SETTING THE STANDARD
AN ANALYSIS OF THE IMPACT OF THE 2005 LEGISLATIVE REFORMS ON THE TEXAS WORKERS' COMPENSATION SYSTEM
2018 RESULTS

TEXAS DEPARTMENT OF INSURANCE
WORKERS' COMPENSATION
RESEARCH AND EVALUATION GROUP

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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.

Information in this report can be obtained in alternative formats by contacting the Texas Department of Insurance.

For more information, email WCResearch@tdi.texas.gov.

This report is available online at www.tdi.texas.gov/reports/wcreg/index.html.

*The Texas Workers' Compensation Commission administered the workers' compensation system until 2005, when it was abolished and replaced by the Texas Department of Insurance, Division of Workers' Compensation. The insurance commissioner has delegated functions of the Research and Evaluation Group and responsibility for all required reports to the Texas Department of Insurance, Division of Workers' Compensation. For the purpose of this report, TDI is used in reference to the department as a whole, and DWC is used in reference to just the division.

TDI | Texas Department of Insurance

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December 1, 2018

The Honorable Greg Abbott, Governor
The Honorable Dan Patrick, Lieutenant Governor
The Honorable Joe Straus, Speaker of the House

Dear Governors and Speaker:

In accordance with Texas Insurance Code §2053.012 and Texas Labor Code §405.0025, the Texas Department of Insurance, Division of Workers' Compensation presents the biennial report on the impact of the 2005 House Bill 7 reforms on the affordability and availability of workers' compensation insurance for Texas employers and the impact of certified workers' compensation health care networks on return-to-work outcomes, medical costs, quality of care issues, and medical dispute resolution.

Please contact Jeff Nelson, Director of Division of Workers' Compensation External Relations, at 512-804-4405 if you have any questions or to request a briefing on this information.

Sincerely,

Kent Sullivan
Commissioner of Insurance

Cassie Brown
Commissioner of Workers' Compensation

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EXECUTIVE SUMMARY

Texas Insurance Code §2053.012 and Texas Labor Code §405.0025, require the Texas Department of Insurance (TDI) to issue biennial reports to the Texas Legislature no later than December 1st every even-numbered year on the impact of the 2005 House Bill (HB) 7 reforms on the affordability and availability of workers' compensation insurance for Texas employers and the impact of certified workers' compensation health care networks (networks) on return-to-work outcomes, medical costs, access and utilization of health care, injured employee satisfaction, health-related outcomes, complaints, and medical dispute resolution. The following are key findings from this analysis of the HB 7 reforms:

The Workers' Compensation Insurance Market

- Workers' compensation insurance has been profitable each year since 2004, as measured by the industry's combined ratios and return on net worth.
- Since 2003, rates decreased nearly 64 percent through 2017.
- Average premiums decreased from a high of $2.32 per $100 of payroll in policy year 2003 to 76 cents per $100 of payroll in policy year 2016. This is a reduction of about 67 percent.
- Rating tools which recognize individual risk variations, such as schedule rating and experience rating, continue to play a significant role in determining an employer's premium.
- Loss ratios are lower for claims in a network than for non-network claims, and insurers continue to offer discounts, typically ranging from 5 to 12 percent, to employers for participating in a network.

Workers' Compensation Health Care Networks

- The number of employers participating in networks and employees treated by networks has increased; about 50 percent of new claims are treated in networks, compared to 20 percent in 2010.
- Results from data calls with networks indicate that as of May 31, 2017, about 900,000 injured employees have been treated in networks since 2006.
- As of 2017, there were 29 active certified networks covering all 254 counties.

Satisfaction with Care and Health-Related Outcomes

- A 2018 survey of 3,200 injured employees (administered by Texas A&M University and analyzed by the Workers' Compensation Research and Evaluation Group) show that 60 percent of injured employees reported no problem in getting the medical care they felt they needed for their work-related injury, compared with 52 percent of injured employees surveyed in 2005.
- When compared to injured employees who received non-network medical care, most networks were able to get appointments for injured employees to see non-emergency doctors sooner.
- While injured employees were able to get access to medical care faster in 2018 compared to 2005, injured employees generally reported slightly lower satisfaction levels with the medical care they received, compared to 2005 results.

- A lower percentage (76 percent) of injured employees surveyed in 2018 reported that the medical care they received for their work-related injuries was as good or better than their routine medical care when compared to injured employees surveyed in 2005 (81 percent).
- The physical and mental functioning scores for injured employees in networks were better than the scores reported by injured employees who received non-network care.

Medical Costs and Utilization of Care

- Total medical costs for professional services decreased significantly from their 2002 peak until 2007. They increased between 2008 and 2011, but started a decreasing trend after 2011.
- Total hospital costs decreased from 2002 until 2005, then increased from 2006 until 2014. They decreased by 11 percent between 2014 and 2017.
- Total pharmacy costs stayed at about the same level between 2005 and 2011 but decreased significantly after DWC implemented the pharmacy closed formulary in 2011.
- The average professional cost per claim also decreased from its 2002 peak until 2007, then increased by more than 30 percent between 2007 and 2012 injury years. The primary causes were increased fees for services in the 2008 Medical Fee Guideline, decreases in the number of claims, and increases in utilization for some services. Between 2012 and 2017, average costs decreased by 12 percent.
- Average medical costs were higher for claims in workers' compensation health care networks than for those that were not in network until 2011. Network average costs have narrowed the gap, however, and were lower than non-network average costs since 2016.

Access to Care

- The number of physicians participating in treating workers' compensation injured employees increased by 4 percent, from 17,656 in 2005 to 18,419 in 2017, while the number of claims decreased 20 percent during the same time frame. As a result, the average number of injured employees per participating physician continued to decrease, from 19.4 in 2005 to 14.8 in 2017.
- The total number of physicians actively practicing in Texas increased steadily after 2005, reaching 51,930 in 2017. The increase in the total number of Texas physicians relative to the stable number of participating physicians, results in lower participation rates.
- The total number of primary care physicians treating injured employees fell from 5,305 in 2005 to 4,415 in 2017, a 17 percent decrease. However, the total number of claims fell 20 percent over the same time frame.

  The decreasing number of participating primary care physicians was alleviated in part by an increasing number of emergency medicine specialists. They increased from 1,352 in 2005 to 3,182 in 2017. Participation by physician assistants also increased significantly, from 1,040 in 2005 to 2,527 in 2017.
- The overall workers' compensation physician retention rate is high and stable. About 80 percent of physicians who participated in workers' compensation in any given year also treated workers' compensation patients in the following year.

- The Top 20 percent of workers' compensation physicians (in terms of claim volume) accounted for 87 percent of total costs in 2017. These physicians also have higher retention rates: 98 percent or more of these physicians continue to treat workers' compensation patients year after year. Their participation rates appear unaffected by changes in rules and in the fee schedule.
- Overall, initial access (timeliness of care) measures show that workers' compensation patients receive non-emergency treatments faster in 2017 than in 2005: 84 percent of patients received initial care in seven days or less in 2017, up from 81 percent in 2005.

Return-to-Work Outcomes

- Return-to-work rates have improved since the 2005 legislative reforms. A higher percentage of injured employees receiving income benefits went back to work within six months in 2016 (78 percent), compared to those in 2004 (74 percent).
- Three years after their injuries in 2008-2014, approximately 95 percent of those injured employees had returned to some initial employment.
- A higher percentage of injured employees surveyed in 2018 (80 percent compared with 65 percent in 2008) reported that they were employed at the time of the survey.
- A lower percentage of injured employees surveyed in 2018 (11 percent compared with 19 percent in 2008) reported that 12 to 24 months after their work-related injuries, they had not yet returned to work.

Dispute Resolution and Complaints

Most dispute measures have improved since 2005:

- The number of medical disputes decreased from more than 13,000 in 2005 to less than 5,000 in 2017, a decrease of about 63 percent.
- TDI has received relatively few complaints about networks since 2005 (818 total complaints – of which about 30 percent were deemed justified) out of more than 900,000 injured employees treated in networks as of May 31, 2017.
- The timeframe to resolve medical disputes decreased by 70 to 84 percent from 2005 to 2017, depending on the dispute type.

Employer Participation in the Workers' Compensation System

- Private-sector employer participation rates decreased from 78 percent in 2016 to 72 percent in 2018. However, the subscription rates for these two survey years remain the highest rates since the first employer survey in 1993.
- The employee workers' compensation coverage rate (82 percent) remained the same as in 2016.
- About 64 percent of the non-subscriber employee population is covered by some form of an alternate occupational benefit plan.

- An estimated 6 percent of private-sector employees (about 638,340) either do not have workers' compensation coverage or coverage through a non-subscriber occupational benefit plan in the case of a work-related injury in 2018.
- The most frequently cited reasons by non-subscribing employers for not purchasing workers' compensation coverage included having too few employees (24 percent) and too few on-the-job injuries (24 percent).
- Employers' perception that workers' compensation insurance premiums were too high increased slightly, to 19 percent in 2018, but remained significantly lower than in 2010 (32 percent).
- The most frequently cited reason subscribing employers gave for participating in the Texas workers' compensation system was workers' compensation insurance rates were lower (21 percent) and the ability to participate in a network (20 percent).

1. INTRODUCTION

Medical costs have been a concern in the Texas workers' compensation system since the 76th Texas Legislature passed HB 3697 in 1999, which mandated a series of studies comparing the cost, quality, and utilization of medical care provided to injured employees in Texas with those in other states and health care delivery systems. The results from these and other studies showed that Texas had some of the highest average medical costs per claim and that these costs were primarily driven by the amount of medical care provided to injured employees (also known as the utilization of care). These studies also highlighted that injured employees in Texas had poorer return-to-work outcomes and satisfaction with care compared with similarly injured employees in other states. Growing concerns from policymakers about high medical costs and poor outcomes led to the passage of HB 2600 by the 77th Texas Legislature in 2001, and HB 7 by the 79th Legislature in 2005.

HB 7 contained several provisions requiring TDI and the Division of Workers' Compensation (DWC) to evaluate the impact of these reforms on a biennial basis and to report the results to the Governor, Lieutenant Governor, Speaker of the House of Representatives, and the Legislature. Texas Insurance Code §2053.012 and Texas Labor Code §405.0025 require TDI and the Workers' Compensation Research and Evaluation Group (REG) to issue these biennial reports to the Texas Legislature no later than December 1st every even-numbered year. The reports must include the impact of these legislative reforms on the affordability and availability of workers' compensation insurance for Texas employers, and the impact of networks on return-to-work outcomes, medical costs, access and utilization of health care, injured employee satisfaction, health-related outcomes, complaints, and medical dispute resolution.

Specifically, this report examines the impact of the 2005 legislative reforms on:

The affordability and availability of workers' compensation insurance for Texas employers (per Insurance Code §2053.012), including:

- projected workers' compensation premium savings realized by Texas employers;
- employer participation in the system;
- economic development and job creation;
- market competition, including an analysis of how loss ratios, combined ratios, and use of individual risk variations have changed since implementing the reforms; and
- network participation by small and medium-sized employers.

The impact of networks (per Labor Code §405.0025) on:

- medical costs and utilization of care;
- access to and satisfaction with medical care;
- return-to-work outcomes;
- health-related functional outcomes; and
- the frequency, duration, and outcome of medical disputes and complaints.

TDI and DWC continue to track the results of these reforms in order to fulfill the legislature's intent to improve both the cost and quality of medical care provided to injured employees in Texas, as well as the affordability and availability of workers' compensation insurance for Texas employers.

Section two of this report provides an overview of the status of the Texas workers' compensation insurance market prior to and after implementing networks, including the change in workers' compensation insurance rates and premiums, market competition, and loss and combined ratios.

Section three of the report presents the most current information available regarding network participation in the Texas workers' compensation system. This section includes the number of networks certified, as well as the geographic distribution of network coverage by county.

Section four provides an analysis of how access to care, satisfaction with care, and health-related outcomes have changed in the workers' compensation system since 2005. This section also compares the perceptions of injured employees treated in networks with injured employees who received non-network medical care.

Section five presents information about medical cost and utilization of care trends pre- and post-reforms, including information about how these trends vary by type of medical service. This section also includes results from DWC's *2018 Workers' Compensation Network Report Card*, which compares the medical care and utilization of care results between network and non-network claims.

Section six of the report provides a detailed analysis of how access to care has changed in the workers' compensation system since 2005, including an overview of physician participation and retention rates by provider specialty and geographic area.

Section seven examines how return-to-work trends have improved in Texas over time, as well as differences in return-to-work outcomes for network and non-network claims.

Section eight of this report considers the effect of the 2005 legislative reforms on the frequency, duration, and outcomes of disputes in the Texas workers' compensation system. This section also examines the number and type of complaints that TDI has received since 2005 regarding networks.

Section nine provides estimates of overall employer participation in the Texas workers' compensation system and the percentage of the Texas workforce employed by non-subscribing employers. Section nine also includes non-subscription rates categorized by industry and employer size, and explores the reasons subscribing and non-subscribing employers gave for their respective workers' compensation coverage decisions.

2. The Workers' Compensation Insurance Market

Introduction

HB 7 requires TDI to report on the affordability and availability of workers' compensation insurance for employers in Texas. This chapter fulfills this requirement by reviewing:

- market concentration and profitability;
- rates and premiums;
- competitive rating tools; and
- certified healthcare network experience.

