

2019
Workers'
Compensation
Drug Trend Report



With our country and the world facing unprecedented times, myMatrixx made a deliberate decision to delay this report to remain laser-focused on managing your injured patients' prescription drug needs, and on supporting our customers and partners grappling with COVID-19. We feel now is an appropriate time to look back at 2019, and give the drug trends we identified the attention they deserve. Next year, for our 2020 report, we will examine the unique impact of the pandemic.

Lower spending for workers' compensation plans in 2019, even as drug prices rose

- **Total drug spending declined 6.1% for payers with plans managed by myMatrixx**
- **Effective pharmacy management more than offset a slight increase in utilization to deliver a 0.4% net decrease in drug spend**
- **Nearly 50% of payers spent less on drugs in 2019 than in 2018**

Decline in drug spending

While rising prescription drug prices continued to dominate the headlines last year, myMatrixx once again delivered a decrease in drug spending to payers. In fact, overall spending on drugs declined 6.1% compared to 2018, and total medication dispensed decreased 4.3%. This could be attributed to effective pharmacy management by myMatrixx and other factors such as fewer workers' compensation claims, and

enhanced prescription drug monitoring programs, prescriber education and state mandated formularies and treatment guidelines.

Another measure of drug trend is utilization by days' supply per injured patient, which increased 1.9% in 2019, even as total utilization declined. This apparent discrepancy is due to the age of claim effect, which reveals that claimants with 10+ years of drug utilization have almost seven times greater days' supply of medication than claimants during their first year following an injury. So while a decline in new claimants reduces overall utilization, it also increases average utilization per injured patient as older claims become more predominant. This utilization trend is the reason we designed the myMatrixx myRxAdvocateSM program to monitor, intervene and report on the entire life of a claim.

Further reductions in opioid usage and spending

In 2019, myMatrixx delivered a 10.7% decline in opioid spending and a 2.4% reduction in cost per days' supply through utilization management. In fact, 73.1% of payers spent less on opioids in 2019 versus 2018, the fifth consecutive year of declining opioid spend – down 45.1% overall since 2015. The success in the battle against opioid abuse is the result of multiple strategies, including our pharmacovigilance program, state PDMP programs, the FDA REMS program, provider awareness and education. Our targeted clinical pharmacy interventions are helping many clients realize 0% opioid utilization for new claims.

We also saw increasing costs associated with abuse-deterrent formulations of opioids (ADFs). The value of ADFs of long-acting opioids such as OxyContin®, has been challenged. Our Point-of-Care Formulary is an effective tool to manage the use of this class of opioids.

Strong generic substitution rates for Lyrica®

Generic substitution remains a cornerstone of our strategy to offset rising prescription drug prices. Last year, a primary driver of generic savings was the July 2019 launch of pregabalin, the generic version of Lyrica. Efficient substitution assured that payers received maximum benefit as quickly as possible, with 91.8% of all Lyrica prescriptions converted to pregabalin within 4 weeks and 96.4% within 180 days. Generic efficiency – the percent of generic drugs dispensed when a generic is available – was at or near 100% for all clients.

Lower costs through home delivery

Home delivery yielded 23.1% lower costs on average than at retail pharmacies, while fulfilling a vital need among catastrophic patients and those living in rural areas in states like Texas. Consult with your clinical account executive to identify injured patients most suitable for home delivery.

Three emerging trends for workers' compensation plans

When myMatrixx customer data identified three key areas of concern, our clinical team quickly developed strategies to combat these trends:

1. Prescriber-dispensed private-label topical drugs creating unnecessary financial burden

Many topical drugs or dermatologicals applied to the skin are available over-the-counter or are dispensed affordably through retail pharmacies. Other ones are private-labeled and distributed only by prescribers. Many of these are egregiously priced and offer little to no therapeutic advantage for injured patients over traditional therapies. Since prescriber dispensing occurs outside traditional retail networks, myMatrixx works together with clients to implement plan-level and jurisdiction-specific strategies whenever possible. The greatest boon to addressing this problem is access to data regarding prescribers who engage in this practice.

