Impact of the Texas Pharmacy Closed Formulary

A Preliminary Report
Based on 12-month Injuries with 9-month Services

July 2013

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: 9 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

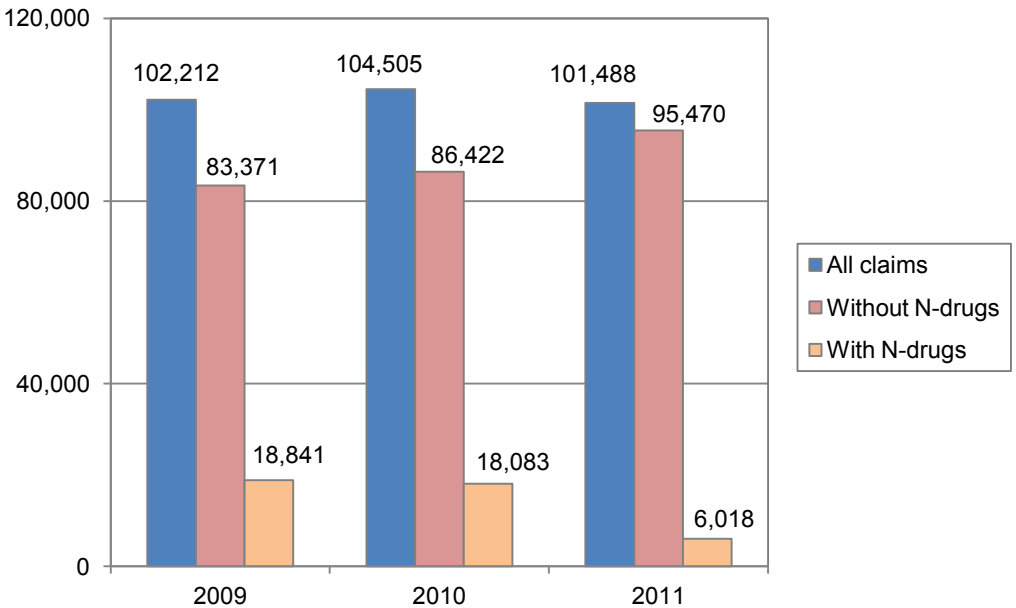
Number of Claims

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

	Injury year			2010–2011 percentage change
	2009	2010	2011	
All claims	102,212	104,505	101,488	-3%
N-drugs				
Number of claims	18,841	18,083	6,018	-67%
Percent of all claims	18%	17%	6%	-66%
Other drugs				
Number of claims with at least one Other drug	100,047	102,177	100,709	-1%
Number of claims with Other drugs only (no N-drugs)	83,371	86,422	95,470	10%
Percent of all claims	82%	83%	94%	14%

Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2013.

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



Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2013.

