Percocet®	II	2
Nucynta®	B	N/A	II	7
Tramadol HCl	G	Ultram®	IV	3
Nucynta ER®	B	N/A	II	9
Oxycodone HCl	G	Oxycontin®	II	4
Hydrocodone Bitartrate-Acetaminophen	G	Vicodin®	II	5
Percocet®	B	N/A	II	6
Opana ER®	B	N/A	II	10
Morphine Sulfate	G	Duramorph®	II	8



Chart 5 displays the top 10 WC opioids according to the number of prescriptions. This chart reveals the most frequently prescribed opioids and the amount paid per unit.

Chart 5

Top 10 Workers Compensation Opioid Drugs by Prescription Counts for North Carolina



Drug Name	B/G	Common Brand Name	CSA Schedule	CW Rank
Hydrocodone Bitartrate-Acetaminophen	G	Vicodin®	II	1
Oxycodone HCl-Acetaminophen	G	Percocet®	II	3
Tramadol HCl	G	Ultram®	IV	2
Oxycodone HCl	G	Oxycontin®	II	4
Oxycontin®	B	N/A	II	5
Nucynta®	B	N/A	II	9
Morphine Sulfate	G	Duramorph®	II	6
Acetaminophen-Codeine Phosphate	G	Tylenol® with Codeine #3	III	7
Hydromorphone HCl	G	Dilaudid®	II	8
Nucynta ER®	B	N/A	II	12

Opioid Claim Statistics

In addition to providing information on workers compensation claims with opioids, this report also provides information on workers compensation claims with concurrent use of opioids and benzodiazepines (benzos). A benzo, typically a Schedule IV drug, produces central nervous system depression (as do opioids) and is most commonly used to treat insomnia and anxiety. Two examples of widely used benzos are Xanax® and Ativan®.

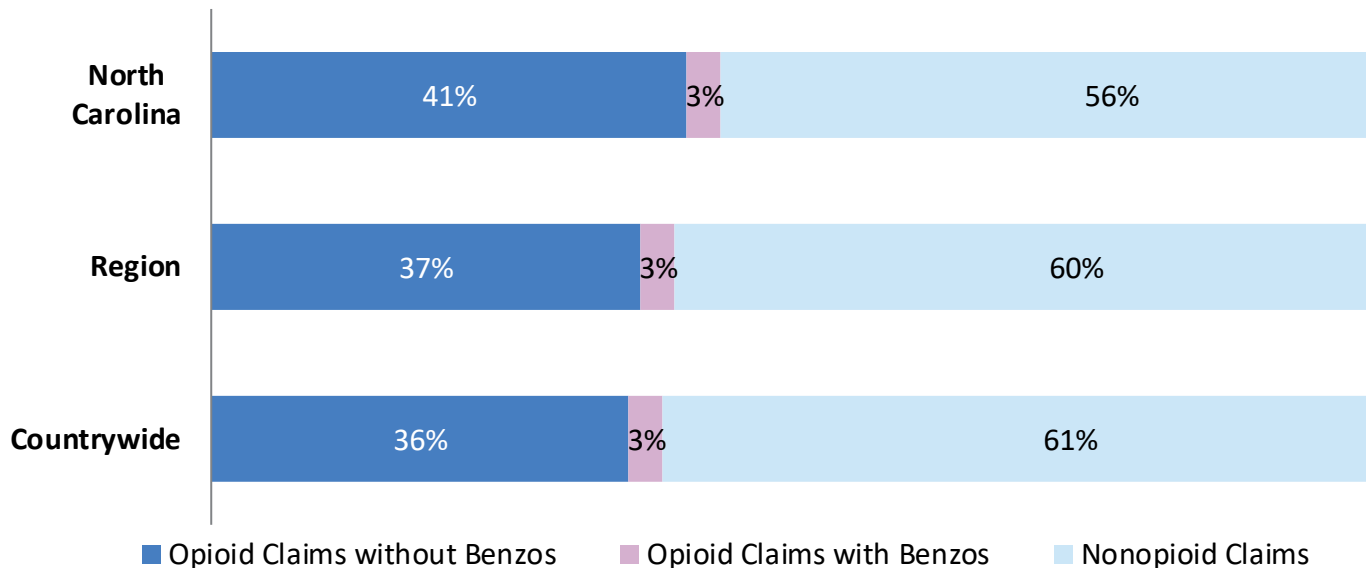
Several types of workers compensation claims are referenced in this report:

- **Rx claim**—A WC claim that had at least one prescription during the period
- **Opioid claim**—A WC claim that had at least one opioid prescription during the period
- **Nonopioid claim**—A WC claim that had at least one prescription but no opioids during the period
- **Opioid claim with benzos**—A WC claim that had at least one opioid prescription and at least one benzo prescription during the period
- **Opioid claim without benzos**—A WC claim that had at least one opioid prescription and no benzo prescriptions during the period

Chart 6 displays the distribution of Rx claims for North Carolina, the region, and countrywide for SY 2017.

Chart 6

Rx Claim Distributions





Injured workers who have been prescribed opioids are, on average, prescribed a greater number of prescriptions than those who have not. In North Carolina, a nonopioid claim has an average number of 3.1 prescriptions in SY 2017 compared to 3.3 in the region and 3.2 countrywide.

Charts 7 and 8 show the average number of opioid and nonopioid prescriptions per opioid claim and the average amount paid per opioid claim for North Carolina, the region, and countrywide.