Our strategy has three steps:

- Gain copies of paper bills from clients
- Target interventions to prescribers, highlighting patient safety concerns
- Initiate multiple escalation steps, depending on jurisdictional and client limitations

2. Specialty pharmaceutical spending on the rise

Only 2.1% of injured patients used a specialty drug in 2019, yet the costs accounted for 8.8% of total pharmacy spend. Though still rare for workers' compensation payers, we are also seeing a rise in injured patients who have annual drug spending of \$250K or more, just as in the commercial market. Mitigating this spend requires early identification of claims, projected costs, compliance and cost management.

Specialty drug claims in workers' compensation plans typically include anticoagulants and therapies for HIV, hepatitis C and oncology. Medications for HIV are typically covered following a needle-stick exposure and are also included

in some payers' first-fill and acute formularies for post-exposure prophylaxis. In 2019, spending on HIV drugs increased 22.1%, driven primarily by a 16.2% rise in utilization. In addition, medications to treat ophthalmic conditions entered the top 10 specialty therapy classes for the first time.

3. Aging workforce contributing to higher costs

In addition to age of claim, myMatrixx is also focusing on age of patient, where we see a similar increase in drug utilization for older age groups. We were able to slow the rate of increase for drug spend in the older population from 2018 to 2019. Our comprehensive pharmacovigilance program includes applying AGS Beers Criteria® for potentially inappropriate medication use in older adults to ensure the medication is appropriate for the injury and for the unique health care concerns of a senior patient. Effective, ongoing management of this population requires an understanding of the changing needs of geriatric patients and an application of the Beers Criteria throughout the life of these claims.

As market conditions and COVID-19 public safety concerns continue to change, our mission on behalf of America's injured patients has never been more important. Through innovative data analytics and focused clinical expertise, we're putting injured patients on a safer path to treatment and, together with our customers, doing our part to make health care more affordable, predictable and simple.



Phil Walls, RPh

Chief Clinical Officer

myMatrixx, an Express Scripts company

Drug spend declines continued for our workers' compensation payers



In 2019, payers with a workers' compensation program managed by myMatrixx experienced a 6.1% decline in total costs and a 4.3% decrease in number of prescriptions. Per injured patient, prescription drug costs decreased 2.4%, while utilization increased 1.9%.



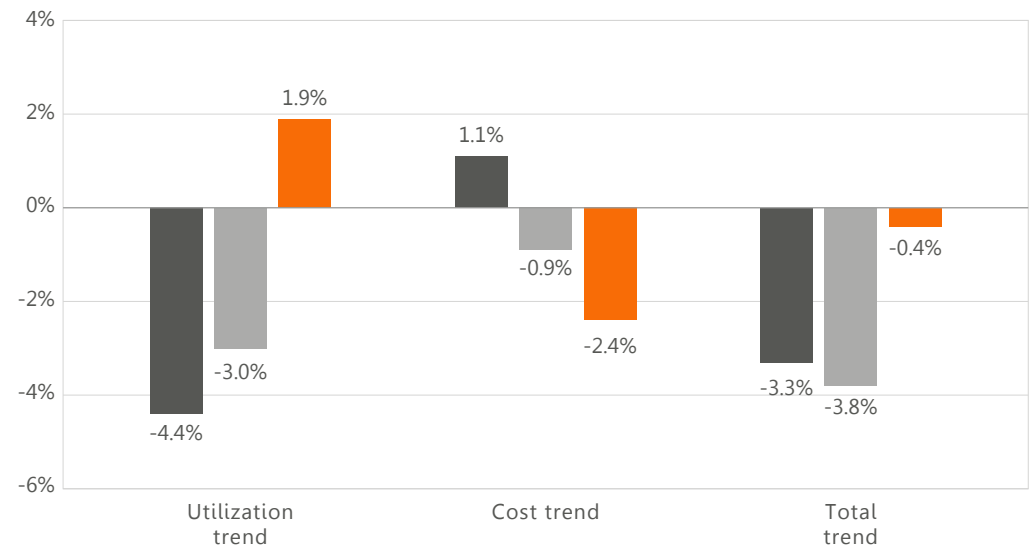
49.7%

of plans managed by myMatrixx
reduced drug spending in 2019

WORKERS' COMPENSATION: DRUG TREND

Components of trend, by year

■ 2017 ■ 2018 ■ 2019



Keeping the downward pressure on opioids



Average spending on opioids declined 10.7% for payers, from \$259.58 to \$231.83 per injured patient per year between 2018 and 2019.



