

Impact of the Texas Pharmacy Closed Formulary

A Preliminary Report
Based on 12-month Injuries with 12-month Services

March 2014



Texas Department of Insurance

Workers' Compensation Research and Evaluation Group

Data and methods

- Injury months: 12 Months (September–August)
- Injury years: 2009–2011
- Injuries in 2011 are new injuries that occurred after the implementation of the pharmacy closed formulary
- Prescription months: 12 months maturity per claim
- N-drug list: approximately 150 drugs that require carrier preauthorization
- Key measures:
 - Claim counts
 - Prescription costs
 - Prescription utilization patterns
 - Generic substitution rates
 - Cost and utilization by drug group
 - Most prescribed drugs

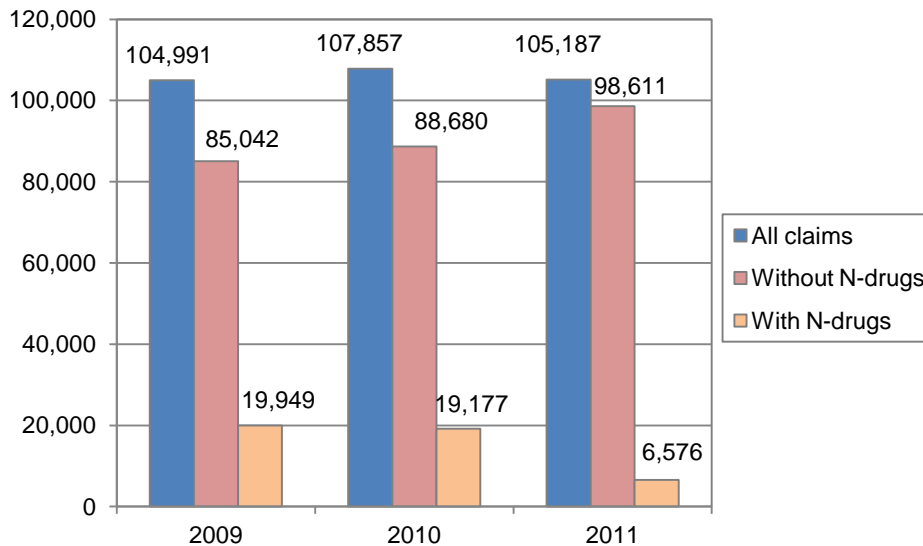
Number of Claims

Number of claims receiving pharmaceuticals, by injury year (Sept.–Aug.)

	Injury year			2010-2011 percentage change
	2009	2010	2011	
All claims	104,991	107,857	105,187	-2%
N-drugs				
Number of claims	19,949	19,177	6,576	-66%
<i>Percent of all claims</i>	19%	18%	6%	-65%
Other Drugs				
Number of claims with at least one Other drug	102,794	105,503	104,388	-1%
Number of claims with Other drugs only (no N-drugs)	85,042	88,680	98,611	11%
<i>Percent of all claims</i>	81%	82%	94%	14%

Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2014.

Number of claims, by injury year (Sept.–Aug.)



Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2014.