Market Concentration

The 2017 total written premium for Texas workers' compensation insurance was $2.31 billion, with 293 insurers writing policies. Table 2.1 shows premium since 2008, along with employer payroll, which is the exposure base used to price workers' compensation insurance. Premiums declined during recession years and climbed to pre-recession level in 2014, followed by a large decline in 2016, while payroll has increased steadily since 2009.

Table 2.1: Direct Written Premium and Payroll

Calendar Year	Direct Written Premium ($B)	Change in Direct Written Premium	Policy Year	Payroll ($B)	Change in Payroll
2008	$2.58		2008	$273	
2009	$2.18	-15%	2009	$269	-1%
2010	$1.92	-12%	2010	$285	6%
2011	$2.16	13%	2011	$308	8%
2012	$2.45	13%	2012	$330	7%
2013	$2.66	9%	2013	$353	7%
2014	$2.84	7%	2014	$376	7%
2015	$2.74	-4%	2015	$390	4%
2016	$2.35	-14%	2016	$403	3%
2017	$2.31	-2%			

Sources: Direct Written Premium: TDI's compilation of Texas Statutory Page 14 of the National Association of Insurance Commissioners (NAIC) Annual Statement for Calendar Years Ending December 31, 2008–2017, for positive direct written premium only. Payroll: Data compiled by the National Council of Compensation Insurance (NCCI). A policy year includes all policies with effective dates in a calendar year. A policy year does not close until a year after the end of the calendar year when the last policy issued in a calendar year expires. Each policy year is first evaluated for premium six months after the end of the policy year to allow for audit and retro adjustments. Thus, policy year 2017 data is not yet available.

The top 10 insurance groups write approximately 77 percent of the market. Texas Mutual Insurance Company is the top writer, with 42 percent of the market, and close to $1 billion in premium in 2017. The

Texas Legislature created Texas Mutual in 1991 to serve as a competitive force in the marketplace, to guarantee the availability of workers' compensation insurance in Texas, and to serve as the insurer of last resort. It predominately writes voluntary business, competing with the rest of the workers' compensation market. The involuntary (residual) market makes up 0.17 percent of the market.[1]

Table 2.2 shows historic market shares for the top 10 groups, based on each group's ranking in 2017. The table shows the market share for these same groups back to 2013, even though they may not have all been in the top 10 or at the same rank during those years. These 10 groups and their respective total market share have been fairly consistent.

Table 2.2: Market Share by Group

Group	Rank (2017 Annual Statement)	2013	2014	2015	2016	2017
Texas Mutual Ins Co	1	38.6%	40.1%	39.7%	40.1%	42.4%
Travelers Grp	2	7.4%	7.0%	7.0%	7.6%	7.5%
Liberty Mutual Grp	3	6.2%	5.8%	5.6%	5.4%	5.4%
Hartford Fire & Cas Grp	4	5.7%	5.1%	5.0%	5.5%	5.2%
Zurich Ins Co Grp	5	6.4%	6.0%	5.3%	4.6%	4.8%
Chubb Ltd Grp	6	2.0%	2.0%	4.7%	5.0%	3.5%
American Intl Grp Inc	7	6.2%	6.5%	5.4%	2.5%	2.7%
Service Ins Holding Grp	8	2.5%	2.3%	2.2%	2.1%	2.0%
Old Republic Ins Grp	9	1.7%	2.1%	2.0%	2.1%	1.9%
CNA Ins Grp	10	2.1%	2.0%	1.9%	2.0%	1.9%
Total		**78.8%**	**78.9%**	**78.8%**	**76.8%**	**77.3%**

Source: TDI's compilation of the Texas Exhibit of Premiums and Losses of the NAIC Annual Statement for Calendar Years Ending December 31, 2013-2017.

One indicator of a competitive market is a lack of concentration by participants in the market. A commonly accepted economic measure of concentration is the Herfindahl-Hirschman Index (HHI) which considers the relative size and distribution of insurers in a market. A market with an HHI index between 1,500 and 2,500 is considered moderately concentrated and one with an HHI index above 2,500 is considered highly concentrated. The HHI, based on Texas workers' compensation group market shares in 2017, is 1,980, thus the Texas market is considered moderately concentrated.

[1] Texas Mutual writes the involuntary market in its START program. START market share data is from the Texas Annual Legislative Report on Market Conditions.

Profitability

Two important measures of the financial health of the market are the loss ratio and the combined ratio. The loss ratio is the relationship between premium collected and incurred losses (loss amounts already paid plus amounts set aside to cover future loss payments). The combined ratio is similar, except it combines incurred losses with expenses before comparing to premium.

The combined ratio compares losses and expenses to premium, excluding investment earnings and federal taxes. A ratio less than 100 percent indicates a profit on insurance operations while a ratio greater than 100 percent indicates a loss, although a loss may be offset by investment earnings.

The loss ratios and the combined ratios are calculated on an accident year basis. In an accident year analysis, the losses tie back to the year in which the accident occurred, regardless of when the claimant reports the loss or the insurer pays the loss.

Expenses include loss adjustment expenses, other expenses, and policyholder dividends. Loss adjustment expenses are costs incurred in processing claims. Other types of expenses include administrative overhead, commissions, taxes, licenses, and fees. Policyholder dividends are an optional return of profits.

For 2017, the estimated combined ratio is 92.3 percent. This means that for every dollar collected, 92.3 cents will be used to cover losses and expenses, and the remainder is profit.

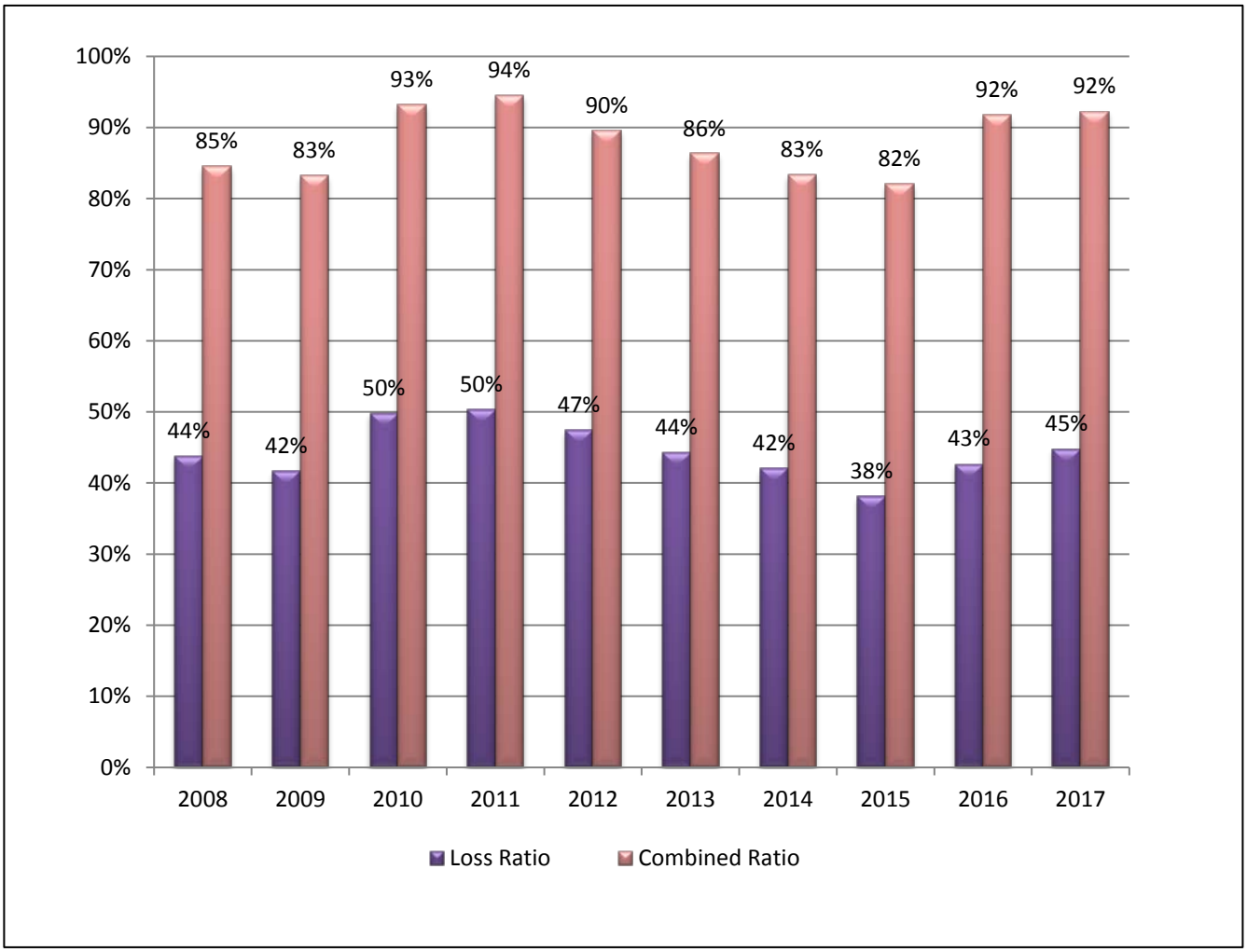
Table 2.3 and Figure 2.1 show that the last 10 years have been profitable. The combined ratio averaged 74.5 percent from 2003 to 2007. In 2008, concurrent with the recession, this ratio deteriorated (increased) and continued to do so until 2012 when it started to rebound. It continued to improve (decrease) until 2016, where it has remained about 92 percent for the last two accident years.

Table 2.3: Projected Calendar/Accident Year Loss and Combined Ratios

Accident Year	Direct Earned Premium ($M)	Losses ($M)	Loss Ratio	Combined Ratio
2008	$2,210	$968	43.8%	84.5%
2009	$1,946	$811	41.7%	83.2%
2010	$1,721	$858	49.8%	93.2%
2011	$1,805	$909	50.3%	94.5%
2012	$2,026	$961	47.4%	89.6%
2013	$2,198	$972	44.2%	86.3%
2014	$2,442	$1,026	42.0%	83.4%
2015	$2,382	$909	38.2%	82.0%
2016	$2,100	$896	42.7%	91.8%
2017	$2,075	$931	44.8%	92.3%

Sources: NCCI Workers' Compensation Financial Data Call (Valuation Year 2017); TDI's compilation of the Insurance Expense Exhibit for Calendar Years Ending December 31, 2009-2017. Losses are developed to ultimate using the loss development factors from the NCCI Annual Statistical Bulletin, 2018 edition.

Figure 2.1: Projected Calendar/Accident Year Loss and Combined Ratios



Sources: Sources: NCCI Workers' Compensation Financial Data Call (Valuation Year 2017); TDI's compilation of the Insurance Expense Exhibit for Calendar Years Ending December 31, 2009-2017. Losses are developed to ultimate using the loss development factors from the NCCI Annual Statistical Bulletin, 2018 edition.

Another measure of profitability is the return on net worth. The return on net worth is the ratio of net income after taxes to net worth, and it indicates the return on equity. It includes income from all sources, including investments, and reflects all federal taxes, whereas the combined ratio reflects only the income from the insurance operations and does not reflect investment income or federal taxes.

The return on net worth is on a calendar year basis. Calendar year analysis includes all activity that occurred during the calendar year, regardless of when the accident occurred.

Calendar year values do not change, whereas accident year values change over time as claim experience emerges and estimates of ultimate activity evolve.

The return on net worth can also be used to compare insurers with firms in other industries. Table 2.4 shows the return on net worth for workers' compensation insurance for Texas and countrywide, along with the return on net worth for Fortune's Industrial and Service sectors. Texas has consistently outperformed the rest of the country in the workers' compensation market and compares favorably to all industries countrywide.

Table 2.4: Return on Net Worth

Calendar Year	Workers' Compensation Insurance Texas	Workers' Compensation Insurance Countrywide	All Industries Countrywide
2007	11.5%	9.0%	15.2%
2008	9.6%	5.1%	13.1%
2009	11.2%	4.2%	10.5%
2010	9.5%	3.9%	12.7%
2011	11.0%	6.2%	14.3%
2012	10.6%	5.9%	13.4%
2013	9.4%	7.2%	16.6%
2014	10.1%	7.5%	14.3%
2015	10.1%	8.4%	12.7%
2016	9.2%	8.2%	13.1%
10-Year Average	10.2%	6.6%	13.2%

Source: NAIC Report on Profitability by Line by State in 2016.

Rates

An insurer may choose to base its rates on:

- the Texas workers' compensation classification relativities established by TDI;
- its own independent company-specific relativities (none are on file currently); or
- loss costs filed by the National Council on Compensation Insurance (NCCI).[2]

TDI relativities represent the relationship between classifications - how risky the activities in a given classification are compared to other classifications.

A loss cost is the portion of an insurance rate used to cover claims and the cost of processing claims.

NCCI filed loss costs in Texas for the first time in 2011. Since then, about 89 percent of insurers use loss costs as their rate basis. These insurers represent about 97 percent of the 2017 premium volume.

Relativities and loss costs are established by classification code. Classification codes are used to identify specific categories of work to effectively estimate costs for the risk associated with that work. For example, code 5606 (contractor) will have a higher base cost than code 8810 (clerical), because more dangerous work is being performed.