73.1%
of payers spent less
on opioids in 2019

14.7%

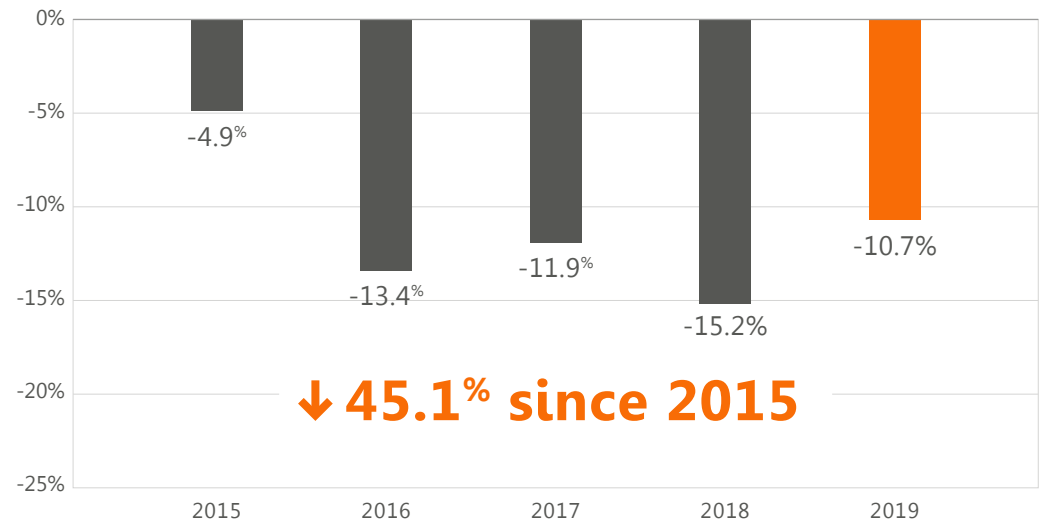
of injured patients
used opioids for 30 or
more days, down from
17.0% in 2018

\$904.87

lower cost for generic
non-abuse-deterrent
formulations vs. branded
abuse-deterrent formulations
(ADF), per adjusted Rx

WORKERS' COMPENSATION: SPENDING ON OPIOIDS

2015-2019



Branded ADF opioids

- Embeda (morphine sulfate and naltrexone hydrochloride)
- Hysingla ER (hydrocodone bitartrate)
- MorphaBond ER (morphine sulfate tablet)
- OxyContin (oxycodone)
- RoxyBond (oxycodone hydrochloride)
- Xtampza ER (oxycodone)

Keeping the downward pressure on opioids

Recent injuries, improved practices

Our 2019 claims data demonstrated that opioid management had a greater impact on prescribing practices for new injuries than for injuries that occurred prior to 2016 in the four measures presented below. Since the older claims are also a driver of claim cost as demonstrated by the Age of Claim effect, it is critical that we continue to focus resources on these claims via our pharmacovigilance program.

Overdose antidote usage on the rise

Only 1.16% of injured patients filled a prescription for an opioid overdose antidote in 2019; however, that was up from 0.39% in 2018 and 0.16% in 2017. Our data showed a 35% increase in prescriptions for naloxone. All 50 states and the District of Columbia have a naloxone access law in place and 14 states make it available over the counter.