Chart 7

Average Number of Prescriptions per Opioid Claim

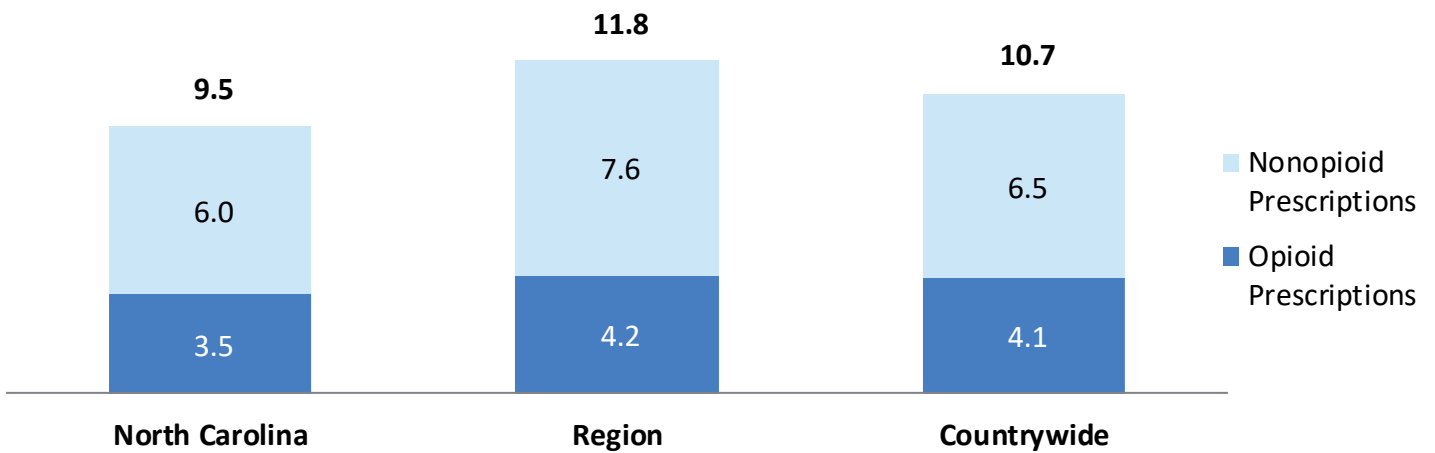
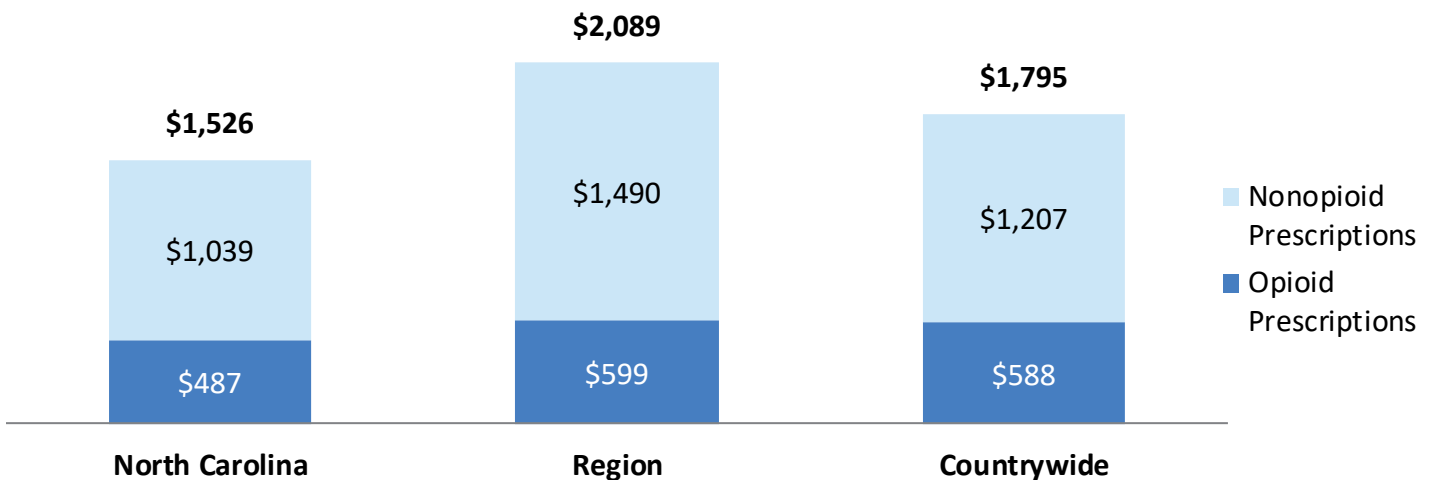


Chart 8

Average Amount Paid for Prescription Drugs per Opioid Claim





Opioid claims may involve a different mix of nonopioid prescriptions when compared to nonopioid claims. Chart 9 shows the top five nonopioid drugs by amount paid for nonopioid claims. Chart 10 shows the top five nonopioid drugs by amount paid for opioid claims.

Chart 9

Top 5 Nonopioid Drugs for Nonopioid Claims by Amount Paid for North Carolina⁶

Drug Name	Common Brand Name	B/G	% of Nonopioid Drug Payments	PPU NC	PPU Region	PPU Countrywide
Lyrica®	N/A	B	7.8%	\$7.00	\$7.12	\$7.10
Gabapentin	Neurontin®	G	4.0%	\$1.03	\$1.27	\$1.18
Meloxicam	Mobic®	G	3.7%	\$2.59	\$3.41	\$3.25
Diclofenac Sodium	Voltaren®	G	3.4%	\$1.05	\$1.40	\$1.28
Duloxetine HCl	Cymbalta®	G	2.8%	\$5.07	\$5.54	\$5.18

Chart 10

Top 5 Nonopioid Drugs for Opioid Claims by Amount Paid for North Carolina⁷

Drug Name	Common Brand Name	B/G	% of Nonopioid Drug Payments	PPU NC	PPU Region	PPU Countrywide
Lyrica®	N/A	B	12.8%	\$7.00	\$7.12	\$7.10
Gabapentin	Neurontin®	G	5.7%	\$1.03	\$1.27	\$1.18
Duloxetine HCl	Cymbalta®	G	4.2%	\$5.07	\$5.54	\$5.18
Lidocaine	Lidoderm®	G	3.7%	\$6.02	\$7.42	\$7.04
Diclofenac Sodium	Voltaren®	G	3.2%	\$1.05	\$1.40	\$1.28

⁶ “% of Nonopioid Drug Payments” is the share of nonopioid drug payments in nonopioid claims

⁷ “% of Nonopioid Drug Payments” is the share of nonopioid drug payments in opioid claims