TDI regularly revises the relativities using the most recently available data. For many of these updates, only the relationship between classes is updated, while the overall average level of the relativities remains the same.

TDI has also lowered the overall relativity level based on the industry's loss experience, especially in recent years, as shown in Figure 2.2. Since their inception in 1994, relativities have decreased overall by about 67 percent. Since 2011, relativities have decreased overall by 35 percent.

NCCI files revised loss costs annually based on the most recently available data. The most recent filings resulted in overall loss cost decreases of 7.8 percent and 13.7 percent, as of July 1, 2017, and July 1, 2018, respectively. Since the initial filing in 2011, loss costs have decreased by nearly 39 percent.

Relativities and loss costs are just the starting point for determining rates by classification for workers' compensation coverage. An insurer determines its rates by multiplying the rate basis by payroll and an insurer-specific multiplier. The multiplier covers the insurer's operational expenses, as well as the insurer's loss experience to the extent it differs from the rate basis.

As shown in Table 2.5, since 2003, rates have dropped nearly 64 percent through December 31, 2017. From September 1, 2003, through December 31, 2009, rates decreased by 41.2 percent. In 2011, rates decreased by 12.6 percent, coinciding with NCCI's initial loss cost filing that year.

[2] NCCI is a licensed advisory organization and statistical agent in Texas that performs workers' compensation functions that TDI is not statutorily required to perform. Its core services include making rate and advisory loss cost filings; providing statistical and compliance services; producing experience rating modifications; and maintaining classifications, rules, plans, and forms.

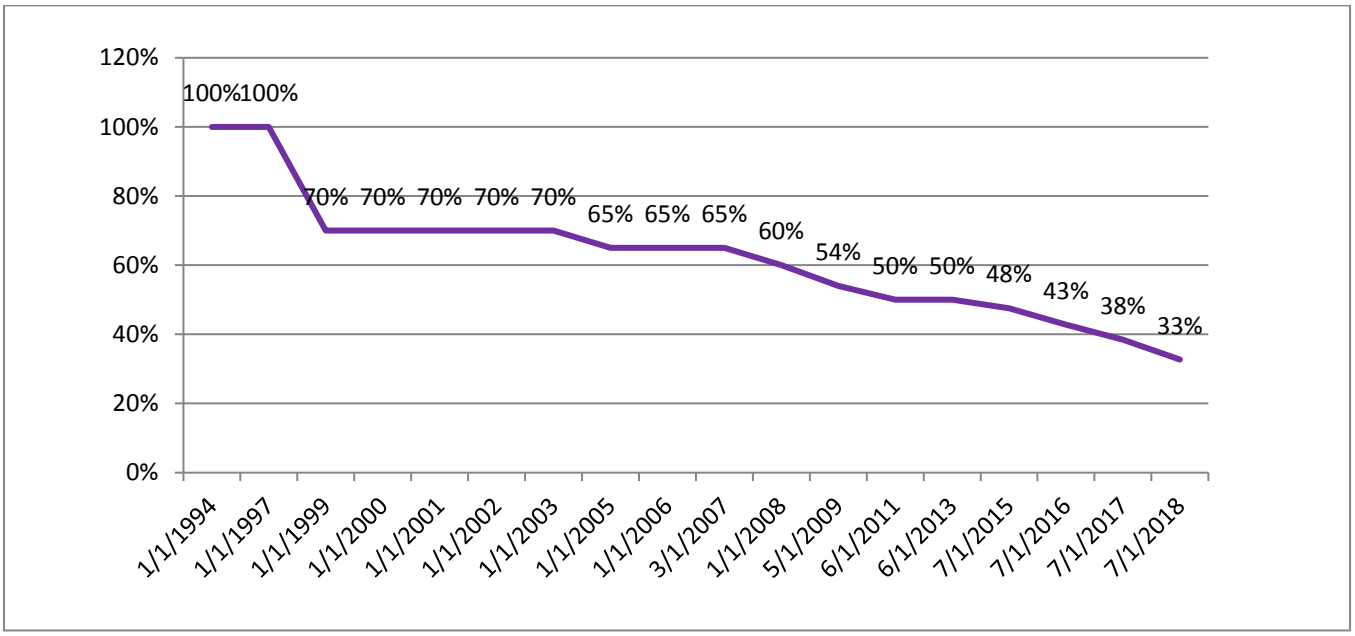
Beginning in 2015, annual rate decreases have been large, coinciding with decreases in both the loss costs and relativities each year. Preliminary results incorporating the adoption of the July 1, 2018, loss costs and relativities indicate a weighted average rate decrease of 11.7 percent in 2018 for a cumulative rate decrease of 68 percent since 2003.

Table 2.5: Rate Trends Report

Time Period	Rate Change	Cumulative Rate Change
9/1/2003 - 8/31/2007	-21.7%	-21.7%
9/1/2007 - 12/31/2009	-24.9%	-41.2%
1/1/2010 - 12/31/2010	-1.7%	-42.2%
1/1/2011- 12/31/2011	-12.6%	-49.5%
1/1/2012 - 12/31/2012	-0.04%	-49.5%
1/1/2013 - 12/31/2013	-3.2%	-51.1%
1/1/2014 - 12/31/2014	-1.6%	-51.9%
1/1/2015 - 12/31/2015	-7.6%	-55.6%
1/1/2016 – 12/31/2016	-9.8%	-59.9%
1/1/2017 – 12/31/2017	-9.7%	-63.8%

Source: Weighted average of insurer rate filings received by TDI. The time period represents effective dates of rate changes. These figures include changes in insurer-specific multipliers, as well as overall changes in the TDI relativities and NCCI loss costs.

Figure 2.2: Cumulative Change in Classification Relativities



Source: Texas Department of Insurance, 2018.

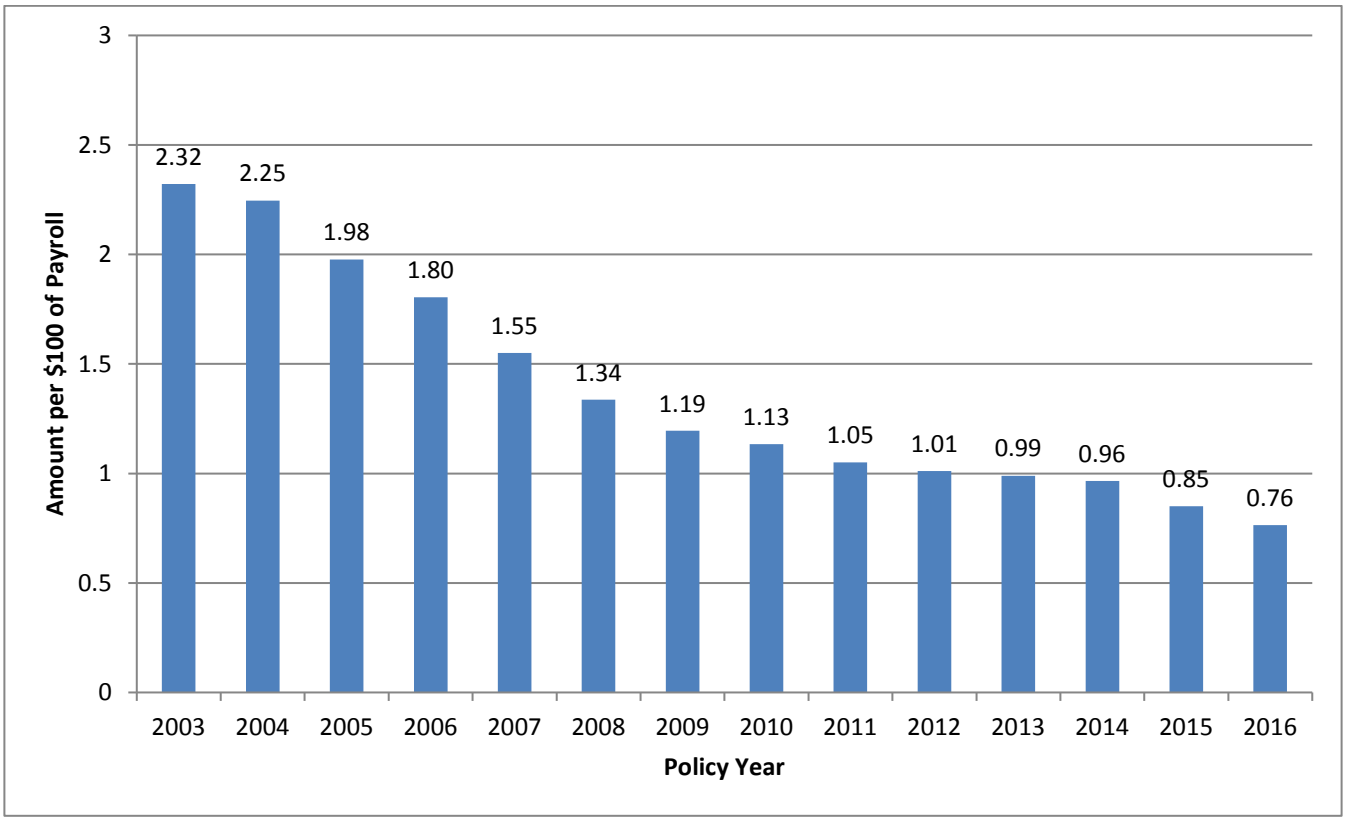
Premium

What employers actually pay (the premium) reflects not only rates, but also mandated and optional rating programs that recognize individual risk variations. Mandated programs include experience rating and premium discounts, while optional programs include schedule rating and negotiated deductibles. See Rating Tools section below.

Figure 2.3 shows the average premium per $100 of payroll for policy years 2003 through 2016. This information is on a policy year basis, which is different from the calendar year and accident year data discussed earlier. In a policy year, the premiums and losses tie back to the year in which the policy was effective.

Up until 2003, the industry suffered underwriting losses and the average premium had climbed to its peak level of $2.32 per $100 of payroll. Starting in 2004, the average premium began to decrease steadily as insurers lowered rates and increased use of optional rating tools. As of 2016, the average premium was down to 76 cents per $100 or payroll, which coincides with the average rate reductions that have taken place.

Figure 2.3: Average Premium per $100 of Payroll by Policy Year



Source: The Texas Workers' Compensation Financial Data Call and data compiled by NCCI, 2018.

The average premiums reflect insurers' filed specific multipliers, as well as adjustments for experience rating, schedule rating, retrospective rating, network premium credits, deductible credits for promulgated deductible plans, and premium discounts. They do not reflect dividends or the impact of some smaller rating modifications, such as small employer premium incentives. Average premiums may change slightly over time, especially for the most recent years, as payroll audits determine final premiums.

Rating Tools Recognizing Individual Risk Variations

One of the revisions that HB 7 made to the workers' compensation statutes was that insurers must consider the effect on premiums of individual risk variations. Additionally, the revisions to the statutes state that neither rates nor premiums may be excessive, inadequate, or unfairly discriminatory.

Individual risk variations discussed in this section include experience rating, schedule rating, and deductibles.

Experience rating is a rating tool that provides incentives for loss prevention by tailoring the cost of insurance to an individual employer's risk characteristics. While this tool is mandatory, it only applies when an employer's amount of premium meets certain minimum thresholds.

If an employer's average loss experience is more costly than the industry average in the same classification, the result is a debit experience modification (the e-mod is greater than 1.00), or surcharge, is applied. If an employer's experience is less costly than the industry average, then a credit experience modification (the e-mod is less than 1.00), or discount, is applied.

Employers on average have been receiving a credit experience modification (e-mod less than 1.00) for many years. According to data from NCCI, the 10-year average e-mod is about 0.85, or a 15 percent credit or discount. This discount had been fairly consistent up until 2016 when it increased to 19 percent (0.81 average e-mod).

In addition to experience rating modifications, a credit or debit may be applied to the premium based on an underwriter's evaluation of the risk, up to a maximum modification, generally plus or minus 40 percent.[3] This optional rating tool is known as schedule rating. An insurer must file its schedule rating plan with TDI.

Schedule rating reflects characteristics of the employer that may not be fully reflected in the employer's past experience. The general categories often used include: the care and condition of premises; classification peculiarities; medical facilities; safety devices; selection, training, and supervision of employees; and management's cooperation with the insurer and safety organization.

Application of schedule rating to a policy can result in significant changes to the premium charged, even though there has been no change in the insurer's filed rate. Based on the Texas Workers' Compensation Financial Data Call, the average schedule rating adjustment was a credit of 11.5 percent for policy years

[3] In the case of Texas Mutual Insurance Company's START program, the aggregate maximum modification is plus or minus 75 percent.

2013 through 2017. Note that market forces and conditions often influence the use of schedule rating and the size of credits or debits given.

Another cost saving tool that is not reflected in the earlier analyses of loss ratios, combined ratios, and average premiums is a deductible, wherein the employer reimburses the insurer for all or part of a loss. Promulgated deductible plans and optional negotiated deductibles are two types of deductible options available for Texas employers.[4]

Promulgated deductible options include per accident, per claim, and medical only deductibles. Insurers wrote less than one percent of policies with a promulgated deductible in 2017.