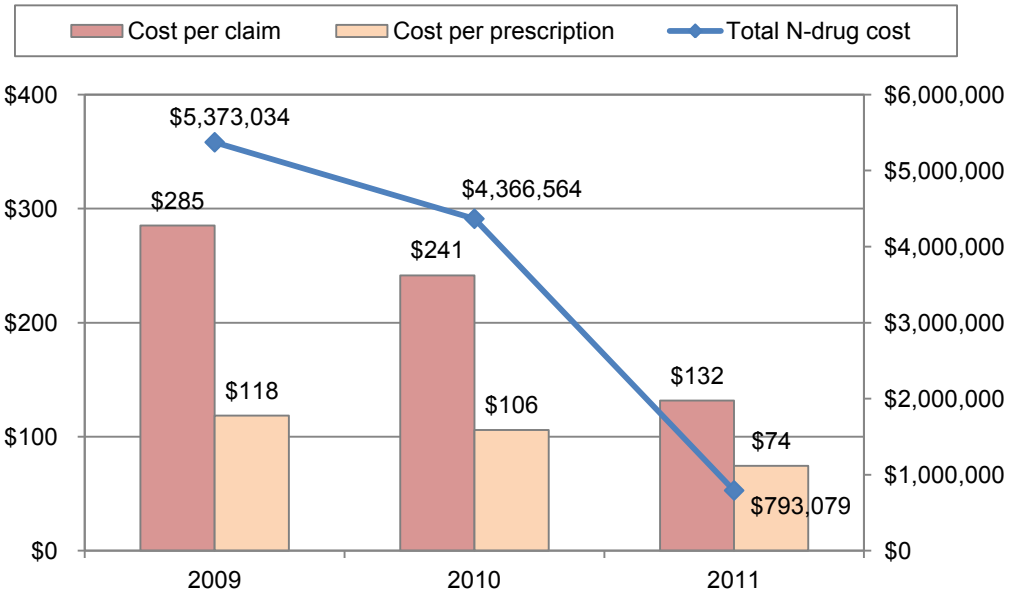
Prescription Costs

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

	Injury year			2010–2011 percentage change
	2009	2010	2011	
Total cost	$27,019,981	$25,993,153	$22,047,001	-15%
Total cost of N-drug prescriptions	$5,373,034	$4,366,564	$793,079	-82%
N-drug cost as a percentage of total drug cost	19.9%	16.8%	3.6%	-79%
Total number of N-drug prescriptions	45,381	41,281	10,651	-74%
Average cost per N-drug prescription	$118	$106	$74	-30%
Total number of N-drug claims	18,841	18,083	6,018	-67%
Average N-drug cost per claim	$285	$241	$132	-45%

Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2013.

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



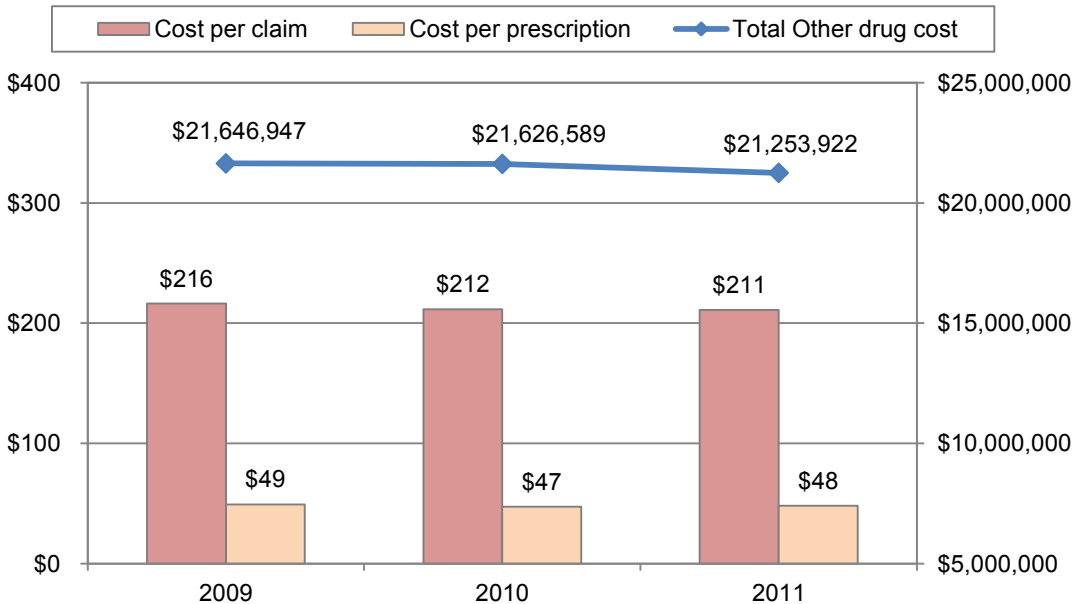
Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2013.

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

	Injury year			2010–2011 percentage change
	2009	2010	2011	
Total cost	$27,019,981	$25,993,153	$22,047,001	-15%
Total cost of Other drug prescriptions	$21,646,947	$21,626,589	$21,253,922	-2%
Other drug cost as a percentage of total drug cost	80%	83%	96%	16%
Total number of Other drug prescriptions	439,444	458,753	442,106	-4%
Average cost per Other drug prescription	$49	$47	$48	2%
Total number of Other drug claims	100,047	102,177	100,709	-1%
Average Other drug cost per claim	$216	$212	$211	0%

Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2013.