OPIOIDS AS PERCENT OF
TOTAL PRESCRIPTIONS



AVERAGE DAYS'
SUPPLY

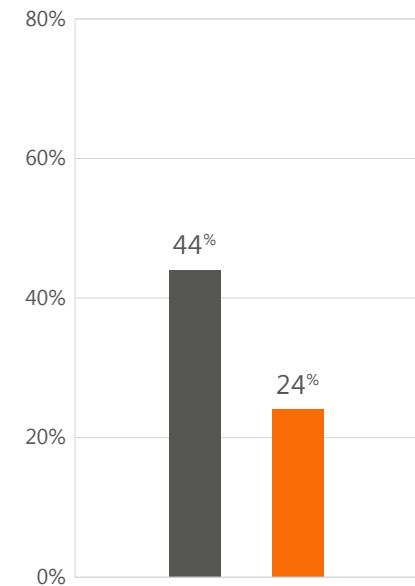
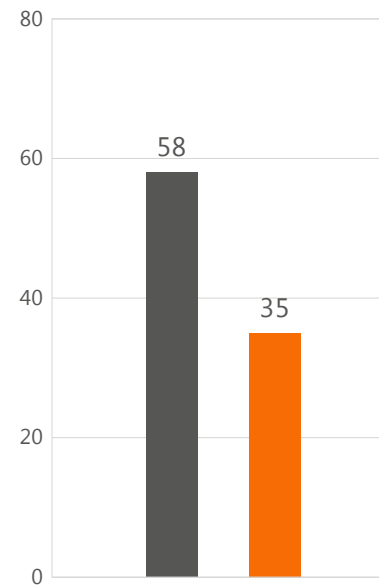
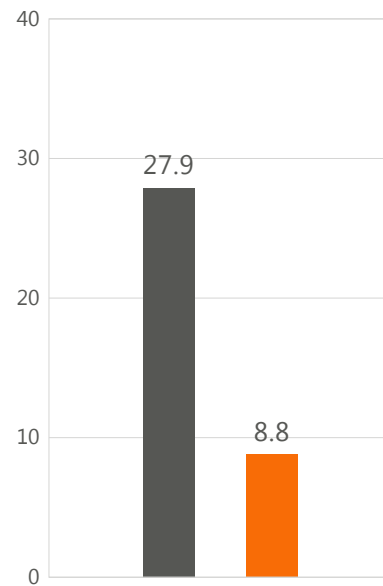
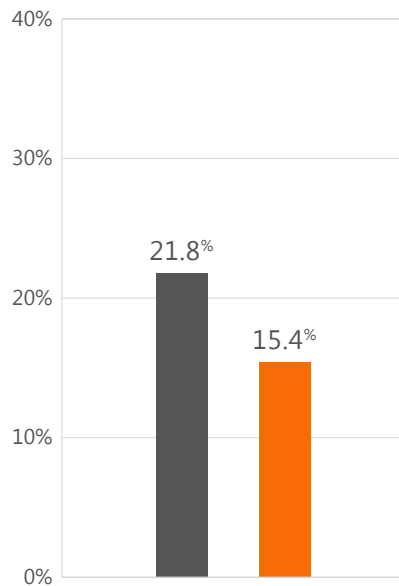


AVERAGE MORPHINE
EQUIVALENT DOSE
PER OPIOID RX



PERCENT OF PATIENTS
PRESCRIBED OPIOIDS

■ Pre-2016 injury ■ 2019 injury



Keeping the downward pressure on opioids

Age-of-claim effect still a factor

Age of claim is measured from the date when a claim is filed for a particular injury. In 2019, patients taking medication for injuries that are more than 10 years old had nearly 17x higher prescription costs and much higher percentages of opioids filled than those taking medication for an injury in the past year.

One-year-old injury

\$224.68

average cost per
injured patient

\$12.14

for opioids
(5.4%)

28.2%

filled opioid Rx

More than 10-year-old injury

\$3,799.59

average cost per
injured patient

\$829.09

for opioids
(21.8%)

45.0%

filled opioid Rx

Age-of-patient effect: Opioid costs per injured patient are also higher among older age groups