Negotiated deductible credits are available for employers with larger premiums or larger deductible amounts, which effectively allows the employer to self-insure. About 2 percent of policies were written using a negotiated deductible in 2017. For these policies, the average overall premium credit was substantial, at 69 percent. The average premium credit for employers with a negotiated deductible for the past 10 years was 72 percent.

Certified Workers' Compensation Health Care Networks

Another way for employers to reduce premiums is through participation in a TDI-certified health care network, which was a main focus of the HB 7 reforms. The objective of these networks was to improve the quality of medical care received by injured employees at a reasonable cost for Texas employers, and to improve outcomes from injuries.

Employers that choose to participate in one of these networks will receive a credit or discount on their premiums. Credits filed with TDI range up to 20 percent, but the majority of actual credits used are between 5 and 12 percent.

Table 2.6 shows the loss ratios for the most recent 12 accident half-years for the top insurance groups that had more than 20 percent of their policies in networks. The loss ratios were determined using premium before application of the network premium credit in order to evaluate the reasonableness of the network credit.

The chart shows that the accident half-year loss ratios for claims in a network were an average of 13 percentage points less than the loss ratios for claims outside a network. This demonstrates that the claims experience of health care networks is better than the experience for claims outside a network, and that the network credits filed with TDI are appropriate.

[4] The Texas Workers' Compensation Financial Data Call excludes large deductible policies. Insurers report losses for all other deductible policies on a gross basis. That is, if the total loss is $20,000 and the employer has a deductible of $5,000, the amount reported in the Department's Financial Data Call is $20,000, even though the insurer ultimately pays only $15,000 of the loss. The direct earned premium is the amount of premium actually earned prior to the payment of policyholder dividends and the application of credits for deductible policies.

Summary

The last 13 years have been profitable for the workers' compensation insurance industry since HB 7 legislation came into effect. The industry responded to the reforms by lowering rates, utilizing rating tools, and providing discounts for participation in networks. During this time, average premiums charged to employers decreased significantly. Based on the rate actions taken by insurers in the last several years, the industry is poised to continue these trends.

Table 2.6: Loss Ratios for Network and Non-Network Experience

Accident Half Year	Non-Network	Network	Difference
2012/12	41%	29%	12
2013/06	44%	29%	15
2013/12	44%	28%	16
2014/06	38%	26%	11
2014/12	39%	28%	12
2015/06	33%	23%	10
2015/12	37%	23%	15
2016/06	41%	28%	13
2016/12	39%	27%	12
2017/06	43%	28%	15
2017/12	39%	27%	13
2018/06	51%	34%	17
average	41%	28%	13

Source: TDI's annual network data call to top insurance groups that had more than 20 percent of their policies in networks. Losses were developed to ultimate.

3. Workers' Compensation Health Care Networks

An important component of evaluating the impact of the HB 7 reforms on the Texas workers' compensation system is the implementation of the cornerstone of these reforms: workers' compensation health care networks. Research studies published by the former Research and Oversight Council on Workers' Compensation (ROC), TDI, and the Workers' Compensation Research Institute (WCRI) highlighted that high medical costs in Texas were being driven primarily by the amount of medical care provided to injured employees (often referred to as "the utilization of medical care"). Despite high medical costs, Texas injured employees were not as satisfied with their medical care compared to employees in other states.[5]

In response to these trends and stakeholders' concerns, the 79th Legislature introduced a new workers' compensation health care delivery model, which allows insurance carriers to establish or contract with managed care networks that are certified by TDI using a method similar to the certification of health maintenance organizations (HMOs).

Overview of the Network Provisions in HB 7

Under HB 7, workers' compensation insurance carriers may elect to contract with or establish workers' compensation health care networks (networks), as long as those networks are certified by TDI. TDI's certification process includes a financial review, validation that the network meets the health care provider credentialing and contracting requirements established in TDI's rules, and a detailed analysis of the adequacy of health care providers available to treat injured employees in each proposed network's service area. If an employer chooses to participate in the insurance carrier's workers' compensation network, the employer's injured employees are required to obtain medical care through the network, provided that the injured employee lives in the network's service area and receives notice of the network's requirements from the employer (including a network provider directory).[6]

Employees receiving network notices are asked to sign an acknowledgment form that indicates which certified network the employer is participating in, and acknowledges that the employee understands how to choose a treating doctor, seek medical care within the network or from a network-approved referral provider (with the exception of emergency care), and file a complaint with the network or with TDI.

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[5] See Research and Oversight Council on Workers' Compensation, Striking the Balance: An Analysis of the Cost and Quality of Medical Care in the Texas Workers' Compensation System: A Report to the 77th Legislature, 2001; Research and Oversight Council on Workers' Compensation, Returning to Work: An Examination of Existing Disability Duration Guidelines and Their Application to the Texas Workers' Compensation System: A Report to the 77th Legislature, 2001; Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, Medical Cost and Quality of Care Trends in the Texas Workers' Compensation System, 2004; and Workers' Compensation Research Institute, CompScope Benchmarks for Texas, 6th Edition, 2006.

[6] By statute, pharmacy services are exempted from workers' compensation networks. Injured employees will continue to obtain pharmaceuticals from any pharmacist willing to accept workers' compensation patients, regardless of whether or not the employee is participating in a workers' compensation network (see Insurance Code § 1305.101(c)).

Health care providers and networks negotiate fees rather than use DWC's adopted fee guidelines. Additionally, networks may operate under their own treatment guidelines, return-to-work guidelines, and preauthorization requirements, although these treatment and return-to-work guidelines must meet minimum statutory criteria.[7] Networks must also have case management and return-to-work coordination services, as well as provide annual quality assurance and financial reports to TDI to ensure that these networks continue to provide high quality medical care to injured employees. Additionally, HB 7 requires TDI to publish an annual workers' compensation network report card that evaluates certified networks on measures including medical costs and utilization, return-to-work outcomes, and injured employee satisfaction with and access to medical care.[8]

Growth in Workers' Compensation Networks

TDI began accepting applications to certify networks on January 2, 2006. As of June 1, 2017, TDI has certified 29 networks, 19 of which currently treat injured employees.

Currently, networks cover 254 Texas counties, up from 234 counties in 2008. Most Texas counties support multiple networks, allowing insurance carriers and their policyholders various options for network coverage. Larger metropolitan areas such as Houston, Dallas-Ft. Worth, and Austin-San Antonio support more than 20 networks.[9]

Public Entities and Political Subdivisions

Labor Code, Chapter 504 allows political subdivisions (such as counties, municipalities, school districts, junior college districts, housing authorities, and community centers for mental health and intellectual disability services) to:

- use a network certified by TDI under Insurance Code, Chapter 1305;
- continue to allow injured employees to seek health care as non-network claims; or contract directly with health care providers if the use of a certified network is not "available or practical," essentially forming their own health care network.

While not required to be certified by TDI, these Chapter 504 networks must still meet DWC's workers' compensation reporting requirements.

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[7] Treatment and return-to-work guidelines utilized by certified workers' compensation networks must be "scientifically valid, evidence-based, and outcome-focused" (see Insurance Code §1305.304).

[8] In accordance with Insurance Code §1305.502, TDI is required to produce annual workers' compensation network report cards on key cost, utilization, and outcome measures. The report card is another of REG's responsibilities that was delegated to DWC. The twelfth report card was published in September 2018 (see www.tdi.texas.gov/reports/wcreg/index.html#wcreports to view these report cards).

[9] The following Managed Care Quality Assurance (MCQA) link has the certified networks, each with a list and map of their respective coverage areas: https://www.tdi.texas.gov/wc/wcnet/wcnetworks.html

Number of Injured Employees Treated in Networks

In addition to tracking the participation of Texas policyholders in workers' compensation networks, TDI also tracks the number of injured employees who were treated by networks through separate semi-annual data calls with each certified network. As of May 31, 2017, about 918,000 injured employees were treated by TDI-certified networks and Chapter 504 networks since the first network was certified in 2006 (see Table 3.1).

Table 3.1: Total Number of Injured Employees Treated by Workers' Compensation Networks Since the First Network Was Certified

Network Participation Measures	As of May 31, 2015	As of May 31, 2017
Total Number of Employees Treated	707,524	918,681
Total Number of Networks Treating Employees	30	29

While the number of certified networks treating injured employees have stabilized at about 30, the number of injuries being treated by TDI-certified networks and by the Chapter 504 networks continue to grow. The 2018 Network Report Card shows that as of May 31, 2017, roughly 50 percent of all new injuries (those that occurred between June 1, 2016, and May 31, 2017) were treated by networks. The lost-time claims among those represent approximately 54 percent of all lost-time claims for that timeframe.[10]

[10] In accordance with Section 1305.502, Texas Insurance Code, TDI is required to produce annual workers' compensation network report cards on key cost, utilization, and outcome measures. The report card is another of REG's responsibilities that was delegated to DWC. The twelfth report card was published in September 2018 (see http:/www.tdi.texas.gov/reports/wcreg/documents/2018_report_card.pdf to view these report cards).

Table 3.2: Distribution of Injured Employees Treated by Workers' Compensation Networks as of May 31, 2017

TDI-Certified Network	Total	**Percent**
AIG TX HCN	896	<1%
Alliance	24,958	20%
Brownsville Independent School District	624	<1%
Blackstone	592	<1%
Broadspire Workers' Comp	376	<1%
Bunch TX HCN - FH	901	<1%
CareWorks	268	<1%
City of McAllen	205	<1%
City of San Angelo	123	<1%
Coventry	11,859	10%
Coventry/United Airlines	300	<1%
Dallas County Schools	1,702	1%
First Health/CSS HCN	245	<1%
First Health/Travelers	6,557	5%
First Health TX HCN	2,106	2%
Genex	2,810	2%
Houston Independent School District	1,335	1%
IMO	4,618	4%
Liberty	3,809	3%
La Joya ISD	99	<1%
My Texas Direct	1,357	1%
Prime Health Services, Inc	182	<1%
River View Provider Group	207	<1%
Sedgwick	5,161	4%
Sharyland ISD	80	<1%
Texas CorCare® Network	3,963	3%
Texas Star Network	42,361	34%
The Hartford WC HCN	1,246	1%
Trinity Occupational Program	677	<1%
West Independent School District	112	<1%
Zenith Health Care Network	1,930	2%
Zurich Services Corporation	1,674	1%

Note: Totals may not add up to 100 percent due to rounding.

Summary

HB 7 introduced a new workers' compensation health care delivery model that allows insurance carriers to establish or contract with managed care networks certified by TDI using a method similar to the certification of HMOs. Under this new system, injured employees whose employers have contracted with a certified network must obtain medical care through the network if the injured employee lives in the network's service area and receives notice of the network's requirements from the employer.

TDI began accepting applications for the certification of workers' compensation networks on January 2, 2006, and as of May 31, 2017, 29 certified networks covered all 254 counties in Texas. According to the information gathered in periodic insurance company and network data calls, the share of claims treated in networks grew from 20 percent in 2010 to 50 percent as of May 31, 2017. Networks have treated more than 900,000 injured employees since 2006.

4. Satisfaction with Care and Health-Related Outcomes

Ensuring high-quality medical care for injured employees at reasonable costs for employers continues to be the focus for the Texas workers' compensation system. As the number of claims decreases and costs stabilize in the system, additional pressure is placed on ensuring that every dollar spent on claims provides benefits to injured employees and enhances their ability to return to work as quickly and safely as possible. Section 3 highlighted how network participation has changed over time. This section examines quality of care issues and whether the system has seen improvements in these issues over the past few years. This section also provides indications of the impact of networks on access to care, satisfaction with care, and health-related outcomes.

Survey Design and Data Collection

The REG conducted an injured employee survey to compare injured employees' experiences with their medical care (access to care, satisfaction with care, and health-related outcomes), as well as to collect information regarding their experiences returning to work after their work-related injuries. The survey was conducted in spring of 2018. Injured employees were surveyed at about 12 to 24 months post-injury.[11] The survey instrument used standardized questions from the Consumer Assessment of Health Plans Study, Version 3.0, the Short Form 12, Version 2, the URAC Survey of Worker Experiences, and previous surveys conducted by the REG.