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



Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2013.

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	484,825	500,034	452,757	-9%
N-drugs				
Number of prescriptions	45,381	41,281	10,651	-74%
N-drug prescriptions as a percent of all prescriptions	9%	8%	2%	-72%
Other drugs				
Number of prescriptions	439,444	458,753	442,106	-4%
Other drug prescriptions as a percent of all prescriptions	91%	92%	98%	6%

Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2013.

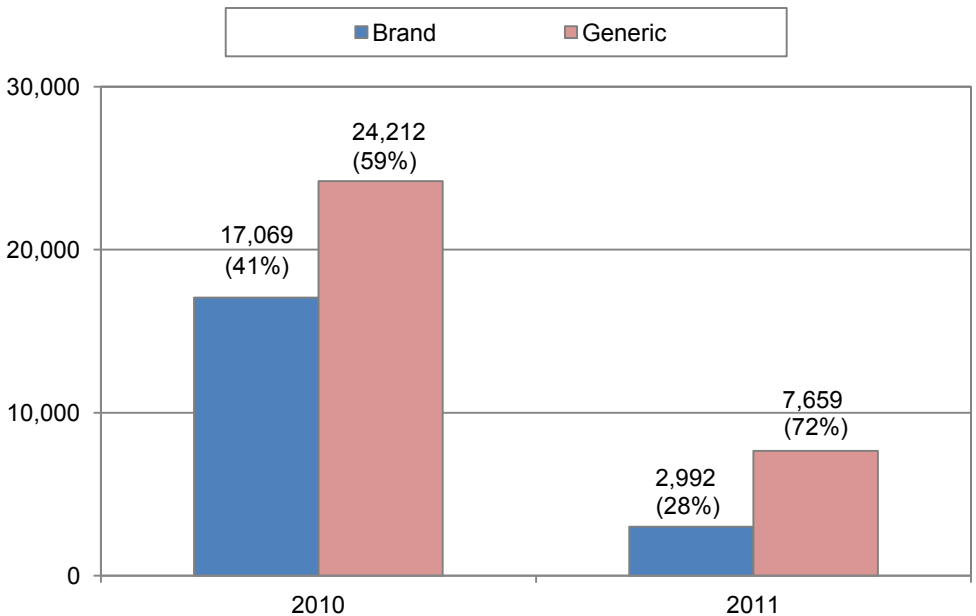
Number of prescriptions per claim, by injury year (Sept.–Aug.)

	Injury year			2010–2011 percentage change
	2009	2010	2011	
N-drugs				
Number of prescriptions	45,381	41,281	10,651	-74%
Total N-drug claims	18,841	18,083	6,018	-67%
Number of prescriptions per claim	2.41	2.28	1.77	-22%
Other drugs				
Number of prescriptions	439,444	458,753	442,106	-4%
Total Other drug claims	100,047	102,177	100,709	-1%
Number of prescriptions per claim	4.39	4.49	4.39	-2%

Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2013.