AVERAGE OPIOID COST PER INJURED PATIENT

By age of injured patient, 2019

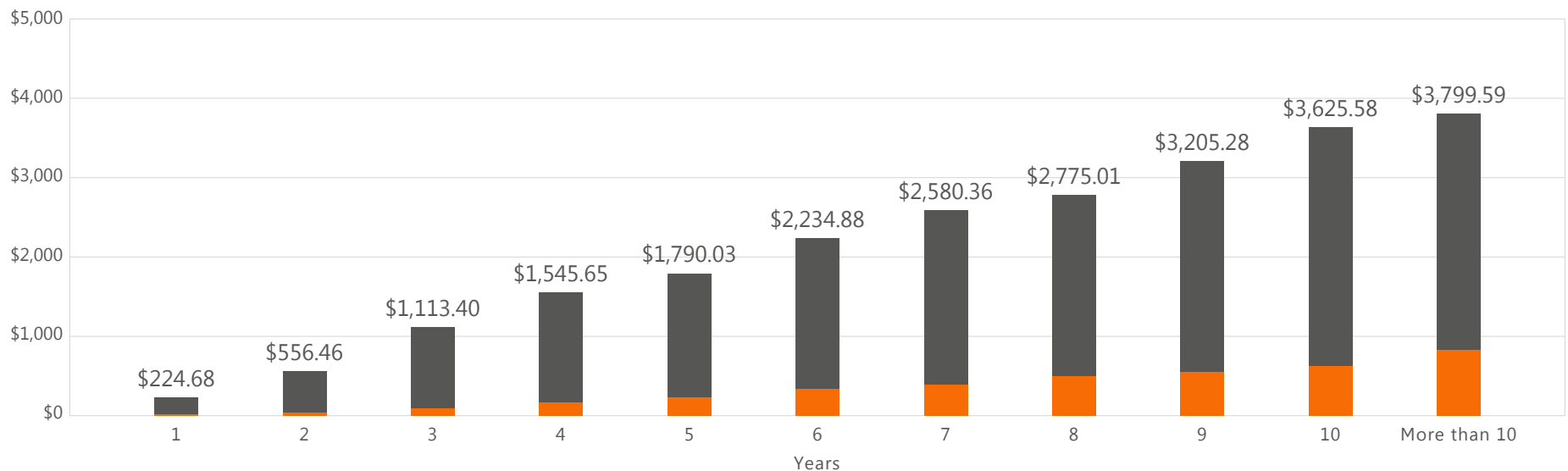


TOTAL COST PER INJURED PATIENT

By age of claim, 2019

■ Opioids

■ Other medications



Generating value with generic substitution and channel optimization



After the launch of pregabalin in July 2019, we converted 91.8% of Lyrica® prescriptions to the generic within four weeks and 96.4% within 180 days. Payers spent 40% less on pregabalin (\$12.01 average cost per days' supply) compared to Lyrica (\$19.98).

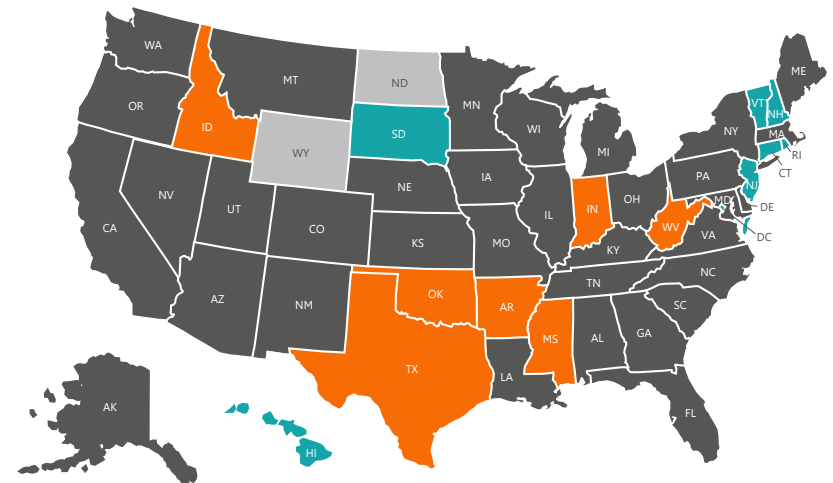
The average generic fill rate reached 87.0% in 2019

In 2019, payers could have saved \$21.4M by achieving optimal mix, the maximum clinically appropriate generic fill rate for each therapy class. State-level mandates along with programs that encourage generic usage, such as step therapy and our physician outreach, can help reduce waste due to suboptimal mix.

WORKERS' COMPENSATION: GENERIC FILL RATE

By state, 2019

- 80%-85%
- 85%-90%
- 90%-100%
- Sample size too small



23.1%

lower cost for prescriptions filled through home delivery vs. retail pharmacies

Facing a new concern: Physician-dispensed private-label topicals



Many topical drugs or dermatologicals applied to the skin are available over-the-counter or are dispensed affordably through retail pharmacies. Other ones are private-labeled and distributed only by prescribers. Many of these are egregiously priced and offer little to no therapeutic advantage for injured patients over traditional therapies.