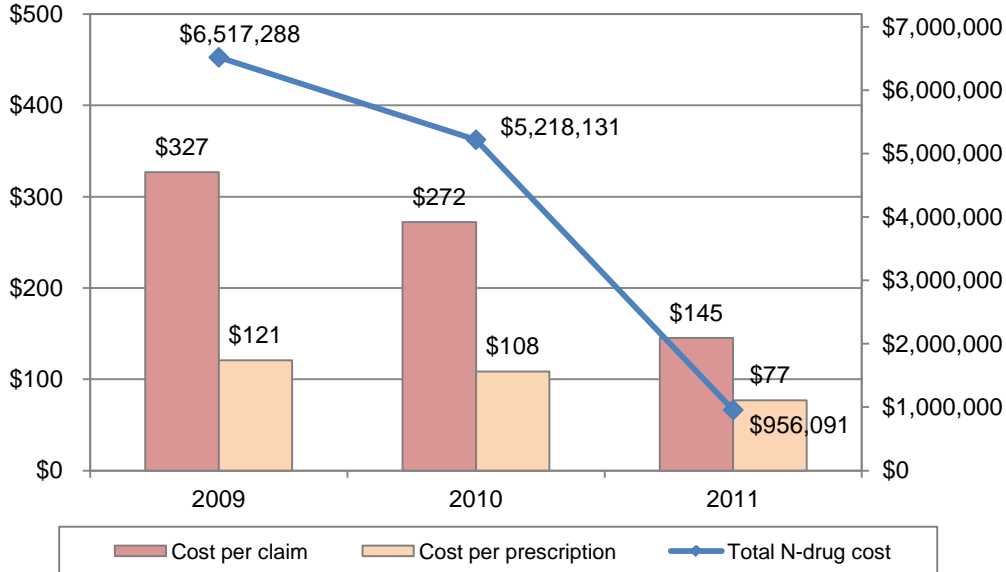
Prescription Costs

Cost of N-drugs, by injury year (Sept.–Aug.)

	Injury year			2010-2011 percentage change
	2009	2010	2011	
Total cost	\$32,175,416	\$30,936,436	\$26,606,875	-14%
Total cost of N-drug prescriptions	\$6,517,288	\$5,218,131	\$956,091	-82%
<i>N-drug cost as a percentage of total drug costs</i>	20%	17%	4%	-79%
Total number of N-drug prescriptions	53,912	48,106	12,424	-74%
<i>Average cost per N-drug prescription</i>	\$121	\$108	\$77	-29%
Total number of N-drug claims	19,949	19,177	6,576	-66%
<i>Average N-drug cost per claim</i>	\$327	\$272	\$145	-47%

Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2014.

Total and average costs: N-drugs, by injury year (Sept.–Aug.)



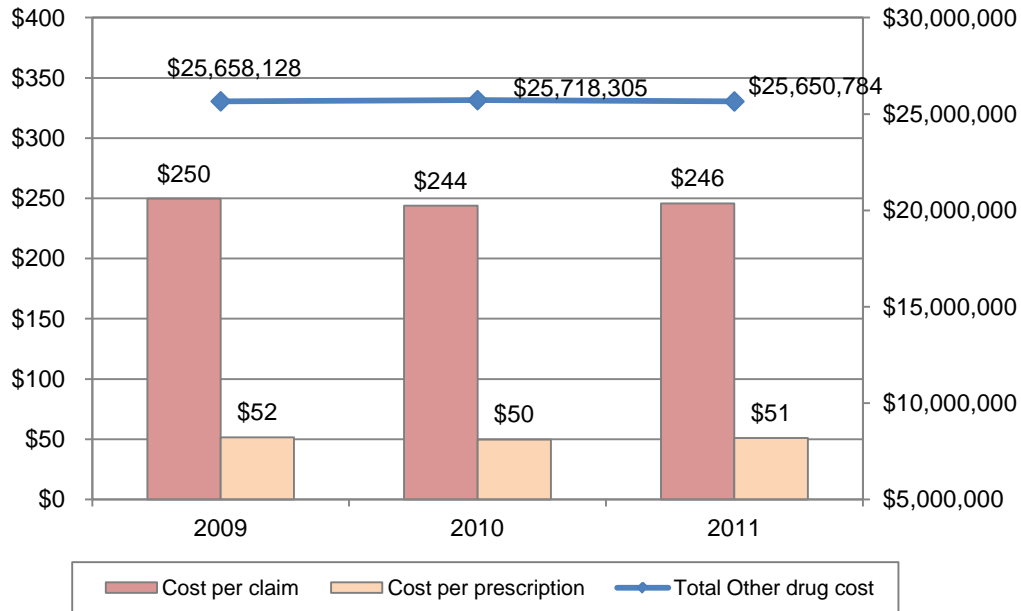
Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2014.