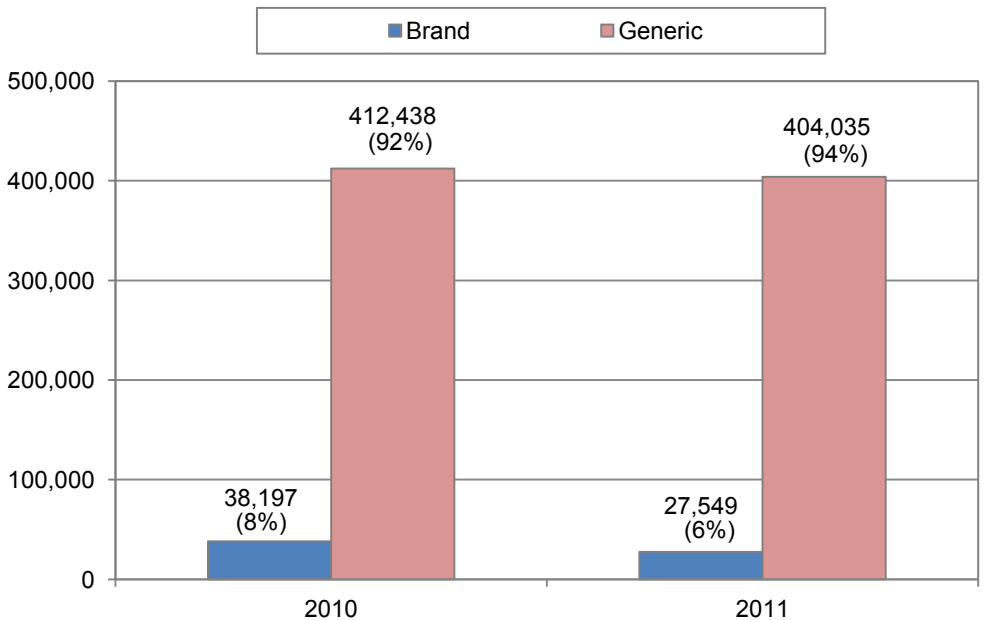
Generic Substitution Rates

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



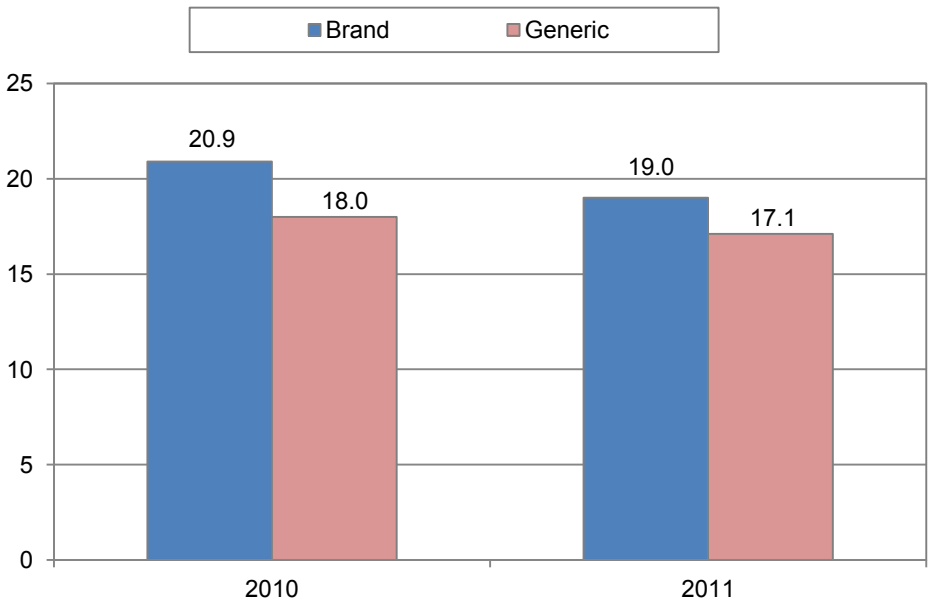
Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2013.

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



Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2013.

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, 2013.

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	12,438	3,037	-76%
	Analgesics - Opioid	4,741	1,744	-63%
	Central Nervous System Drugs	7,823	2,367	-70%
	Musculoskeletal Therapy Agents	9,540	1,392	-85%
	Others	6,739	1,142	-83%
	Total	**41,281**	**9,682**	**-77%**
Other drugs	Analgesics - Anti-Inflammatory	118,300	117,522	-1%
	Analgesics - Opioid	164,646	149,984	-9%
	Central Nervous System Drugs	18,369	17,628	-4%
	Musculoskeletal Therapy Agents	67,715	66,696	-2%
	Others	89,723	90,276	1%
	Total	**458,753**	**442,106**	**-4%**

Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2013.