12.0%
of total
physician-dispensed
prescriptions

35.4%
of total spent on
physician-dispensed
medications

PRIVATE-LABEL TOPICALS

By physician-dispensed cost, 2019

DRUG NAME	TYPICAL COST FOR PHYSICIAN-DISPENSED PRODUCT	AVG COST FOR COMPARABLE RETAIL PHARMACY PRODUCTS
Diclofenac sodium solution 1.5%	\$2,163	\$261
Terocin patch 4%-4%	\$1,592	\$54
LidoPro® patch 4%-4%-5%	\$1,518	\$54
Lidothol patch 4.5%-5%	\$1,452	\$54
LidoPro® ointment	\$846	\$27
Terocin lotion	\$717	\$17
LidoRx® gel 3%	\$469	\$10
Dendracin Neurodendraxcin® lotion	\$463	\$17
Methyl salicylate cream 25%	\$345	\$5
Lidocaine cream 3%	\$82	\$10

Bold = Prescription required

Giving specialty therapies the attention they deserve



While just 2.1% of injured patients used a specialty drug in 2019, the costs accounted for 8.8% of total pharmacy spend for workers' compensation payers.

18.8%

increase in specialty medication spending for injured patients

27.0%

increase in specialty drug utilization, to 1.75 days' supply PPPY

As the traditional drug market becomes saturated with generic drugs, the next influx of generics will be for specialty drugs. In the super spending example at right, the generic substitution of icanibant for brand Firazyr® alone saves over \$414,000 on an annualized basis.

Injured patients in "super spending" category

As in the commercial market, having prescription drug costs of \$250K or more is considered super spending, including these workers' compensation cases from 2019.

INDICATION FOR INJURED PATIENT	STATE	PRIMARY SPECIALTY DRUG(S)	TOTAL ANNUAL DRUG SPEND
Angioedema	CA	Takhzyro®	\$1,252,181
		Firazyr®	
		icanibant	
Nephrotic syndrome, ophthalmic disease and/or sarcoidosis	CA	Acthar®	\$697,285
Seizure disorders	MI	Epidiolex® Sabril®	\$421,376
Pulmonary arterial hypertension	CA	Opsumit®	\$360,851
		Uptravi®	
Pulmonary arterial hypertension	CA	Opsumit®	\$279,526
		tadalafil	
		Uptravi® Veletri®	
Acute myeloid leukemia	CA	Tibsovo®	\$275,125

Giving specialty therapies the attention they deserve

Top 10 specialty classes and medications

TOP 10 SPECIALTY THERAPY CLASSES

By per-patient-per-year spend (PPPY), 2019

CONDITION	PPPY SPEND	COST PER DAYS' SUPPLY	UTILIZATION TREND	COST PER DAYS' SUPPLY TREND	TOTAL TREND
HIV	\$26.41	\$58.33	16.2%	5.0%	22.1%
Cancer	\$20.21	\$316.62	36.9%	-8.7%	25.0%
Inflammatory conditions	\$12.98	\$197.16	9.7%	14.2%	25.2%
Osteoarthritis	\$10.34	\$23.58	93.5%	-26.4%	42.5%
Angioedema	\$5.46	\$2,839.04	83.7%	-52.3%	-12.4%
Pulmonary hypertension	\$4.35	\$98.79	5.5%	4.3%	10.1%
Asthma	\$3.41	\$138.19	3.7%	6.2%	10.2%
Neuromuscular conditions/Cosmetic	\$3.36	\$22.94	22.1%	-1.6%	20.2%
Anticoagulant	\$3.35	\$36.38	2.4%	-7.2%	-4.9%
Transplant	\$3.16	\$10.51	6.9%	-10.6%	-4.4%