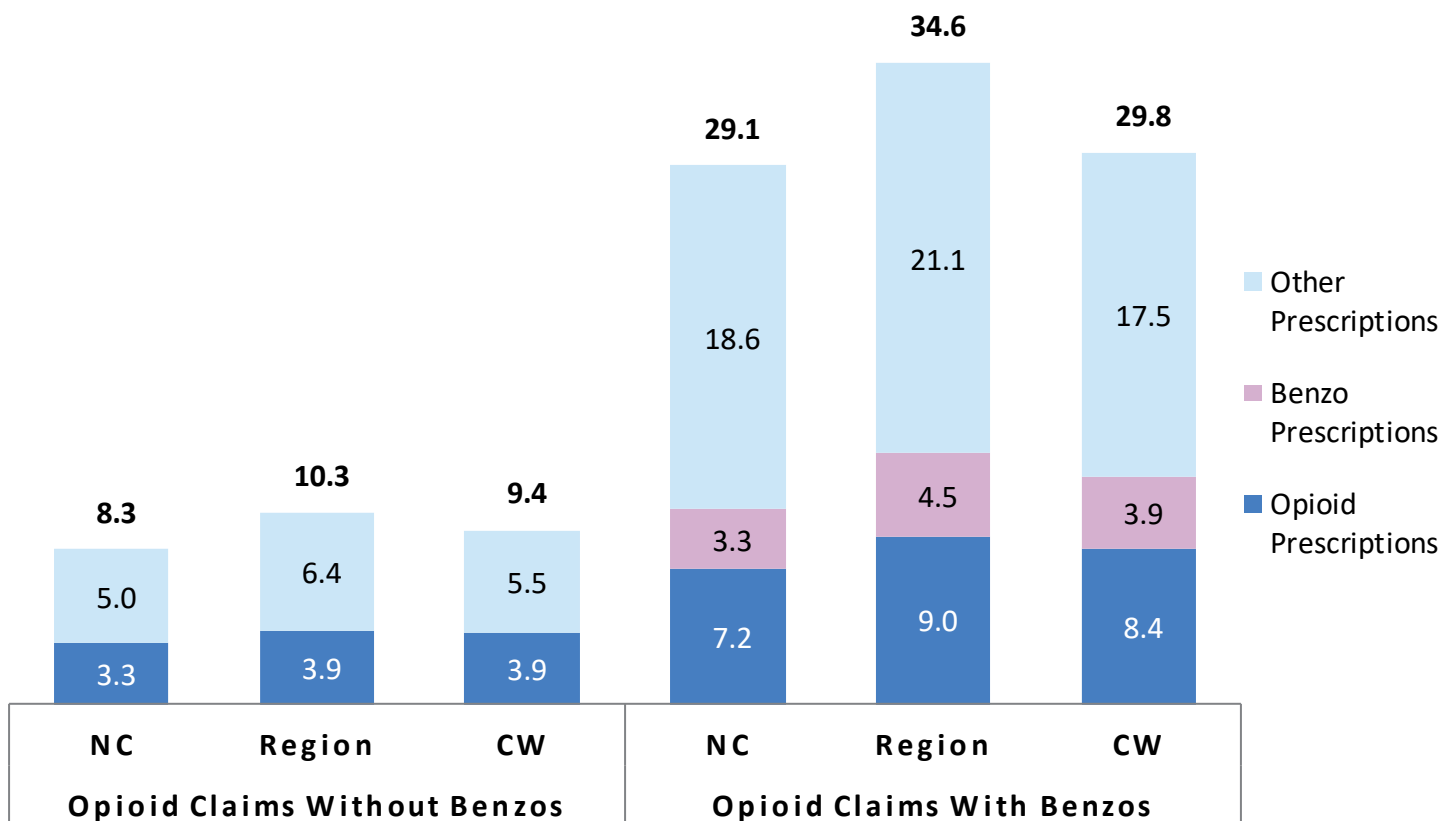
Concurrent Use of Opioids and Benzodiazepines

According to a study⁸ on opioid abuse published by *The British Medical Journal*, of “2,400 veterans in the population who died because of a drug overdose while taking opioid painkiller prescriptions, 49% had been concurrently prescribed benzodiazepines.” In workers compensation, the number of injured workers who are concurrently prescribed both an opioid and a benzo is relatively small. However, the number of prescription drugs and their associated costs for those injured workers are considerably higher than for workers who are not prescribed benzos.

Chart 11 displays the average number of opioid, benzo, and other types of prescriptions for opioid claims with and without benzos for North Carolina, the region, and countrywide.

Chart 11

Average Number of Prescriptions by Claim Type



⁸ "Dangers of Mixing Opiates and Benzodiazepines: Vicodin, Xanax, Oxycodone, and Valium." American Addiction Centers. N.p., n.d. Web, 16 Nov. 2016.



Chart 12 shows the top five benzos concurrently used with opioids for North Carolina, along with the PPU for North Carolina, the region, and countrywide.

Chart 12

Top 5 Workers Compensation Benzos by Amount Paid for North Carolina

Drug Name	Common Brand Name	B/G	% of Benzo Payments	PPU NC	PPU Region	PPU Countrywide
Ativan®	N/A	B	15.8%	\$29.66	\$32.97	\$33.22
Valium®	N/A	B	12.7%	\$6.18	\$7.59	\$7.35
Alprazolam	Xanax®	G	10.8%	\$0.71	\$0.77	\$0.75
Clonazepam	Klonopin®	G	10.3%	\$0.58	\$0.62	\$0.58
Xanax®	N/A	B	9.3%	\$4.74	\$5.82	\$6.02

To delve further into the “Other Prescriptions” (i.e. nonopioid, nonbenzo drugs) shown in Chart 11 above, Chart 13 shows the top five other drugs by amount paid for opioid claims without a benzo, while Chart 14 shows the top five other drugs by amount paid for opioid claims with benzos.

Chart 13

Top 5 Other Drugs for Opioid Claims without a Benzo by Amount Paid for North Carolina⁹

Drug Name	Common Brand Name	B/G	% of Other Drug Payments	PPU NC	PPU Region	PPU Countrywide
Lyrica®	N/A	B	14.4%	\$7.00	\$7.12	\$7.10
Gabapentin	Neurontin®	G	6.2%	\$1.03	\$1.27	\$1.18
Duloxetine HCl	Cymbalta®	G	4.2%	\$5.07	\$5.54	\$5.18
Lidocaine	Lidoderm®	G	3.7%	\$6.02	\$7.42	\$7.04
Diclofenac Sodium	Voltaren®	G	3.7%	\$1.05	\$1.40	\$1.28

Chart 14

Top 5 Other Drugs for Opioid Claims with Benzos by Amount Paid for North Carolina¹⁰

Drug Name	Common Brand Name	B/G	% of Other Drug Payments	PPU NC	PPU Region	PPU Countrywide
Lyrica®	N/A	B	8.2%	\$7.00	\$7.12	\$7.10
Gabapentin	Neurontin®	G	4.4%	\$1.03	\$1.27	\$1.18
Duloxetine HCl	Cymbalta®	G	4.4%	\$5.07	\$5.54	\$5.18
Lidocaine	Lidoderm®	G	3.6%	\$6.02	\$7.42	\$7.04
Lidoderm®	N/A	B	2.5%	\$13.89	\$13.85	\$13.80

⁹ “% of Other Drug Payments” is the share of other drug payments in opioid claims *without* a benzo

¹⁰ “% of Other Drug Payments” is the share of other drug payments in opioid claims *with* a benzo