Cost of Other drugs, by injury year (Sept.–Aug.)

	Injury year			2010-2011 percentage change
	2009	2010	2011	
Total cost	\$32,175,416	\$30,936,436	\$26,606,875	-14%
Total cost of Other drug prescriptions	\$25,658,128	\$25,718,305	\$25,650,784	0%
<i>Other drug cost as a percentage of total drug costs</i>	80%	83%	96%	16%
Total number of Other drug prescriptions	497,491	518,052	503,549	-3%
<i>Average cost per Other drug prescription</i>	\$52	\$50	\$51	3%
Total number of Other drug claims	102,794	105,503	104,388	-1%
<i>Average Other drug cost per claim</i>	\$250	\$244	\$246	1%

Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2014.

Total and average costs: Other drugs, by injury year (Sept.–Aug.)



Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2014.

Prescription Patterns

Share of prescriptions by drug type, by injury year (Sept.–Aug.)

	Injury year			2010-2011 percentage change
	2009	2010	2011	
Total number of all prescriptions	551,403	566,158	515,973	-9%
N-drugs				
Number of prescriptions	53,912	48,106	12,424	-74%
<i>N-drug prescriptions as a percent of all prescriptions</i>	10%	8%	2%	-72%
Other drugs				
Number of prescriptions	497,491	518,052	503,549	-3%
<i>Other drug prescriptions as a percent of all prescriptions</i>	90%	92%	98%	7%

Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2014.

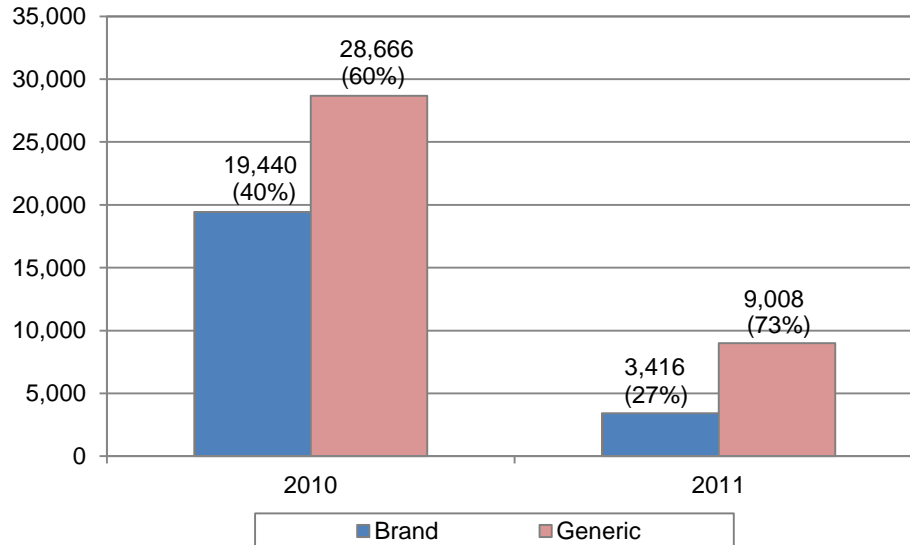
Number of prescriptions per claim, by injury year (Sept.–Aug.)

	Injury year			2010-2011 percentage change
	2009	2010	2011	
N-drugs				
Number of prescriptions	53,912	48,106	12,424	-74%
Total N-drug claims	19,949	19,177	6,576	-66%
<i>Number of prescriptions per claim</i>	2.70	2.51	1.89	-25%
Other Drugs				
Number of prescriptions	497,491	518,052	503,549	-3%
Total Other drug claims	102,794	105,503	104,388	-1%
<i>Number of prescriptions per claim</i>	4.84	4.91	4.82	-2%

Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2014.