TOP 10 SPECIALTY MEDICATIONS

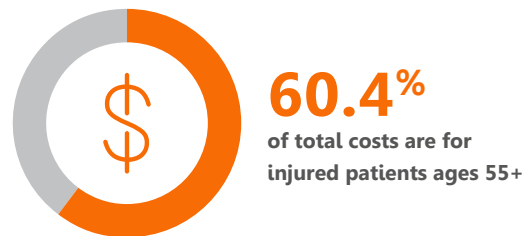
By PPPY spend, 2019

MEDICATION	THERAPY CLASS	PPPY SPEND	COST PER DAYS' SUPPLY	UTILIZATION TREND	COST PER DAYS' SUPPLY TREND	TOTAL TREND
Truvada®	HIV	\$11.74	\$60.41	17.9%	4.7%	23.5%
Isentress®	HIV	\$7.79	\$53.21	14.2%	5.0%	20.0%
Synvisc-one®	Osteoarthritis	\$3.87	\$13.06	149.4%	-25.4%	86.1%
Enbrel Sureclick®	Inflammatory conditions	\$3.63	\$199.58	-1.7%	10.5%	8.5%
Botox®	Neuromuscular conditions/Cosmetic	\$3.13	\$22.30	23.3%	-1.6%	21.3%
Acthar®	Misc conditions	\$3.05	\$2,206.60	65.2%	-1.2%	63.3%
Tivicay®	HIV	\$2.96	\$59.49	29.1%	3.3%	33.4%
Upravi®	Pulmonary hypertension	\$2.60	\$602.51	40.0%	10.7%	54.9%
Xolair®	Asthma	\$2.44	\$148.54	-10.6%	8.7%	-2.8%
Enoxaparin Sodium®	Anticoagulant	\$2.44	\$29.34	4.8%	-5.2%	-0.6%

Understanding that higher costs come naturally with age



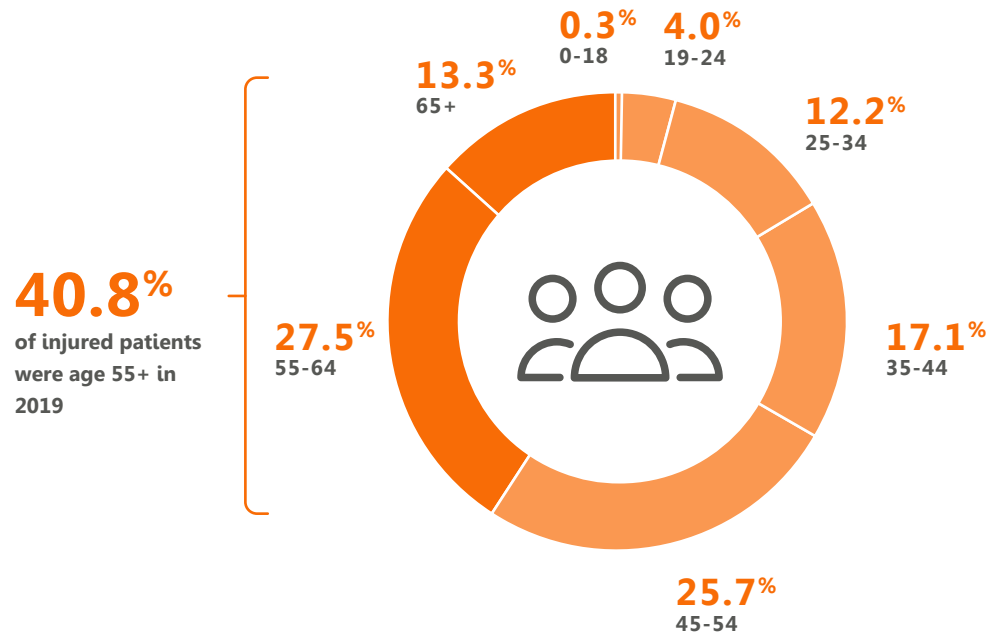
Costs escalate for injured patients in older age groups.



\$1,459.71
higher costs per injured patient age 65+ vs. under 65

PERCENT OF INJURED PATIENTS

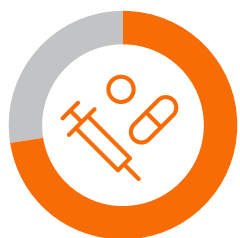
By age group, 2019



Top 10 therapy classes and insights



The top 10 therapy classes accounted for 72.6% of total workers' compensation drug spending in 2019.



72.6%

\$1,326.35

spent by payers per injured patient for prescription drugs, on average

27.6%

higher costs per days' supply for anticoagulants, moderated by low and negative trend for other therapy classes

In 2019, utilization increased for nine of the top 10 therapy classes, particularly dermatologicals (23.5%) and anticoagulants (11.7%) with opioids being the only class to decline (-8.6%). New to the top 10 were antihyperlipidemics, used to treat high cholesterol. Its -2.4% total trend was driven primarily by a 6.6% increase in days' supply PPPY, moderated by an 8.9% decrease in the average cost per days' supply.