Selection of Treating Doctors Recommended by Employers

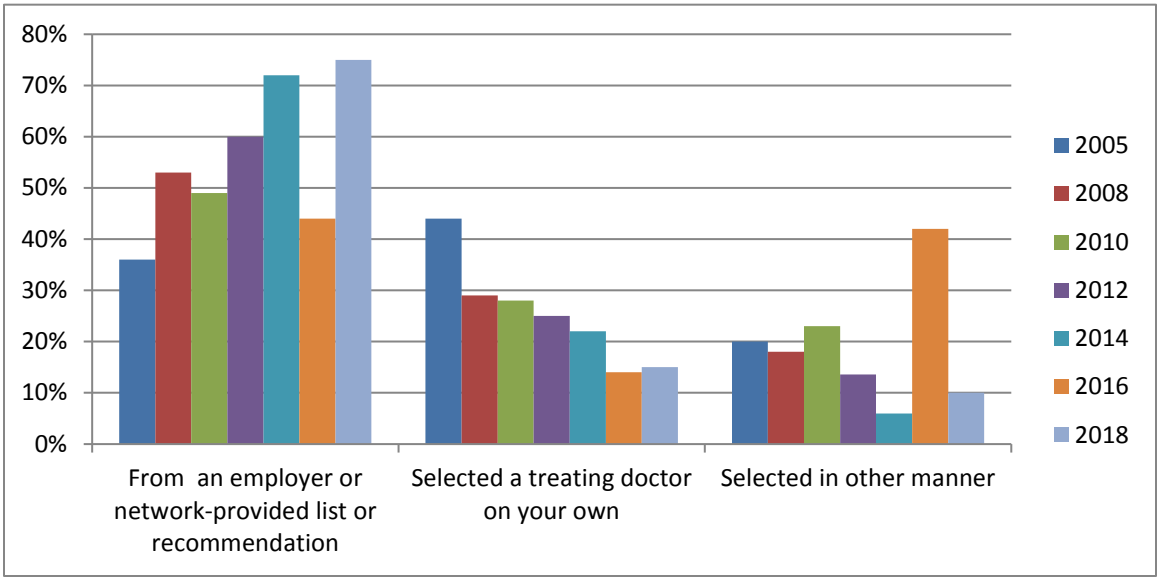
Prior to passage of HB 7, injured employees could select a treating doctor from a list of doctors who registered and received approval from DWC to participate in the Texas workers' compensation system, DWC's Approved Doctor List (ADL). The ADL contained approximately 14,000 medical doctors (MDs), osteopaths (DOs), chiropractors (DCs), and other doctors (dentists, podiatrists, etc.) who agreed to participate at some level in the system. To improve access to care for non-network claims and to reduce administrative burdens for doctors treating injured employees, HB 7 eliminated the ADL.[12] At the same time, HB 7 paved the way for networks to treat injured employees. Injured employees in networks were required to select a treating doctor from the networks' list of contracted doctors. While injured employees could select their own treating doctors prior to HB 7, a significant percentage of injured employees reported (in this and in previous studies in Texas) that they selected a doctor recommended by their employer or insurance carrier.

[11] A total of 3,200 injured employees were surveyed in 2018 by Texas A&M University Public Policy Research Institute. The REG analyzed the survey results.

[12] Even though the ADL expired on August 31, 2007, DWC continues to regulate health care providers treating injured employees in the system. Doctors must continue to disclose financial interest in other providers, practitioners and facilities, etc. to DWC, as well as obtain training and testing for the assignment of impairment ratings and maintain a medical license in good standing in the jurisdiction where care is provided.

As Figure 4.1 shows, a significantly higher percentage of injured employees surveyed in 2018 (75 percent) reported that they selected a treating doctor recommended to them by their employer or from their network's list of treating doctors, compared to injured employees surveyed in 2005 (36 percent).

Figure 4.1: Methods Injured Employees Reported Using to Select Their Treating Doctor

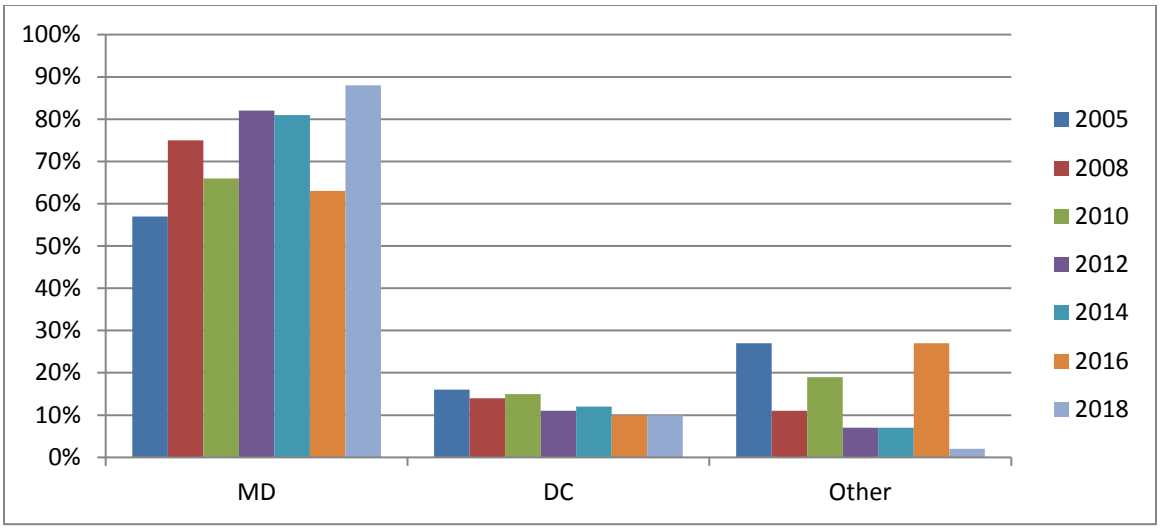


Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, Survey of Injured Employees 2005, 2008, 2010, 2012, 2014, 2016, and 2018. Note: "Selected in other manner" includes recommendations from family or friends or other coworkers, among others.

The Texas Labor Code and DWC rules allow a variety of medical specialties, including MDs, DOs, DCs, dentists, podiatrists, and optometrists to serve as treating doctors for non-network claims. However, HB 7 allowed networks to select or designate certain medical specialties to serve as treating doctors for network claims. In a 2018 survey, a higher percentage of injured employees reported that they selected an MD as their first treating doctor (88 percent), compared with 2005 (57 percent).

Even with the increased use of networks, the percentage of employees who reported selecting a DO, DC, or other type of doctor as their treating doctor has not changed significantly since 2005 (see Figure 4.2).

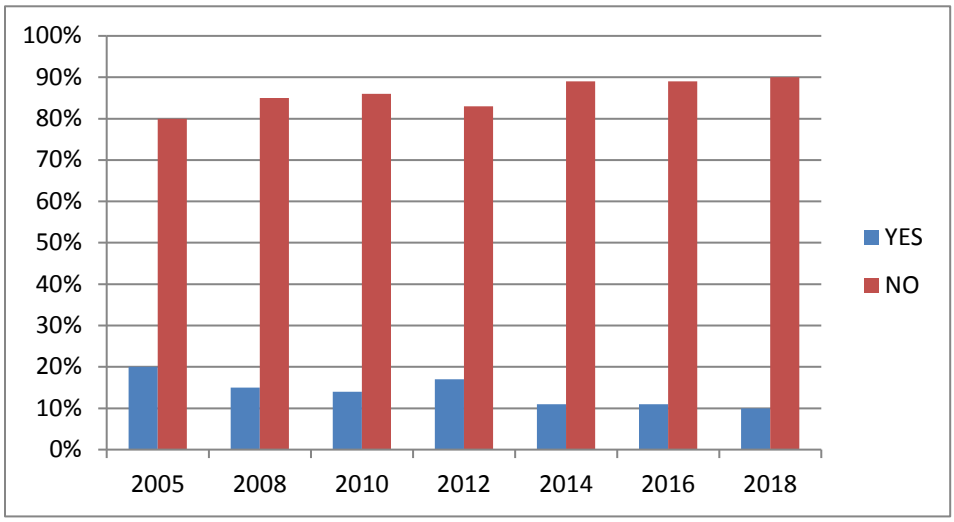
Figure 4.2: Type of First Non-Emergency Treating Doctor Selected by Injured Employees



Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, Survey of Injured Employees 2005, 2008, 2010, 2012, 2014, 2016, and 2018. Note: "Other" includes Physical Therapists, Occupational Therapists, Nurse Practitioners, and General Practitioners.

A larger percentage of injured employees surveyed in 2018 (90 percent) indicated that the doctor they saw for their workers' compensation medical care was not the doctor they normally saw for their routine medical care compared with 2005 (80 percent). This change may be the result of more injured employees seeking medical care through networks, which, to date, are not generally associated with group health plans that provide routine medical care (see Figure 4.3).

Figure 4.3: Was the Doctor Who Saw You for Your Work-Related Injury or Illness the Doctor That You Normally See for Your Routine Medical Care?



Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, Survey of Injured Employees 2005, 2008, 2010, 2012, 2014, 2016, and 2018.

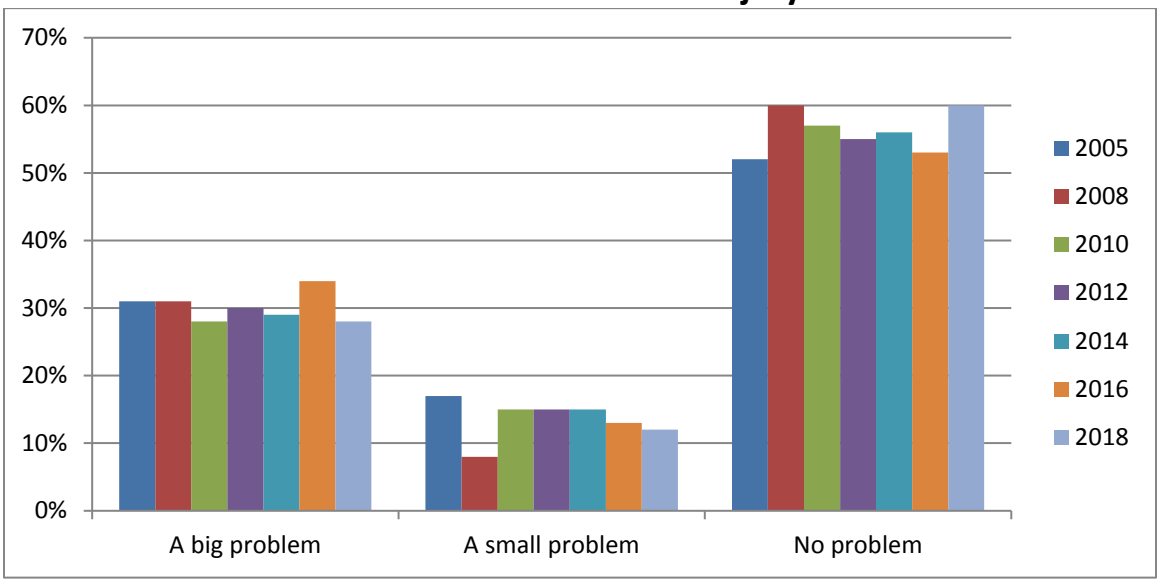
Improvements and Perceptions in Access to Care in Networks

Before the 2005 legislative session, there were increasing concerns about injured employees' access to care within the Texas workers' compensation system. Physicians, particularly surgical specialists, expressed resistance to treating injured employees because of administrative burdens related to treating workers' compensation cases and inadequate reimbursement levels resulting from the Texas Workers' Compensation Commission's adoption of the 2003 Medicare-based Medical Fee Guideline.

To increase health care provider participation in the Texas workers' compensation system, DWC adopted a new professional services medical fee guideline in March 2008. The new medical fee guideline raised reimbursement levels for doctors and added an annual inflation adjustment based on the annual Medicare Economic Index to keep reimbursement levels current. Other changes coming from HB 7, included adopting evidence-based treatment guidelines (effective May 1, 2007). ADL registration requirements were also eliminated (effective September 1, 2007) to increase certainty regarding the medical necessity of treatments that would be reimbursed in the system and to reduce administrative burdens.

Based on the results of recent injured employee surveys, a slightly higher percentage (60 percent) of workers surveyed in 2018 reported "no problem" getting the medical care they felt they needed for their work-related injury, compared to 52 percent of workers surveyed in 2005 (see Figure 4.4).

Figure 4.4: Percentage of Injured Employees Who Reported Having Problems Getting Medical Care for Their Injury



Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, Survey of Injured Employees 2005, 2008, 2010, 2012, 2014, 2016, and 2018.

As Tables 4.1 and 4.2 illustrate, injured employees who received medical care from networks generally had a more favorable view of their access to care, including the ability to see specialists.

A slightly lower percentage of injured employees surveyed in 2018 (86 percent) reported that their ability to schedule a doctor's appointment was as good or better than their normal health care provider, compared to 88 percent of injured employees surveyed in 2005 (see Figure 4.5).

As Table 4.3 shows, except for four networks, a larger percentage of injured employees receiving medical care in networks reported that their ability to schedule a doctor's appointment was better than or about the same as that of injured employees receiving non-network medical care.

Table 4.1: Since You Were Injured, How Often Did You Get Care as Soon as You Wanted When You Needed Care Right Away?