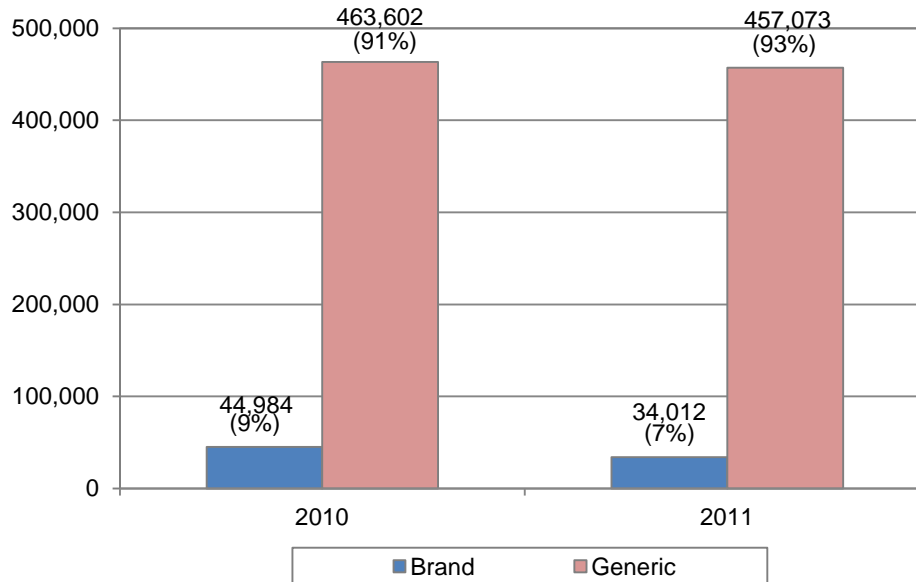
Generic Substitution Rates

Generic substitution: prescriptions of N-drugs, by injury year (Sept.–Aug.)



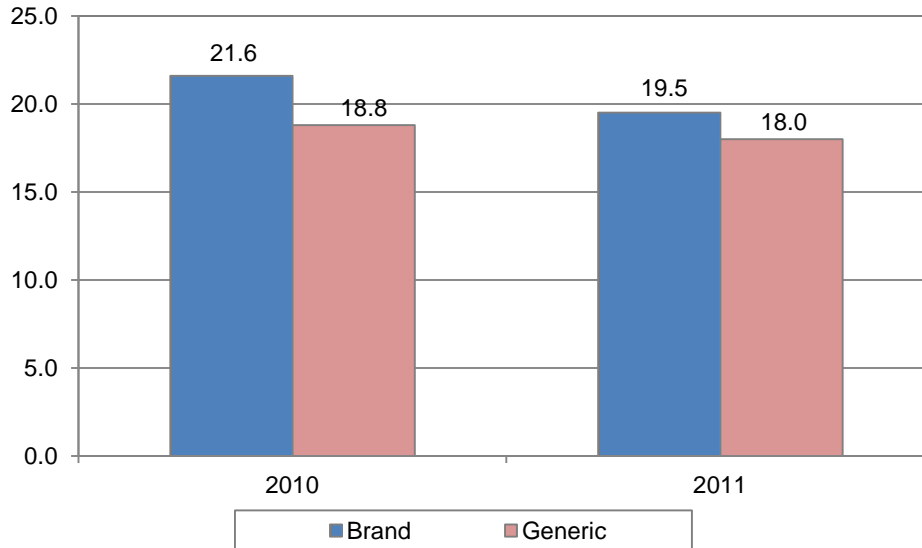
Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2014.

Generic substitution: prescriptions of Other drugs, by injury year (Sept.–Aug.)



Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2014.

Average number of N-drug prescription days by generic status, by injury year (Sept.–Aug.)



Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2014.

Cost and Utilization by Drug Group

Number of prescriptions by drug group, by injury year (Sept.–Aug.)