WORKERS' COMPENSATION: TREND FOR THE TOP 10 THERAPY CLASSES

By per-patient-per-year spend, 2019

THERAPY CLASS	TOTAL TREND
Opioids	-10.7%
Anticonvulsants	-6.4%
Dermatologicals*	10.7%
NSAIDs	4.8%
Muscle relaxants	-0.6%
Antidepressants	-1.6%
Anticoagulants	27.6%
Ulcer drugs	9.4%
Antihyperlipidemics	-2.4%
Antiasthmatics	2.8%
All other	1.5%
Total	-0.4%

*Includes both traditional and private-label topicals, as discussed in this report.

Looking ahead to 2020 and beyond



PIPELINE DRUGS TO WATCH

Alphabetically by drug name, 2020

DRUG NAME	MOST COMMON INDICATION	FDA APPROVAL EXPECTED
Brixadi (buprenorphine)	Opioid addiction	Dec. 2020
fostemsavir	HIV	Aug. 2020
Qtrypta (zolmitriptan patch)	Acute migraine disease	Oct. 2020
risperidone ER	Schizophrenia and bipolar disorder	2020
tanezumab	Moderate to severe knee and hip pain due to osteoarthritis	Dec. 2020
Xolair (omalizumab)	Prevention of severe allergic reactions after exposure to foods	2020

Looking ahead to 2020 and beyond

TOP DRUGS SCHEDULED TO LOSE PATENT PROTECTION

Alphabetically by drug name, 2020-2024

DRUG NAME	MOST COMMON INDICATION	YEAR SCHEDULED
Amitiza® (lubiprostone)	Gastrointestinal disorders	2021
Cambia® (diclofenac)	Migraine headaches	2023
Dexilant® (dexlansoprazole)	Heartburn and ulcer disease	2020-2023
Duexis® (famotidine; ibuprofen)	Pain and inflammation	2023
Flector® (diclofenac epolamine patch)	Pain and inflammation	2020
Gralise® (gabapentin)	Pain and inflammation	2024
Isentress® (raltegravir)	HIV	2024
Latuda® (lurasidone)	Mental and neurological disorders	2023
Oxaydo® (oxycodone)	Pain and inflammation	2022
Perforomist® (formoterol)	Asthma	2021
ProAir® HFA (albuterol)	Asthma	2021
Proventil® HFA (albuterol)	Asthma	2021
Restasis® (cyclosporine)	Ophthalmic conditions	2020
Symbicort® (budesonide; formoterol)	Asthma	2023
Trokendi XR® (topiramate)	Seizures	2023
Truvada® (emtricitabine; tenofovir disoproxil fumarate)	HIV	2020
Ventolin® HFA (albuterol sulfate)	Asthma	2020
Viibryd® (vilazodone)	Depression	2021
Vimovo® (esomeprazole; naproxen)	Pain and inflammation	2020
Vimpat® (lacosamide)	Seizures	2022
Xarelto® (rivaroxaban)	Blood-clot related events	2024
Zipsor® (diclofenac)	Pain and inflammation	2022
Zohydro ER® (hydrocodone)	Pain and inflammation	2020
Zorvolex® (diclofenac)	Pain and inflammation	2023

While some of these drugs are not typically used in workers' compensation programs, payers with certain patient populations may deem them related to an occupational injury.

Methodology



In calculating trend, prescription drug use was considered for payers with a stable injured-patient base, defined as having a change in user volume of less than 50% from 2018 to 2019.

Nonprescription medications and prescriptions that were dispensed in hospitals, long-term care facilities and other institutional settings were not included in our analysis.

Utilization, determined on a per-patient-per-year (PPPY) basis, was calculated by dividing the total days' supply of medications by the total number of users in a year.

Market share was determined by calculating the percentage of total days' supply of medication represented each medication in a therapy class.

Prescription drug costs were calculated by adding together ingredient cost, taxes, administrative fees and dispensing fees.

All images are for representative purposes only and do not depict actual patients or prescribers.

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