Changes in Opioid Prescribing Patterns

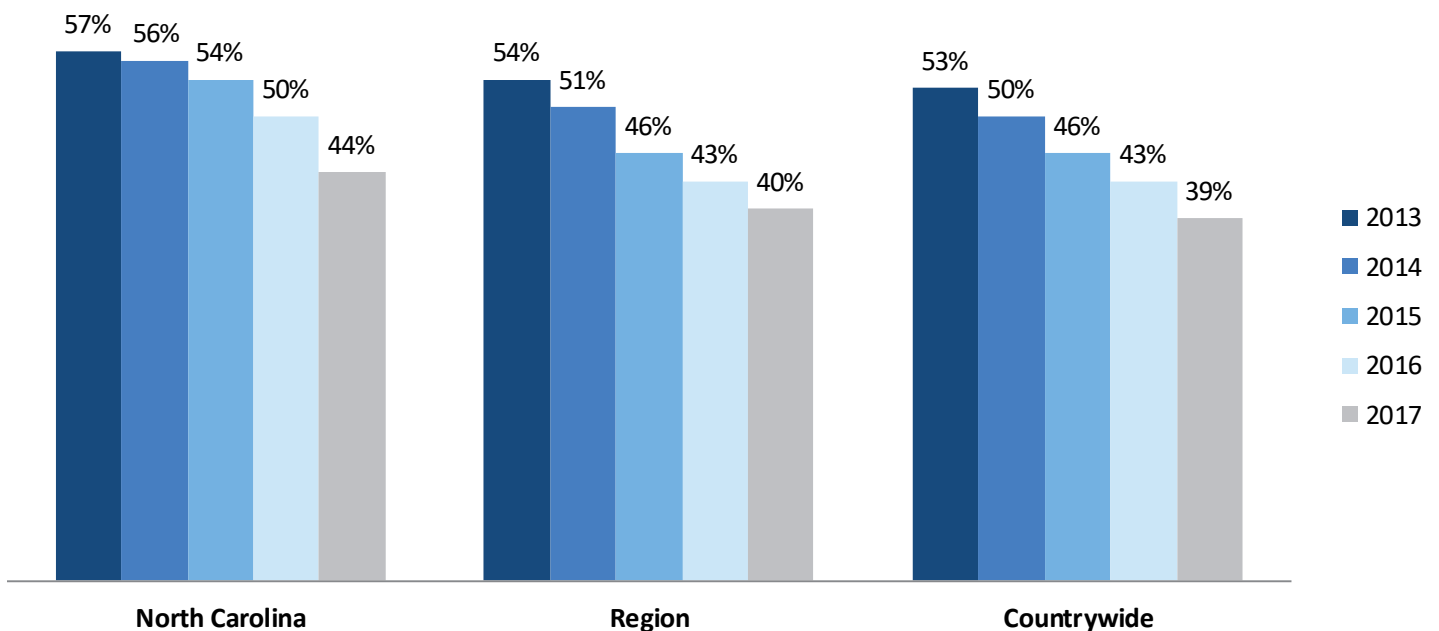
According to the U.S. Department of Health & Human Services (HHS)¹¹, “Our nation is in the midst of an unprecedented opioid epidemic.” One initiative the HHS is using to target this problem is improving prescribing practices. In March 2016, the CDC released its *Guideline for Prescribing Opioids for Chronic Pain*, which provides recommendations for the prescribing of opioid pain medication for patients 18 and older in primary care settings.

Lower prescribing patterns for workers compensation claims reflect concerted efforts by the various stakeholders to respond to the opioid crisis—through rules used by regulatory agencies, guidelines for prescribing opioids, or greater attention paid by the prescribing physicians and employers to the injured workers with prescriptions.

Chart 15 shows the share of opioid claims over the latest five service years for North Carolina, the region, and countrywide.

Chart 15

Share of Drug Claims with At Least One Opioid Prescription by Service Year



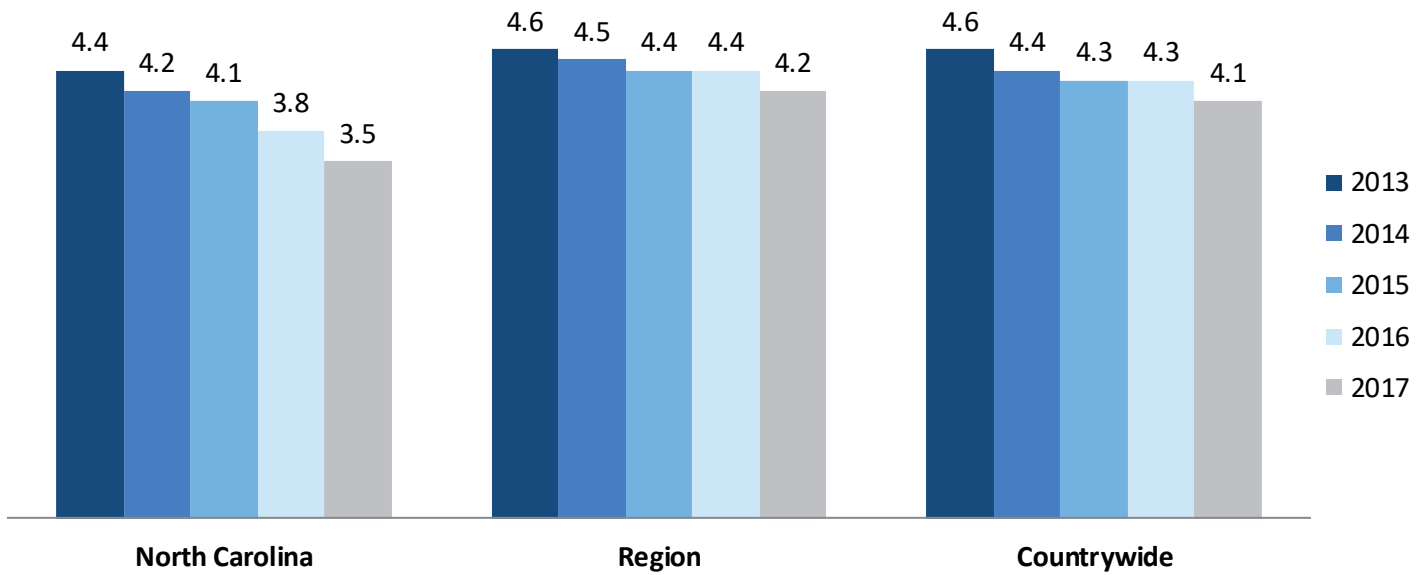
¹¹ The Opioid Epidemic: By the Numbers, HHS Factsheet, June 2016



Chart 16 reflects the change in the average number of opioid prescriptions per opioid claim over the latest five service years in North Carolina, the region, and countrywide.