How often did you get care?	Always	Usually	Sometimes/Never
Non-network	54%	15%	30%
504-Alliance	66%*	15%*	19%*
504-Dallas County Schools	54%	13%	33%
504-Others	58%*	13%*	29%
Corvel	53%	15%	32%
Coventry	45%*	23%*	32%
First Health	71%*	7%*	22%
Genex	45%	21%	33%
IMO	49%*	21%*	30%
Liberty	57%	22%*	22%*
Sedgwick	55%	11%	34%
Texas Star	61%*	13%	26%*
Travelers	53%	24%*	23%
Zenith	70%*	8%*	22%
Zurich	60%	15%	25%
Other networks	46%*	20%*	34%

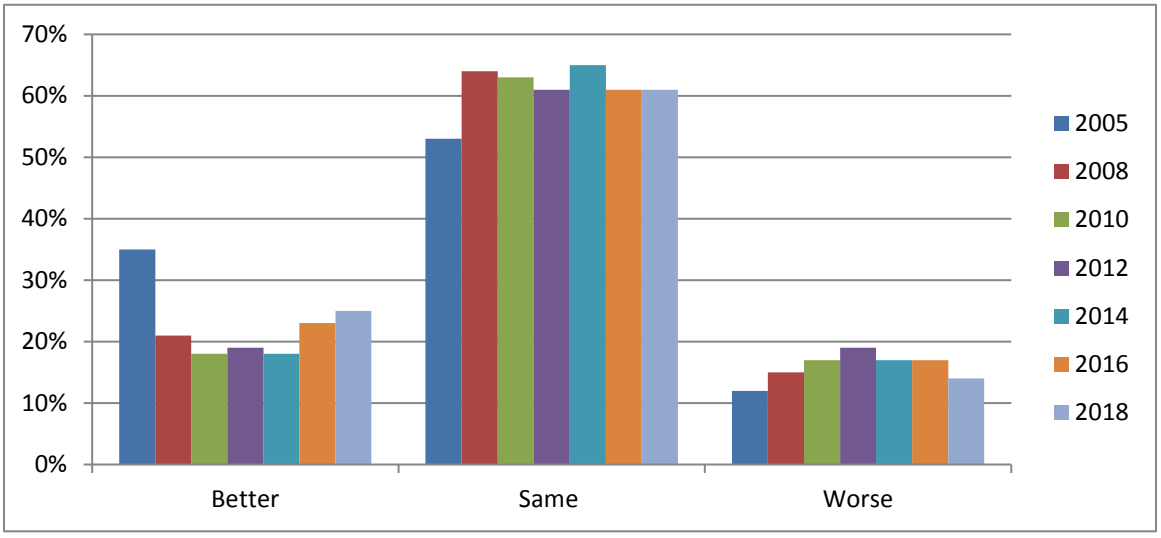
Notes: Asterisks (*) indicate that the differences between the network and non-network are statistically significant. The figures presented above are adjusted for risk factors such as injury type, type of claim, and age differences that may exist between the groups. Percentage for each network may not add up to 100% because of rounding.

Table 4.2: Overall, for Your Work-related Injury or Illness, How Much of a Problem, if Any, Was It to Get a Specialist You Needed to See?

How much of a problem?	Not a problem	A small problem	A big problem
Non-network	61%	14%	26%
504-Alliance	65%*	13%*	23%*
504-Dallas County Schools	63%*	5%*	32%
504-Others	63%*	9%*	28%
Corvel	63%	14%	23%
Coventry	48%*	10%*	42%*
First Health	70%*	8%*	22%
Genex	51%	12%*	37%
IMO	60%*	20%	20%*
Liberty	58%	18%	23%
Sedgwick	46%	20%*	34%
Texas Star	68%*	16%*	16%*
Travelers	63%*	11%*	26%
Zenith	75%*	12%*	13%*
Zurich	68%*	14%	18%*
Other networks	59%*	12%*	29%

Notes: Asterisks (*) indicate that the differences between the network and non-network are statistically significant. The figures presented above are adjusted for risk factors such as injury type, type of claim, and age differences that may exist between the groups. Percentage for each network may not add up to 100% because of rounding.

Figure 4.5: Compared to the Medical Care You Usually Receive When You are Injured or Sick, Your Ability to Schedule a Doctor's Appointment for Your Work-Related Injury or Illness Was:



Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, Survey of Injured Employees 2005, 2008, 2010, 2012, 2014, 2016, and 2018.

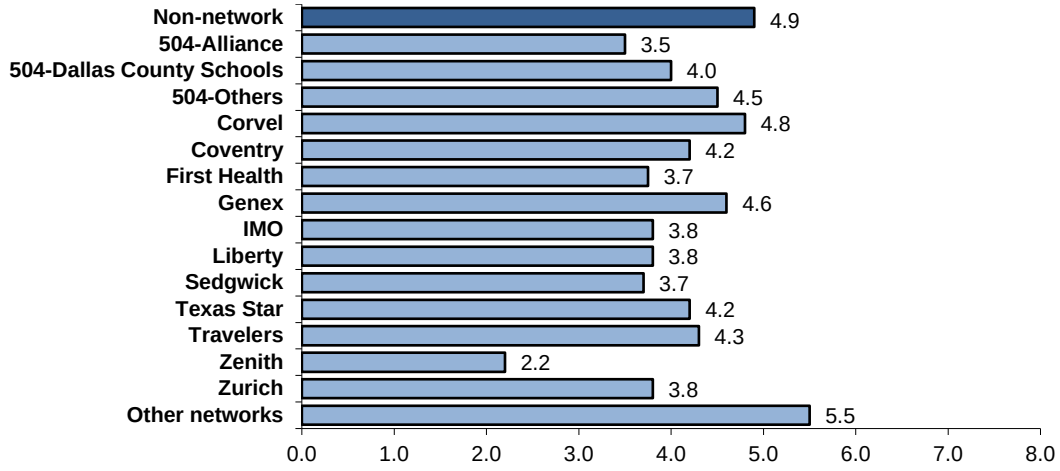
Table 4.3: Injured Employees' Perceptions Regarding Their Ability to Schedule a Doctor's Appointment for Their Work-Related Injuries Compared to the Medical Care They Normally Receive When Injured or Sick

Percentage of injured employees indicating that their ability to schedule a doctor's appointment was:	Better	About the same	Worse
Non-network	26%	58%	17%
504-Alliance	20%*	69%*	11%*
504-Dallas County Schools	14%*	65%	21%
504-Others	24%	60%	15%
Corvel	24%	63%*	14%
Coventry	29%*	53%	19%*
First Health	39%*	51%	10%*
Genex	14%	72%*	14%
IMO	25%	57%	18%
Liberty	20%*	68%*	12%*
Sedgwick	16%	65%*	19%
Texas Star	29%*	61%*	10%*
Travelers	29%	60%	11%*
Zenith	32%	52%	16%
Zurich	33%	58%	9%*
Other networks	28%	54%*	18%

Notes: Asterisks (*) indicate that the differences between the network and non-network are statistically significant. The figures presented above are adjusted for risk factors such as injury type, type of claim, and age differences that may exist between the groups. Percentage for each network may not add up to 100% because of rounding.

Injured employees in networks tend to get appointments to see a non-emergency doctor faster than non-network employees (see Figure 4.6 and Section 6).

Figure 4.6: Average Number of Days from Date of Injury to Date of First Non-Emergency Treatment, Six Months Post Injury

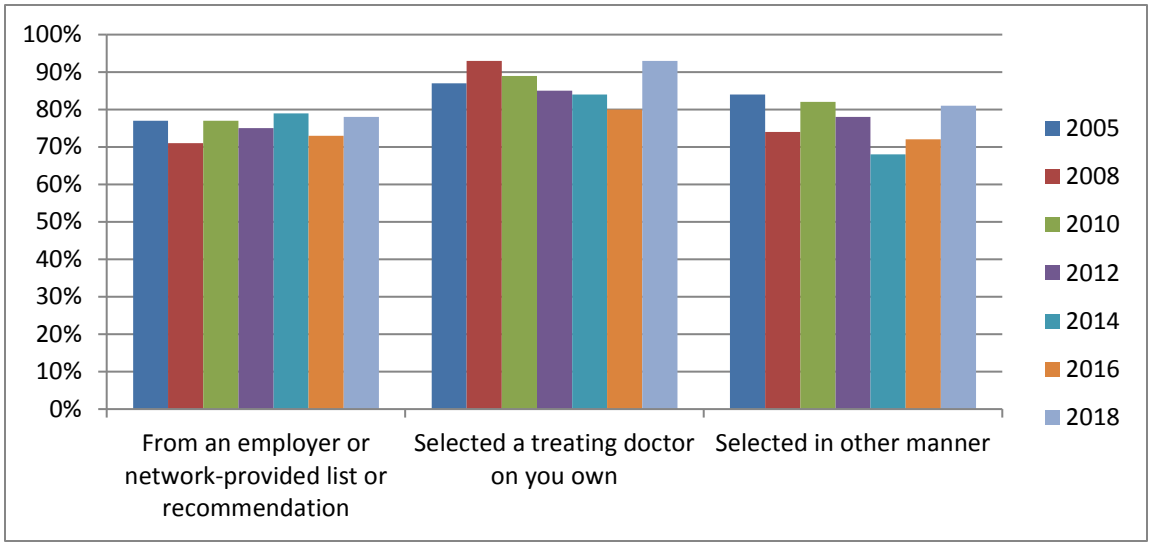


Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

Treating Doctor Choice and Satisfaction

Previous studies conducted by the REG show that injured employees' views about the quality of their medical care are closely associated with their ability to choose their own treating doctor. As networks expand coverage in Texas, and injured employees are more often required to choose a treating doctor from a list of in-network doctors, it is expected that satisfaction levels will be affected. As Figure 4.7 shows, for injured employees who reported that they selected their own treating doctor, satisfaction levels increased from 2005 to 2018 (93 percent surveyed in 2018 reported that the doctor they saw most often provided them good medical care, compared to 87 percent surveyed in 2005).

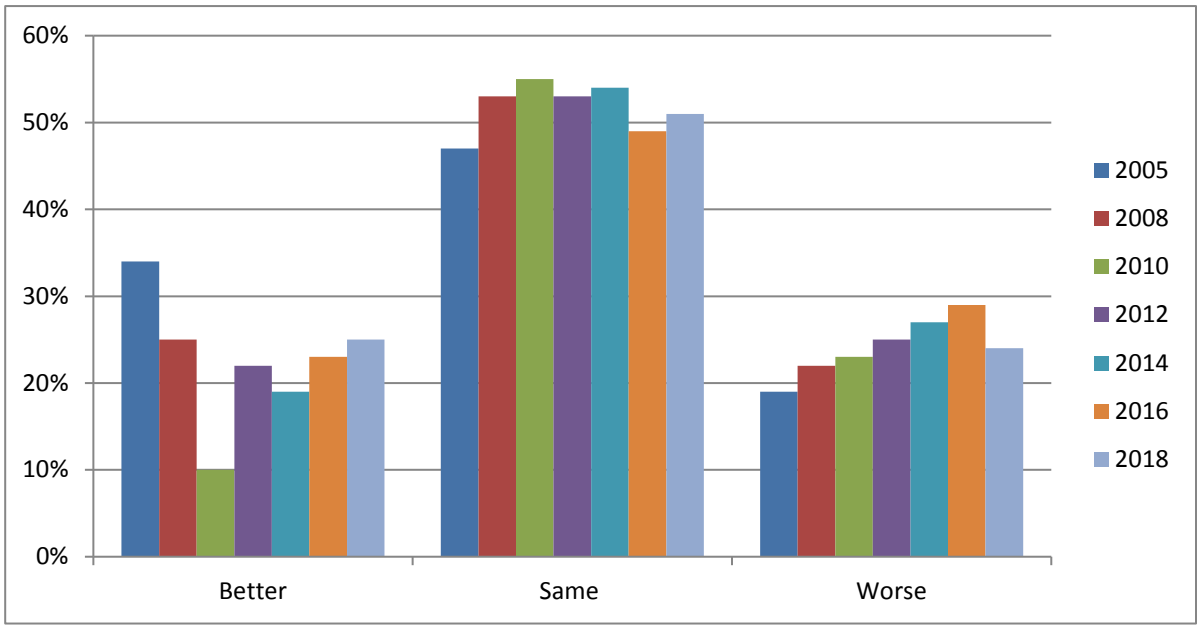
Figure 4.7: Percentage of Injured Employees Indicating Agreement That the Doctor They Saw Most Often Provided Them with Good Medical Care by Doctor Selection Method



Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, Survey of Injured Employees 2005, 2008, 2010, 2012, 2014, 2016, and 2018.

Meanwhile, satisfaction levels increased by 1 percent in 2018 compared to 2005 for injured employees who indicated that they selected a doctor recommended by their employer or network. Satisfaction levels for injured employees who selected a doctor some other way decreased from 84 percent in 2005 to 81 percent in 2018, which includes recommendations from family, friends, and co-workers. Generally, satisfaction levels remained high for most injured employees. Additionally, 76 percent of injured employees surveyed in 2018 reported that the medical care they received for their work-related injury was as good or better than their routine medical care compared to injured employees surveyed in 2005 (81 percent) (see Figure 4.8).

Figure 4.8: Compared to the Medical Care You Usually Receive When You Are Injured or Sick, Would You Say the Care You Received for Your Work-Related Injury or Illness Was:



Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, Survey of Injured Employees 2008, 2010, 2012, 2014, 2016, and 2018.

It is important to note that while injured employees who received medical care from networks were generally more satisfied with the quality of the care than non-network employees, there are differences in satisfaction levels among individual networks profiled in the 2018 Workers' Compensation Network Report Card (see Tables 4.4 and 4.5). HB 7 included mechanisms to promote quality of care monitoring, including the requirement that every network produce and submit an annual Quality Improvement Plan to TDI.