N-Drug Status	Drug Group	Number of prescriptions 2010	Number of prescriptions 2011	2010 - 2011 percentage change
N-drugs	Analgesics - Anti-Inflammatory	13,566	3,285	-76%
	Analgesics - Opioid	5,722	2,106	-63%
	Central Nervous System Drugs	9,940	3,081	-69%
	Musculoskeletal Therapy Agents	10,812	1,542	-86%
	Others	8,066	2,410	-70%
	Total	48,106	12,424	-74%
Other drugs	Analgesics - Anti-Inflammatory	130,965	131,149	0%
	Analgesics - Opioid	186,388	170,571	-8%
	Central Nervous System Drugs	24,731	24,099	-3%
	Musculoskeletal Therapy Agents	75,301	75,030	0%
	Others	100,667	102,700	2%
	Total	518,052	503,549	-3%

Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2014.

Total cost by drug group, by injury year (Sept.–Aug.)

N-Drug Status	Drug Group	Total cost 2010	Total cost 2011	2010 - 2011 percentage change
N-drugs	Analgesics - Anti-Inflammatory	\$1,487,645	\$192,799	-87%
	Analgesics - Opioid	\$665,426	\$221,013	-67%
	Central Nervous System Drugs	\$556,577	\$171,327	-69%
	Musculoskeletal Therapy Agents	\$926,234	\$58,031	-94%
	Others	\$1,582,249	\$312,921	-80%
	Total	\$5,218,131	\$956,091	-82%
Other drugs	Analgesics - Anti-Inflammatory	\$7,425,566	\$7,387,691	-1%
	Analgesics - Opioid	\$5,505,604	\$4,896,786	-11%
	Central Nervous System Drugs	\$2,810,353	\$2,763,857	-2%
	Musculoskeletal Therapy Agents	\$4,200,467	\$3,904,310	-7%
	Others	\$5,776,315	\$6,698,141	16%
	Total	\$25,718,305	\$25,650,784	0%

Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2014.

Average cost per claim by drug group, by injury year (Sept.–Aug.)

N Drug Status	Drug Group	Number of claims		Cost per claims		
		2010	2011	2010	2011	2010 - 2011 percentage change
N-drugs	Analgesics - Anti-Inflammatory	8,152	2,273	\$182	\$85	-54%
	Analgesics - Opioid	2,669	1,123	\$249	\$197	-21%
	Central Nervous System Drugs	3,359	1,261	\$166	\$136	-18%
	Musculoskeletal Therapy Agents	4,653	931	\$199	\$62	-69%
	Others	4,142	1,637	\$382	\$191	-50%
Other drugs	Analgesics - Anti-Inflammatory	61,613	62,922	\$121	\$117	-3%
	Analgesics - Opioid	59,009	58,079	\$93	\$84	-10%
	Central Nervous System Drugs	6,997	6,897	\$402	\$401	0%
	Musculoskeletal Therapy Agents	33,953	34,890	\$124	\$112	-10%
	Others	45,288	45,863	\$128	\$146	15%

Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2014.

Most Prescribed Drugs

Ten most frequently prescribed drugs, by injury year (Sept.–Aug.)

2010 Rank by Number of Prescription	Drug Name	Drug Group	Number of Prescriptions 2010	Number of Prescriptions 2011
1	Hydrocodone/APAP	Analgesics - Opioid	126,911	112,266
2	Cyclobenzaprine	Musculoskeletal Therapy Agents	48,063	49,155
3	Naproxen	Analgesics - Anti-Inflammatory	44,481	45,183
4	Ibuprofen	Analgesics - Anti-Inflammatory	41,103	43,744
5	Tramadol	Analgesics - Opioid	37,824	39,617
6	Meloxicam	Analgesics - Anti-Inflammatory	16,109	17,320
7	Celebrex	Analgesics - Anti-Inflammatory	11,223	9,021
8	Tramadol/APAP	Analgesics - Opioid	11,023	11,804
9	Methylpred	Others	9,843	10,631
10	Cephalexin	Others	9,050	8,685
Subtotal			355,630	347,426

Note: No N-drug was in the top ten most frequently prescribed drugs in 2010 and 2011.

These ten drugs accounted for 63 percent of total prescriptions in 2010, and 67 percent in 2011.

Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2014.