Chart 16

Average Number of Opioid Prescriptions per Opioid Claim by Service Year





NCCI data¹² shows that average opioid prices have increased 34% between SYs 2012 and 2016, while opioid use has decreased by 32%. As a result, opioid payments per active claims have decreased by 9% over that period. Charts 17 and 18 display the change in the average opioid payment per opioid claim and per opioid prescription over the last five service years for North Carolina, the region, and countrywide.

Chart 17

Average Opioid Payment per Opioid Claim by Service Year

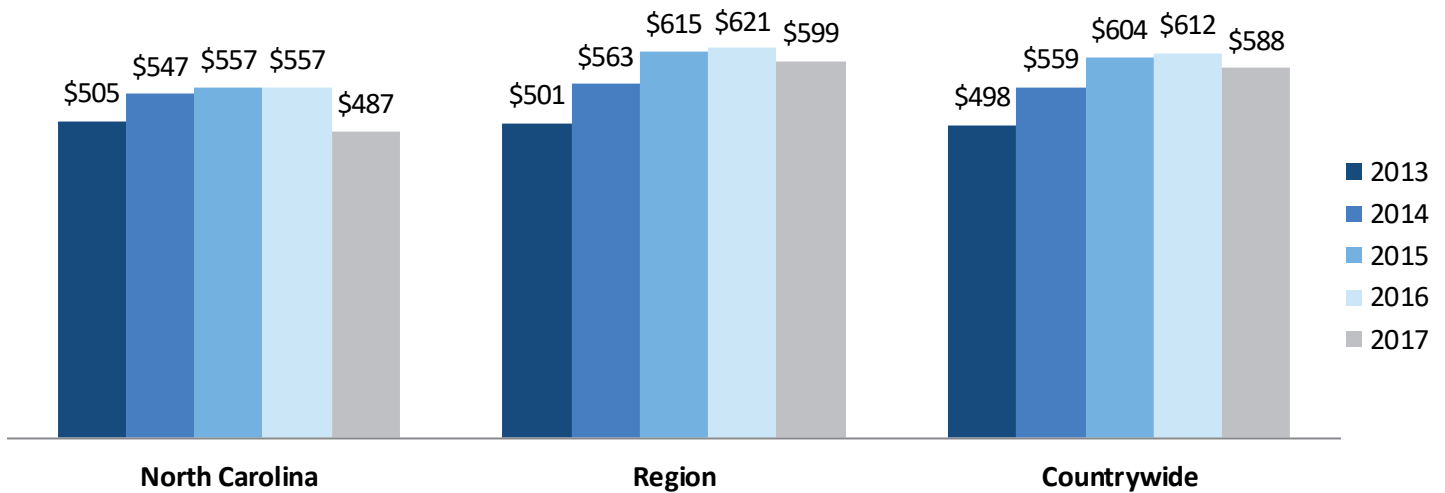
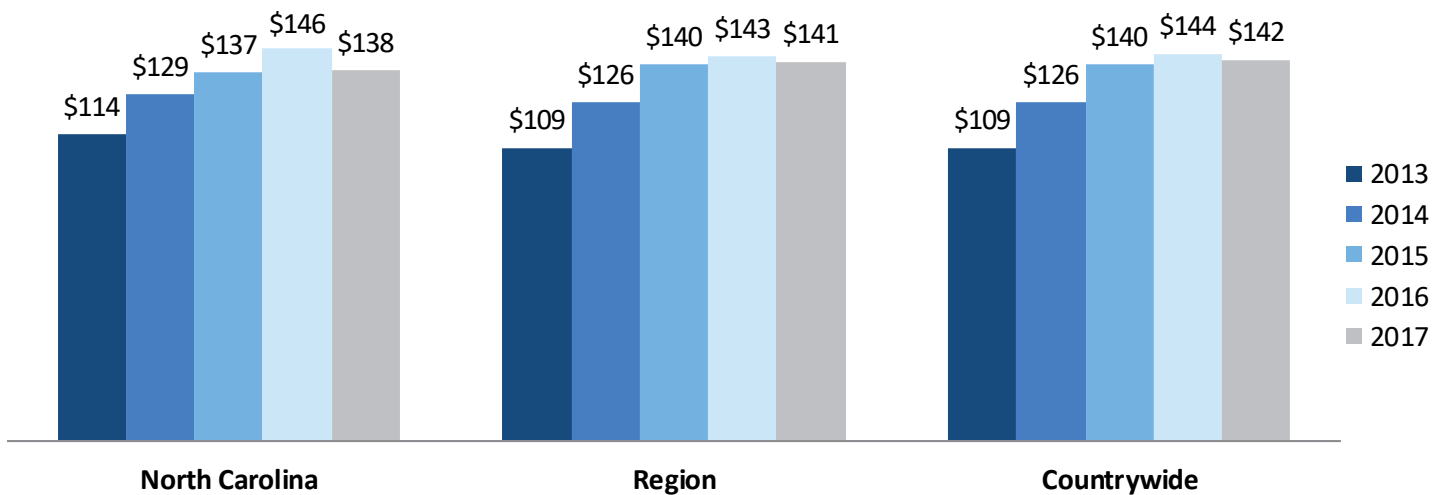


Chart 18

Average Payment per Opioid Prescription by Service Year



¹² "Opioids—Killer Pain Relief" (*Annual Issues Symposium*, May 2018)



Oxycodone Pill Equivalents

Price inflation of prescription drugs is one factor that impacts payments over time. The content of prescriptions and dosages can also impact the payments made. Not all prescriptions are equal, and not all opioids are equal. Consequently, a comparison of prescriptions or opioid payments with a common unit of comparison can add clarity to the observed experience.

The CDC¹³ 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 Morphine Milligram Equivalents (MME) for any opioid prescription, based on the number of units (pills for example) prescribed and the drug formulation. One milligram per day of oxycodone, for instance, is assigned an MME factor of 1.5; one milligram per day of codeine, on the other hand, is assigned an MME factor of 0.15.

NCCI converts milligrams of morphine to a number of oxycodone pills and calls it the Oxycodone Pill Equivalent (OPE). A 20mg oxycodone pill, which contains 30 MMEs, is exactly 1 OPE. Oxycodone is used as the standard of reference since it is the most prevalent opioid used in workers compensation. The chart below provides sample MME and OPE conversions for some commonly used opioids.