Table 4.4: The Treating Doctor for Your Work-Related Injury or Illness Overall Provided You with Very Good Medical Care That Met Your Needs

Treating doctor provided you with very good medical care	Strongly agree/Agree	Not sure	Strongly disagree/Disagree
Non-network	71%	4%	24%
504-Alliance	77%*	4%*	19%*
504-Dallas County Schools	60%*	5%	35%*
504-Others	69%	6%*	25%
Corvel	63%*	6%	31%*
Coventry	62%*	10%*	28%*
First Health	78%	1%*	21%
Genex	65%	6%	29%
IMO	68%	9%*	23%
Liberty	74%	4%	21%
Sedgwick	65%	9%	26%
Texas Star	79%*	4%*	17%*
Travelers	76%	4%	20%*
Zenith	76%	3%	21%
Zurich	78%	6%	16%
Other networks	72%	2%*	26%

Notes: Asterisks (*) indicate that the differences between the network and non-network are statistically significant. The figures presented above are adjusted for risk factors such as injury type, type of claim, and age differences that may exist between the groups. Percentage for each network may not add up to 100% because of rounding.
Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

Table 4.5: Injured Employees' Perceptions Regarding Medical Care for Their Work-Related Injuries Compared to the Medical Care They Normally Receive When Injured or Sick

Percentage of injured employees indicating that the medical care for their work-related injuries was:	Better	Same	Worse
Non-network	24%	50%	26%
504-Alliance	22%	59%*	19%*
504-Dallas County Schools	16%	43%*	41%*
504-Others	25%	49%	26%
Corvel	32%*	47%	21%
Coventry	20%*	51%	29%*
First Health	33%*	48%	19%
Genex	16%*	48%	35%*
IMO	23%	45%*	32%
Liberty	17%*	57%*	28%
Sedgwick	12%*	50%	38%*
Texas Star	28%	53%	19%*
Travelers	34%*	47%	21%*
Zenith	30%	49%	21%
Zurich	29%	52%	19%
Other networks	17%	51%	32%*

Note: Asterisks (*) indicate that the differences between the individual network and non-network are statistically significant. The figures presented above are adjusted for risk factors such as injury type, type of claim, and age differences that may exist between the groups. Percentage for each network may not add up to 100% because of rounding.
Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

Health Outcomes Improve in 2018

While there have been significant changes in the Texas workers' compensation system over the past few years in terms of the amount of medical care provided to injured employees, injured employees' perceptions about their physical and mental functioning since the HB 7 reforms have also improved measurably compared to earlier years. Physical functioning is used to measure whether an injured employee gets better or physically recovers from the injury. Mental functioning is used to measure whether an injured employee is likely to experience mental health issues, such as depression after the injury.

To measure the physical and mental functioning of injured employees, REG utilized a standardized set of questions (the Short Form 12 survey instrument) which asks injured employees to rate their current mental health, as well as their current abilities to perform certain daily activities.

The results are calculated into two overall scores: the physical component summary and the mental component summary, which have a range of scores from zero to 100, and a mean score of 50 in a sample of the U.S. general population. Scores of more than 50 represent above-average health status, and scores at 40 or less represent people who function at a level lower than 84 percent of the population (one standard deviation).

Injured employees in Texas have improved their physical and mental functioning status significantly since 2005. The physical functioning score increased from 38.4 in 2005 to 45.0 in 2018, while the mental functioning score increased from of 46.6 in 2005 to 51.0 in 2018. Overall, the physical and mental functioning scores for network injured employees are higher than those for non-network claims.[13]

[13] For more detailed information about the physical and mental functioning scores for individual health care networks and non-network claims, see the Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018 Workers' Compensation Network Report Card Results, which can be viewed at www.tdi.texas.gov/reports/wcreg/documents/report16.pdf.

5. Medical Costs and Utilization of Care

The Texas workers' compensation system implemented various legislative and regulatory reforms through HB 2600, 77th Legislature in 2001 and HB 7, 79th Legislature in 2005, including medical fee guidelines, treatment guidelines, workers' compensation health care networks, and the pharmacy closed formulary. This section of the report focuses on how medical costs and utilization-of-care trends have changed in the system over time, as well as some of the factors influencing these cost trends.

Injury and Claim Trends

Occupational injury rates have declined steadily during the last two decades, both nationally and for Texas, according to the nonfatal occupational injury and illness data collected and reported by the Bureau of Labor Statistics and DWC for the Survey of Occupational Injuries and Illnesses.[14] Since 1998, the nonfatal occupational injury and illness rate fell by 57 percent for the U.S. and by 58 percent for Texas. The injury rate in Texas has been consistently lower than the national rate.

The decreasing rate of workplace injuries is also evident in the decreasing number of reportable claims filed with DWC.[15] In 2000, there were 165,609 claims with at least one day of lost time reported to DWC. This decreased to less than 86,000 in 2017 (see the bottom series in Figure 5.1). Adding medical-only claims, the total number of new claims in 2000 was 264,902. This decreased to 208,501 in 2017 (see the middle series in Figure 5.1). The top series in Figure 5.1 is the number of all unique claims treated in a given year regardless of the date of injury: 294,679 claims in 2017.

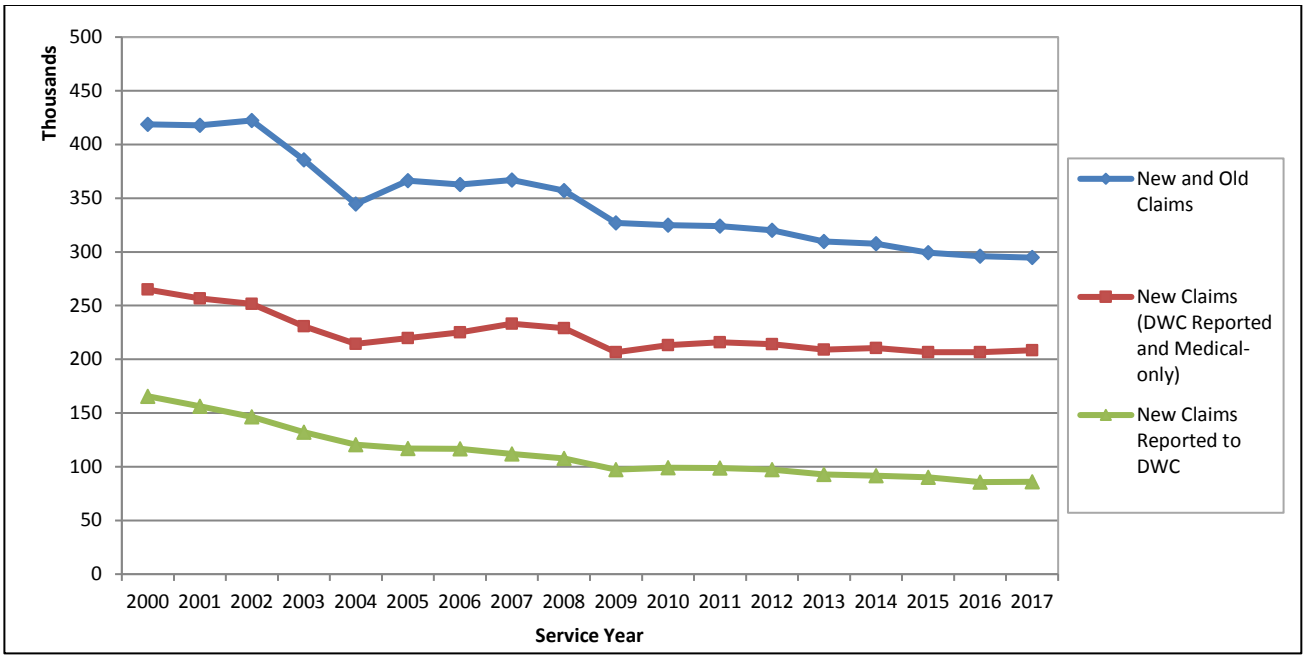
The number of workers' compensation claims decreased steadily since 2000, with a period of relative stability or slight increases between 2004 and 2008. The decrease in the number of claims, both nationally and in Texas, can be attributed to a variety of factors. Some factors include increased safety awareness among employers and employees, enhanced health and safety outreach and monitoring efforts at the federal and state level (including DWC in Texas), improvements in technology, globalization, increased use of independent contractors, and the possibility of under-reported workplace injuries and illnesses.

A decreasing number of injuries and claims results in lower total system medical costs, especially if the average cost per claim remains stable. Total and average medical costs can fluctuate up or down depending on many factors, including frequency and intensity in service utilization, expenses associated with disputes and denials, medical fees, use of managed care arrangements, and changes in injury and claim types. The remainder of this section examines these factors influencing medical costs in the Texas workers' compensation system.

[14] Changes to the OSHA recordkeeping logs in 2002 and the transition from the Standard Industrial Classification (SIC) system to the North American Industry Classification System (NAICS) in 2003 may limit comparability of pre-2003 data series.

[15] The number of claims reported to DWC includes claims with at least one day of lost time, all occupational diseases and all fatalities. In this report, "Lost-time" claims refer to those claims with more than seven days of lost time in which income benefits are due to the injured employee.

Figure 5.1: Number of Workers' Compensation Claims by Claim Type



Note: These numbers include the claims that are required to be reported to DWC, including fatalities, occupational diseases, and injuries with at least one day of lost time. Medical-only claims are not required to be reported to DWC. *Data for 2017 should be viewed with caution since the number of claims per calendar year will continue to grow as injuries for that calendar year are reported or as "medical only" injuries begin to lose time away from work.
Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

Medical Cost Trends

Medical costs are direct benefits for injured employees and represent a substantial portion of the total costs of the Texas workers' compensation system. DWC collects and maintains medical data submitted by insurance carriers according to the Texas Labor Code, Section 413.007. Medical bills are organized by provider bill type, including professional, hospital, dental, and pharmacy services. A claim is grouped as "lost-time" if the employee has more than seven days of lost time from work and receives income benefits. A claim is "medical-only" if the employee has seven or less days of lost time and does not receive income benefits.

Professional Services

The REG examined the number of claims and costs of professional services by claim type and by injury year evaluated at six, 12, and 24 months after the injury date (see Table 5.1).[16] For claims with 12 months

[16] For example, injury year 2016 data calculates costs for claims with the injury date between January 1, 2016, and December 31, 2016. Data with six months maturity evaluates services for six months after the injury date, up to June 30, 2017. Injury year 2016 with 12 months maturity covers services up to December 31, 2017.

maturity, medical-only claims accounted for 76 percent of all claims and 32 percent of the total cost for injury year 2016. Lost-time claims with more severe injuries accounted for most of total medical costs. Please note that the cost information provided in Table 5.1 is unadjusted, meaning that the costs reflected are actual costs reported and have not been adjusted to account for inflation changes over time.

Total costs have continued to decrease since 2003 because of a variety of factors, including fewer claims filed, reductions in medical reimbursement, and decreases in the utilization of services. While average costs per claim increased rapidly prior to 2003, these costs decreased after the implementation of the 2003 Medical Fee Guideline. By 2007, average costs per claim were lower than any of the previous 10 years. This decline coincided with the passage of HB 2600 in 2001.

Average medical costs per claim increased since 2007, though at a slower rate than the double-digit increases experienced in the late 1990s and early 2000s. This increase is mainly due to the adopted 2008 Medical Fee Guideline, which contains an annual inflation factor using the Medicare Economic Index. More recent data indicates that average costs per claim decreased since 2013. This is in part due to decreasing utilization and fees in certain services, such as physical medicine and diagnostic services.

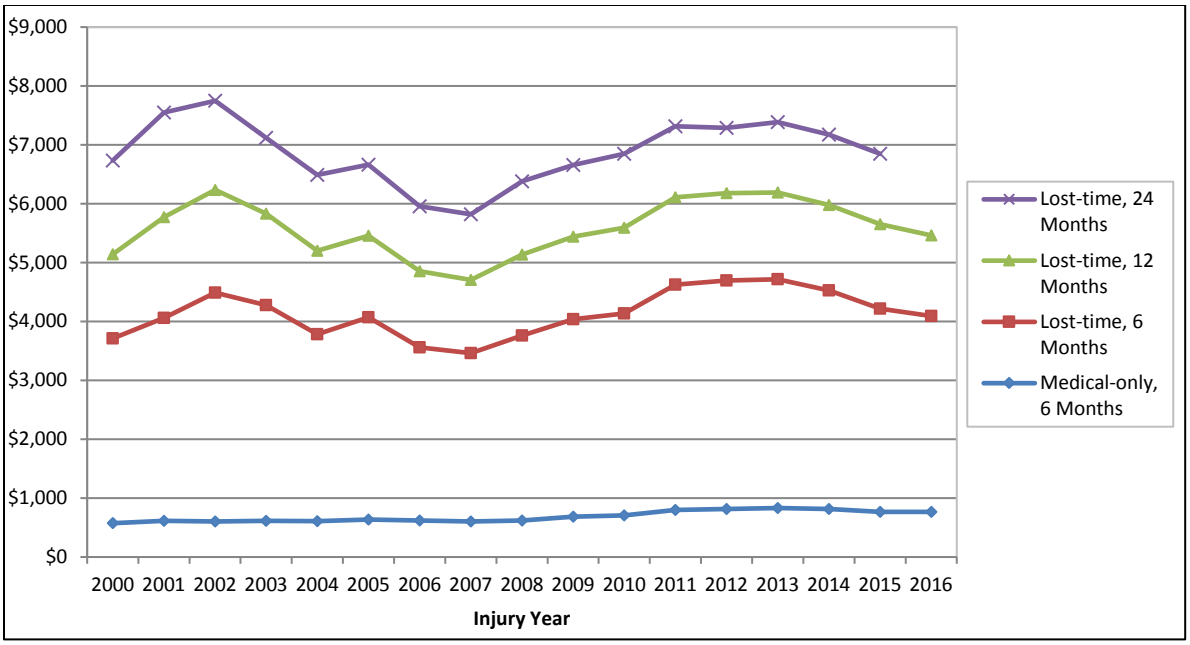
Average costs increased and decreased at different periods of time (see Figure 5.2). The decrease in average costs from 2002 to 2007 reflected clear impacts from the adoption of the 2003 Medicare-based professional services medical fee guideline, and the 2005 HB 7 reforms. Since 2007, professional service costs had increased. The average cost evaluated at six months maturity increased by 34 percent for medical-only claims, and by 39 percent for lost-time claims between 2007 and 2013. Since 2013, average costs have decreased.