Ten most frequently prescribed N-drugs, by injury year (Sept.–Aug.)

2010 Rank by Number of Prescription	Drug Name	Drug Group	Number of Prescriptions 2010	Number of Prescriptions 2011	2010-2011 Percentage Change
1	Carisoprodol	Musculoskeletal Therapy Agents	6,345	954	-85%
2	Diclofenac	Analgesics - Anti-Inflammatory	4,302	1,853	-57%
3	Zipsor	Analgesics - Anti-Inflammatory	3,616	451	-88%
4	Naprelan	Analgesics - Anti-Inflammatory	2,614	206	-92%
5	Lidoderm	Others	2,567	618	-76%
6	Diazepam	Central Nervous System Drugs	2,461	670	-73%
7	Amrix	Musculoskeletal Therapy Agents	2,159	27	-99%
8	Hydrocodone/IBU	Analgesics - Opioid	2,129	596	-72%
9	Flector	Others	1,950	282	-86%
10	Alprazolam	Central Nervous System Drugs	1,584	314	-80%
Subtotal			29,727	5,971	-80%

Note: These ten drugs accounted for 62 percent of total N-drug prescriptions in 2010, and 48 percent in 2011.
Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2014.

Prescription Patterns for Legacy Claims

Legacy claims (with injury dates prior to the closed formulary)

	Service year		Percentage change after formulary
	Before formulary (Sept. 2010–Aug. 2011)	After formulary (Sept. 2011–Aug. 2012)	
Number of claims			
Claims with N-drugs	23,856	20,169	-15%
Claims with only Other drugs	35,184	36,198	3%
All claims	59,040	56,367	-5%
Number of prescriptions			
N-drugs	209,064	161,159	-23%
Other drugs	881,083	838,325	-5%
Total	1,090,147	999,484	-8%
Total drug cost			
N-drugs	\$39,728,747	\$31,519,771	-21%
Other drugs	\$89,041,257	\$88,722,865	0%
Total	\$128,770,003	\$120,242,636	-7%

Note: The 2010/2011 “Before formulary” cohort covers all claims with an injury date between 1991 and August 2010, and the “After formulary” cohort covers all claims with an injury date between 1991 and August 2011.

Source: Texas Department of Insurance, Workers’ Compensation Research and Evaluation Group, 2014.

Summary of Key Findings



Summary of key findings

Since the implementation of the Texas pharmacy closed formulary:

- The number of injured employees receiving N-drugs fell by 66 percent.
- N-drug costs fell by 82 percent, and N-drug costs as a percentage of all drug costs decreased by 79 percent (from 17 percent of total to 4 percent of total).
- The number of injured employees receiving other drugs fell by 1 percent.
- The share of N-drug claims among all claims fell from 18 percent to 6 percent.
- The total number of prescriptions for N-drugs fell by 74 percent while it fell by 3 percent for other drugs.
- The average number of N-drug prescriptions per claim fell by 25 percent.
- The generic substitution rate for N-drugs increased from 60 percent in 2010 to 73 percent in 2011.
- The number of N-drug prescriptions fell by 60+ percent across all drug groups.
- The number of prescriptions for the ten most-prescribed N-drugs decreased by 80 percent.



Texas Department of Insurance
Workers' Compensation Research and Evaluation Group

REG's main Web page at the Texas Department of Insurance:
www.tdi.texas.gov/wc/regulation/roc

For more information, contact us at WCResearch@tdi.texas.gov.

Per Chapter 405 of the *Texas Labor Code*, the Workers' Compensation Research and Evaluation Group at the Texas Department of Insurance is responsible for conducting professional studies and research on various system issues, including:

- the delivery of benefits;
- litigation and controversy related to workers' compensation;
- insurance rates and rate-making procedures;
- rehabilitation and reemployment of injured employees;
- the quality and cost of medical benefits;
- employer participation in the workers' compensation system;
- employment health and safety issues; and
- other matters relevant to the cost, quality, and operational effectiveness of the workers' compensation system.