Morphine Milligram Equivalents (MME)

Vicodin® (10mg)	Oxycodone (20mg)	Butrans® (20mcg/hr)
10 MMEs	30 MMEs	36 MMEs/Day



Oxycodone Pill Equivalents (OPE)

Vicodin® (10mg)	Oxycodone (20mg)	Butrans® (20mcg/hr)
0.3 OPEs	1 OPE	1.2 OPEs/Day

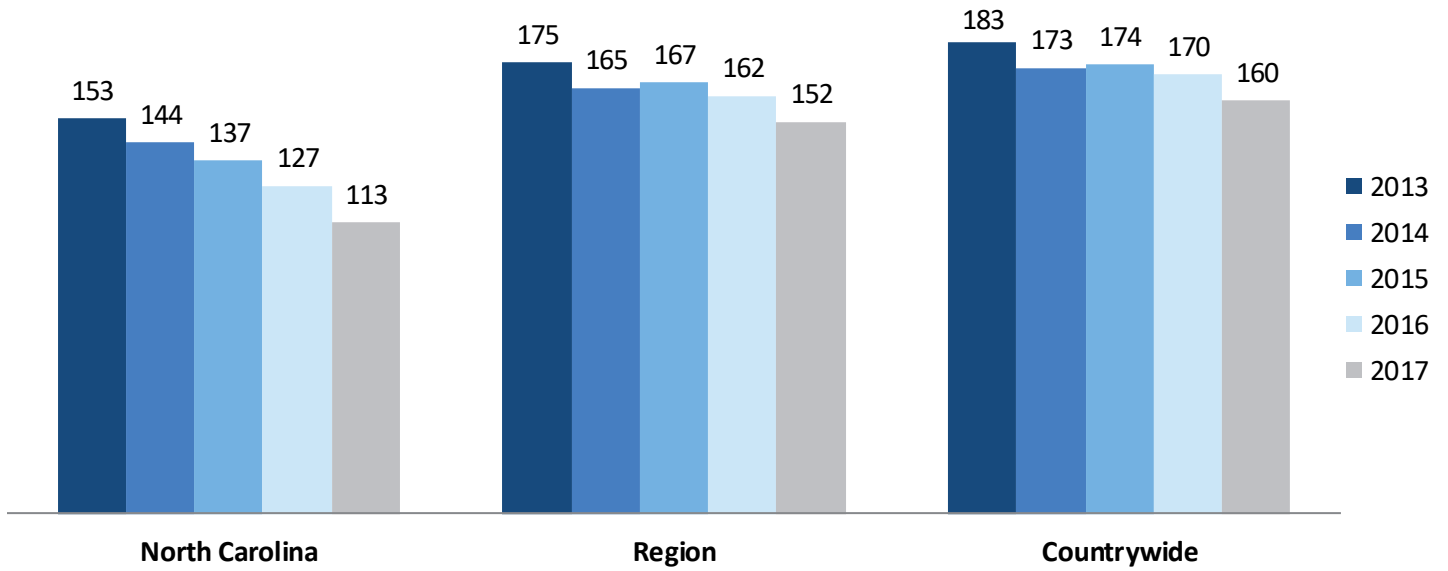
¹³ www.cdc.gov/drugoverdose/pdf/calculating_total_daily_dose-a.pdf



Chart 19 displays the average yearly amount of OPEs prescribed per claimant with at least one opioid prescription for the latest five service years in North Carolina, the region, and countrywide.

Chart 19

Average Yearly OPE per Opioid Claim by Service Year



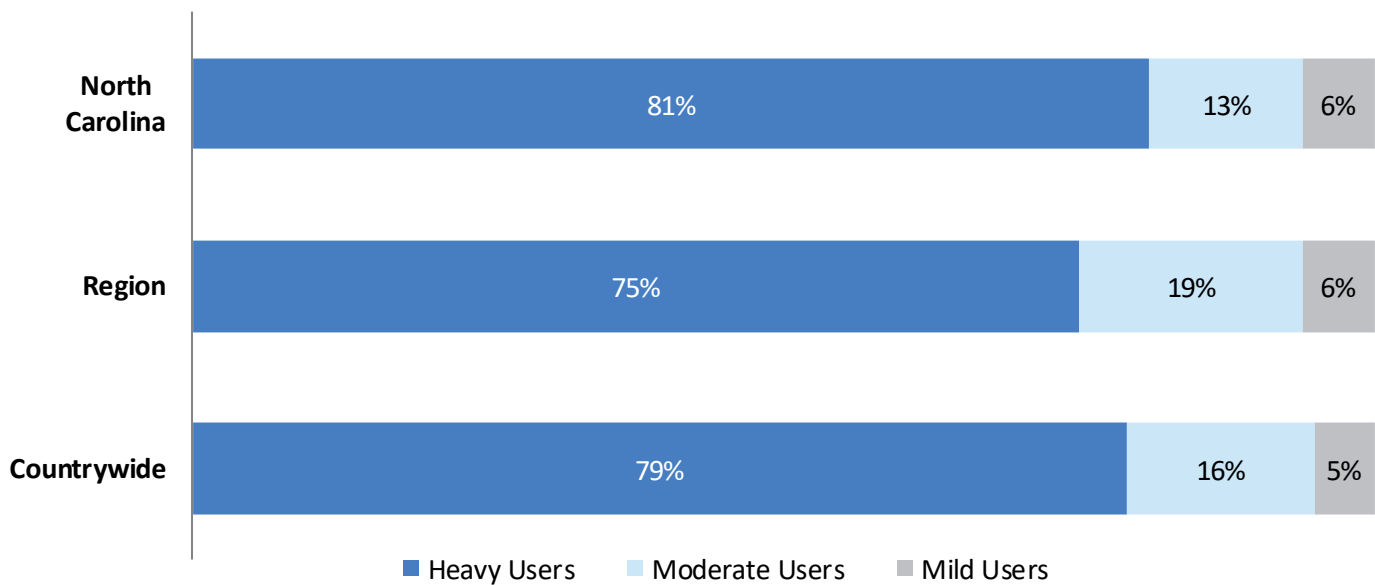
One way to recognize the extensive use of opioids is to classify claims into groups with different levels of opioid use. NCCI classifies opioid claimants based on yearly OPE consumption:

- “Heavy users” represent the top 10% of claims by OPE consumption
- “Moderate users” are in the next 20% of claims by OPE consumption
- “Mild users” are in the bottom 70% of claims by OPE consumption

Chart 20 shows the distribution of OPE by consumption classification in North Carolina, the region, and countrywide for SY 2017.