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	$1,340,330	$172,460	-87%
	Analgesics - Opioid	$481,884	$176,084	-63%
	Central Nervous System Drugs	$398,928	$127,792	-68%
	Musculoskeletal Therapy Agents	$855,953	$52,076	-94%
	Others	$1,289,470	$264,667	-79%
	Total	**$4,366,564**	**$793,079**	**-82%**
Other drugs	Analgesics - Anti-Inflammatory	$6,402,092	$6,312,174	-1%
	Analgesics - Opioid	$4,664,240	$4,170,541	-11%
	Central Nervous System Drugs	$1,972,454	$1,913,582	-3%
	Musculoskeletal Therapy Agents	$3,613,738	$3,302,241	-9%
	Others	$4,974,065	$5,555,384	12%
	Total	**$21,626,589**	**$21,253,922**	**-2%**

Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2013.

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	7,713	2,134	$174	$81	-53%
	Analgesics - Opioid	2,423	1,004	$199	$175	-12%
	Central Nervous System Drugs	3,025	1,073	$132	$119	-10%
	Musculoskeletal Therapy Agents	4,432	858	$193	$61	-69%
	Others	3,774	1,500	$342	$176	-48%
Other drugs	Analgesics - Anti-Inflammatory	59,121	60,160	$108	$105	-3%
	Analgesics - Opioid	56,973	55,801	$82	$75	-9%
	Central Nervous System Drugs	6,225	6,087	$317	$314	-1%
	Musculoskeletal Therapy Agents	32,571	33,292	$111	$99	-11%
	Others	43,562	43,840	$114	$127	11%

Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2013.

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	111,800	98,394
2	Cyclobenzaprine	Musculoskeletal Therapy Agents	43,652	44,401
3	Naproxen	Analgesics - Anti-Inflammatory	40,908	41,308
4	Ibuprofen	Analgesics - Anti-Inflammatory	37,707	39,874
5	Tramadol	Analgesics - Opioid	33,411	34,894
6	Meloxicam	Analgesics - Anti-Inflammatory	13,956	14,886
7	Tramadol/APAP	Analgesics - Opioid	10,025	10,800
8	Celebrex	Analgesics - Anti-Inflammatory	9,755	7,559
9	Methylpred	Others	9,188	9,931
10	Cephalexin	Others	8,671	8,267

Note: No N-drug was in the top ten most frequently prescribed drugs in 2010 and 2011.
These ten drugs accounted for 64 percent of total prescriptions in 2010, and 69 percent in 2011.
Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2013.

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	5,294	828	-84%
2	Diclofenac	Analgesics - Anti-Inflammatory	3,896	1,721	-56%
3	Zipsor	Analgesics - Anti-Inflammatory	3,437	425	-88%
4	Naprelan	Analgesics - Anti-Inflammatory	2,381	187	-92%
5	Amrix	Musculoskeletal Therapy Agents	2,121	25	-99%
6	Diazepam	Central Nervous System Drugs	2,087	564	-73%
7	Lidoderm	Others	2,085	527	-75%
8	Hydrocodone/IBU	Analgesics - Opioid	1,883	535	-72%
9	Flector	Others	1,650	230	-86%
10	Orphenadrine	Musculoskeletal Therapy Agents	1,470	482	-67%

Note: These ten drugs accounted for 64 percent of total N-drug prescriptions in 2010, and 52 percent in 2011.
Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2013.

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)	
All claims	58,081	55,414	-5%
N-drugs			
Number of claims	23,583	19,913	-16%
Number of prescriptions	207,537	159,460	-23%
Total N-drug cost	$39,419,158	$31,201,846	-21%
Percent of all claims	*41%*	*36%*	*-11%*
Percent of all prescriptions	*19%*	*16%*	*-16%*
Percent of all costs	*31%*	*26%*	*-15%*
Other drugs			
Number of claims	56,497	54,173	-4%
Number of prescriptions	871,316	825,559	-5%
Total Other drug cost	$88,057,425	$87,387,252	-1%

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, 2013.

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 67 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 17 percent to 6 percent.
- The total number of prescriptions for N-drugs fell by 74 percent while it fell by 4 percent for other drugs.
- The average number of N-drug prescriptions per claim fell by 22 percent.
- The generic substitution rate for N-drugs increased from 59 percent in 2010 to 72 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 79 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.

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- the delivery of benefits;
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- 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.