Chart 20

Distribution of OPE by Consumption Classification



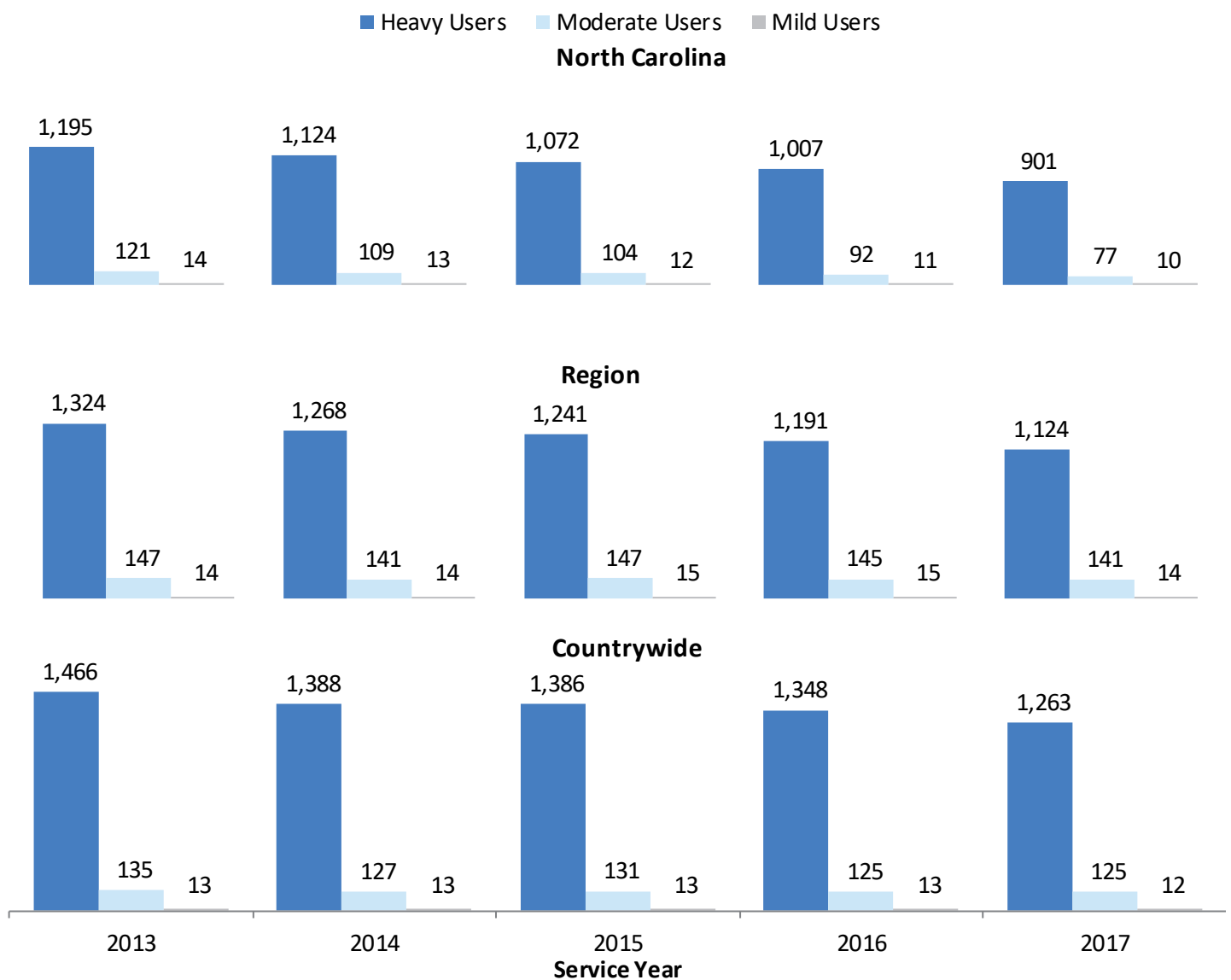


According to the [CDC Guideline for Prescribing Opioids for Chronic Pain](#),¹⁴ clinicians “should avoid increasing dosage to ≥ 90 MME/day [3 OPE/day] or carefully justify a decision to titrate dosage to ≥ 90 MME/day.” A claimant who consumes 3 OPE per day for each day of the year would have a yearly OPE consumption of 1,095. In SY 2017, average heavy users in North Carolina were prescribed approximately 82% of the OPE of such a claimant.

Chart 21 shows the distribution of average OPE consumption within each usage classification for the latest five service years for North Carolina, the region, and countrywide.

Chart 21

Average Yearly OPE per Opioid Claim by Service Year and Classification



¹⁴ www.cdc.gov/drugoverdose/pdf/guidelines_at-a-glance-a.pdf

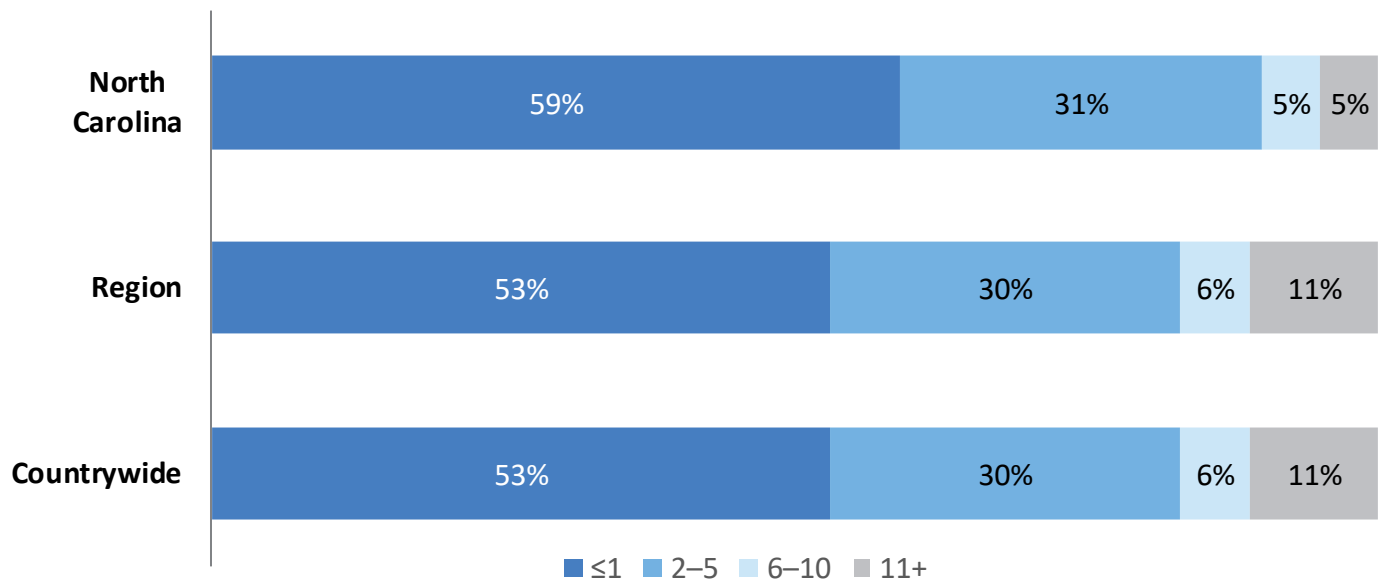


WC insurance is considered to have a long tail of liability, meaning that injured workers continue to receive medical benefits over a long period of time, sometimes 30 years or more. Observing opioid claims by claim maturity provides insight into the long-lasting usage of opioid prescriptions and their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

Chart 22 shows the distribution of opioid claims by claim maturity for North Carolina, the region, and countrywide, where maturity is measured by the number of years from the date of injury.

Chart 22

Opioid Claim Distribution by Claim Maturity in Years

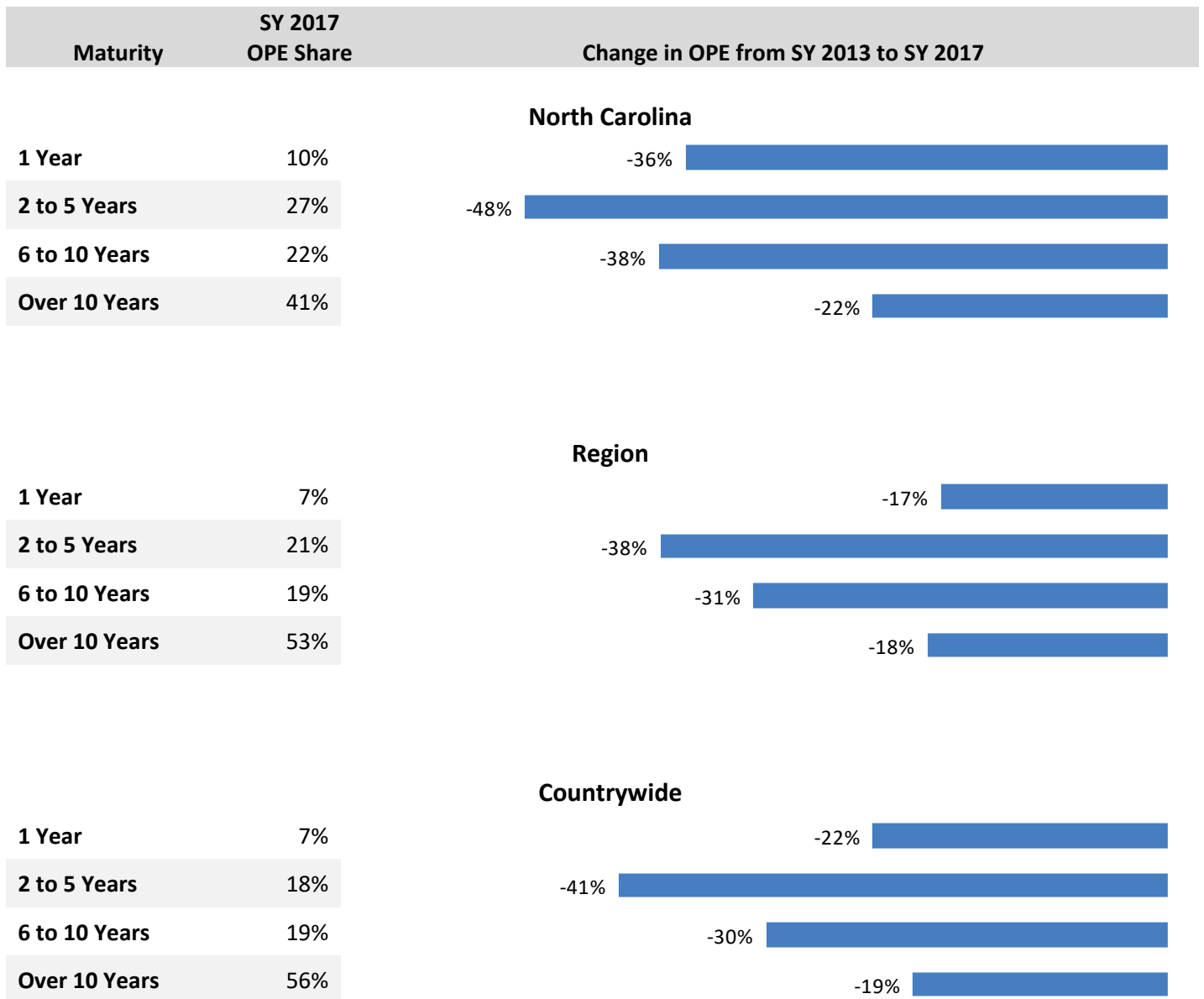




The decrease in the number of opioid prescriptions is most prominent for opioid claims at the earlier years of maturity. Chart 23 shows the change in OPE per opioid claim between service years 2013 and 2017.

Chart 23

Change in OPE per Opioid Claim by Maturity





Glossary

Benzodiazepines (Benzos): A class of drugs that produce central nervous system depression and are most commonly used to treat insomnia and anxiety.

Controlled Substance: Drugs that are regulated by the Controlled Substance 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.

Current Procedure 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.

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

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 Procedure Terminology (CPT) procedures.

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.

Opioid Pill Equivalent (OPE): A standard unit for comparing opioid doses, equivalent to one 20mg oxycodone pill.

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.

Transaction: A line item on 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., it represents 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 (e.g., milliliters, grams, ounces). For example, codeine cough syrup dispensed by a pharmacist into a four-ounce bottle would be reported as four units.



Appendix

The data contained in this report represents medical transactions for SY 2017 (medical services delivered from January 1, 2017, to December 31, 2017). Workers compensation insurance carriers must report paid medical transactions if they write at least 1% of the market share in any one state for which NCCI is the advisory organization. Once a carrier meets the eligibility criteria, the carrier will be required to report for all applicable states in which it writes workers compensation insurance, even if an individual state's market share is below the 1% threshold. All carriers within an insurance group are required to report, regardless of whether they write less than 1% of the market share in the state.

The data 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. Nearly 30 data elements are reported.

For North Carolina in SY 2017, the reported number of transactions was more than 1,571,000, with more than \$244,947,300 paid, for more than 76,300 claims, representing data from 89% of the workers compensation premium written, which includes experience for large-deductible policies. Lump-sum settlements are not required to be reported. Also, self-insured data is not included.

Wherever possible, standard industry codes are used because they:

- Provide a clear definition of the data
- Increase efficiency of computer systems
- Improve the accuracy and quality of the data

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, and medical bill review vendors. It's 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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