Table 5.1: Total and Average Costs by Claim Type, Professional Services, by Injury Year

Injury Year	6 Months			12 Months			24 Months		
	Total Cost (Thousand Dollars)	Number of Claims	Average Cost per Claim	Total Cost (Thousand Dollars)	Number of Claims	Average Cost per Claim	Total Cost (Thousand Dollars)	Number of Claims	Average Cost per Claim
Lost-time Claims									
2000	$258,391	69,583	$3,713	$370,973	72,124	$5,144	$498,382	74,007	$6,734
2001	$282,123	69,441	$4,063	$415,202	71,916	$5,773	$553,681	73,345	$7,549
2002	$308,098	68,587	$4,492	$436,287	69,970	$6,235	$547,618	70,673	$7,749
2003	$264,290	61,798	$4,277	$365,819	62,720	$5,833	$456,377	64,100	$7,120
2004	$222,403	58,820	$3,781	$316,973	60,920	$5,203	$399,498	61,537	$6,492
2005	$230,475	56,602	$4,072	$314,642	57,638	$5,459	$387,256	58,132	$6,662
2006	$200,573	56,331	$3,561	$277,088	57,087	$4,854	$342,127	57,413	$5,959
2007	$198,274	57,263	$3,463	$272,649	57,929	$4,707	$339,230	58,282	$5,821
2008	$219,418	58,350	$3,760	$303,470	59,061	$5,138	$378,788	59,363	$6,381
2009	$218,957	54,233	$4,037	$297,886	54,767	$5,439	$365,988	54,970	$6,658
2010	$234,947	56,827	$4,134	$320,438	57,272	$5,595	$393,385	57,436	$6,849
2011	$262,031	56,641	$4,626	$348,615	57,059	$6,110	$418,604	57,215	$7,316
2012	$256,990	54,718	$4,697	$340,302	55,070	$6,179	$402,525	55,212	$7,291
2013	$248,744	52,736	$4,717	$328,657	53,106	$6,189	$393,234	53,255	$7,384
2014	$241,405	53,320	$4,527	$321,288	53,746	$5,978	$386,797	53,909	$7,175
2015	$215,289	51,032	$4,219	$290,723	51,413	$5,655	$353,053	51,559	$6,848
2016	$204,761	50,035	$4,092	$274,980	50,333	$5,463			
Medical-only Claims									
2000	$112,185	195,319	$574	$130,742	198,268	$659	$147,948	200,648	$737
2001	$114,624	187,200	$612	$133,655	190,067	$703	$149,664	191,882	$780
2002	$110,693	183,087	$605	$126,344	184,919	$683	$138,384	185,855	$745
2003	$103,863	168,921	$615	$116,763	170,179	$686	$126,050	171,103	$737
2004	$94,279	155,456	$606	$105,514	157,069	$672	$113,206	157,902	$717
2005	$104,092	163,210	$638	$114,358	164,310	$696	$121,497	164,925	$737
2006	$104,261	168,898	$617	$114,666	169,923	$675	$121,226	170,445	$711
2007	$106,608	175,897	$606	$116,304	176,869	$658	$123,043	177,408	$694
2008	$105,690	170,500	$620	$114,151	171,383	$666	$119,859	171,897	$697
2009	$104,309	152,321	$685	$111,673	153,092	$729	$116,629	153,520	$760
2010	$110,544	156,410	$707	$118,932	157,135	$757	$124,223	157,507	$789
2011	$127,190	159,141	$799	$136,371	159,882	$853	$141,681	160,276	$884
2012	$129,529	159,240	$813	$137,626	159,898	$861	$142,043	160,312	$886
2013	$130,047	156,295	$832	$138,140	157,033	$880	$142,970	157,442	$908
2014	$128,322	157,094	$817	$135,706	157,766	$860	$139,672	158,109	$883
2015	$119,563	155,738	$768	$126,596	156,355	$810	$130,544	156,635	$833
2016	$119,822	156,698	$765	$126,705	157,282	$806			

Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018

Figure 5.2: Average Cost per Claim by Claim Type, by Injury Year, Professional Services



Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

Hospital Services

For hospital and institutional services, lost-time claims at 12 months maturity comprised 39 percent of all claims in 2016 but accounted for 82 percent of the total cost (see Table 5.2). Since 2000, total hospital payments evaluated at 12 months maturity increased 30 percent by 2017 for lost-time claims. Payments decreased by 8 percent for medical-only claims in the same period. The number of claims decreased since 2000 by 28 percent for lost-time claims, and by 33 percent for medical-only claims. Average hospital costs per claim increased for both lost-time and medical-only claims by 82 percent and 38 percent, respectively (see Figure 5.3).

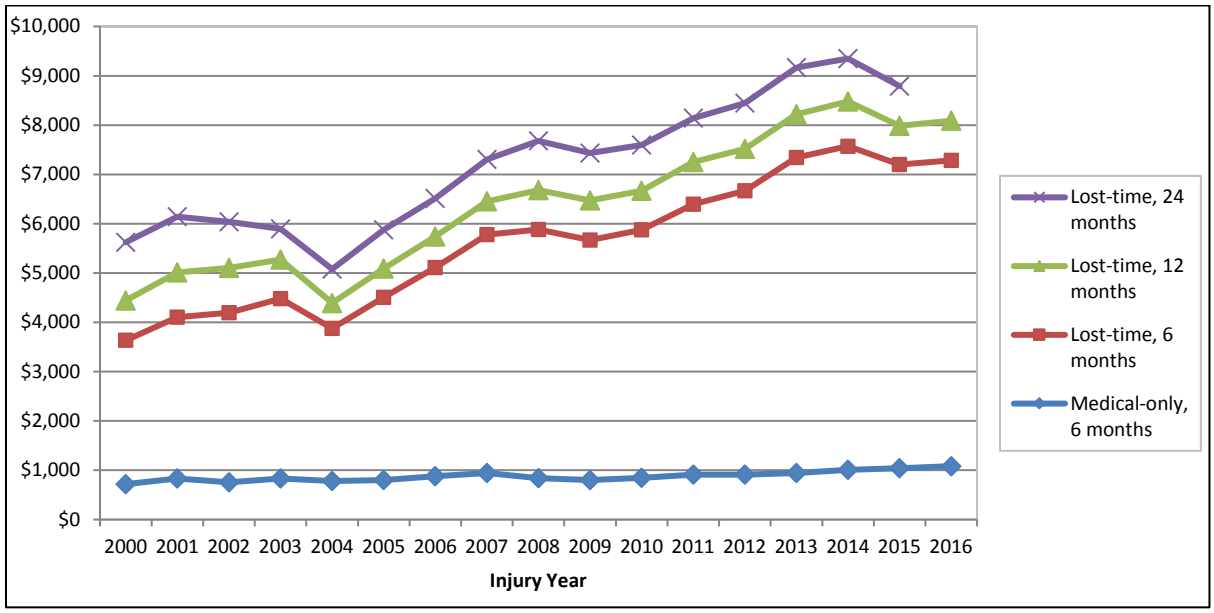
The increase in hospital costs was likely because, prior to March 1, 2008, the system did not have an outpatient hospital services fee guideline and the inpatient hospital fee guideline in place was significantly outdated (adopted in 1997), which lead to an increase of inpatient hospital services paid at "fair and reasonable" levels. This resulted in a significant number of medical fee disputes between insurance carriers and hospitals. Figure 5.3 indicates that the new hospital fee guideline moderated the growth in per-claim hospital costs in 2008 and 2009, but costs increased significantly between 2010 and 2014, while the number of claims continued to decrease. Average hospital costs per claim have been decreasing or remained stable since 2014.

Table 5.2: Number of Claims and Total Cost by Claim Type, Hospital Services, by Injury Year at 12 Months Post Injury

Injury Year	Lost-time Claims		Medical-only Claims	
	Number of claims	Total cost	Number of claims	Total cost
2000	37,243	$165,514,642	62,215	$50,823,605
2001	39,969	$200,361,883	61,956	$57,987,486
2002	41,633	$212,365,552	60,319	$51,265,637
2003	37,512	$197,686,739	55,386	$50,073,015
2004	31,347	$137,660,339	48,042	$39,769,134
2005	28,332	$144,260,663	45,556	$38,871,562
2006	30,549	$175,409,474	50,052	$45,996,762
2007	32,259	$208,171,968	53,386	$52,602,937
2008	32,984	$220,315,598	50,381	$43,809,022
2009	30,137	$195,151,297	44,563	$37,210,393
2010	31,924	$212,944,630	46,305	$40,802,591
2011	32,077	$232,502,241	47,997	$45,773,670
2012	30,374	$228,251,608	45,076	$42,667,457
2013	29,401	$241,627,775	43,719	$43,034,676
2014	29,527	$250,366,899	43,631	$45,388,493
2015	27,884	$222,565,822	42,609	$45,775,853
2016	26,670	$215,684,350	41,688	$46,916,707

Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

Figure 5.3: Average Cost per Claim for Hospital Services, by Claim Type by Injury Year



Note: 2004 figures may be incomplete due to the transition to the electronic data interchange data reporting in 2005.
Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

Pharmacy Services

Total pharmacy costs in 2017 ($77.5 million) were 47 percent lower than in 2005 ($146 million) (see Table 5.3).[17] Notably, total costs decreased substantially by 22 percent from 2016 to 2017. Payments for lost-time claims decreased by 44 percent since 2005, while those for medical-only claims decreased by 61 percent. Lost-time claims accounted for most pharmacy costs (86 percent of the total in 2017). Pharmacy costs were also concentrated in older claims (see Table 5.4). Claims with four or more years of maturity accounted for 59 percent of all costs in 2017.

Pharmacy costs have decreased significantly since 2011. The main reason for the decrease was the pharmacy closed formulary that became effective for new claims in September 2011 and for older (legacy) claims in September 2013. Specific effects of the closed formulary will be discussed in a section below.

Table 5.3: Total and Average Costs by Claim Type and Service Year, Pharmacy Services

Service Year	Total Pharmacy Cost (Thousand Dollars)	Lost-time Claims			Medical-only Claims		
		Number of Claims	Total Costs (Thousand Dollars)	Cost per Claim	Number of Claims	Total Costs (Thousand Dollars)	Cost per Claim
2005	$145,931	93,461	$118,120	$1,264	78,757	$27,812	$353
2006	$151,987	90,570	$122,621	$1,354	80,943	$29,366	$363
2007	$154,847	90,956	$125,011	$1,374	89,251	$29,835	$334
2008	$159,508	89,739	$131,931	$1,470	85,764	$27,577	$322
2009	$162,313	85,743	$133,150	$1,553	74,916	$29,163	$389
2010	$159,690	86,789	$134,756	$1,553	73,731	$24,934	$338
2011	$153,516	85,159	$130,550	$1,533	71,793	$22,966	$320
2012	$139,874	80,780	$120,299	$1,489	69,665	$19,575	$281
2013	$126,541	76,227	$108,271	$1,420	65,217	$18,271	$280
2014	$111,661	72,600	$96,889	$1,335	60,583	$14,772	$244
2015	$104,709	67,338	$91,443	$1,358	55,619	$13,266	$239
2016	$98,953	63,779	$86,365	$1,354	54,259	$12,588	$232
2017	$77,453	58,906	$66,614	$1,131	53,158	$10,840	$204

Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

[17] Payment data for pharmacy services began with the new electronic data interchange data collection process in 2005.

Table 5.4: Total Pharmacy Cost by Maturity, by Service Year (Thousand Dollars)

Service Year	First Year Maturity	Second Year Maturity	Third Year Maturity	4+ Years Maturity
2005	$27,489	$13,632	$11,580	$93,230
2006	$27,852	$14,097	$10,559	$99,479
2007	$31,568	$13,595	$10,338	$99,345
2008	$32,815	$14,120	$10,304	$102,269
2009	$33,729	$15,967	$11,056	$101,562
2010	$32,759	$15,693	$10,806	$100,431
2011	$30,693	$14,032	$10,320	$98,468
2012	$27,415	$13,542	$9,487	$89,429
2013	$25,759	$11,748	$8,749	$80,285
2014	$28,552	$11,088	$7,320	$64,700
2015	$26,205	$10,972	$6,687	$60,842
2016	$27,246	$11,380	$6,611	$53,712
2017	$19,261	$7,598	$5,244	$45,349

Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

Utilization of Health Care

Medical costs are affected not only by the fees for services, but also by the amount of medical care provided to injured employees (the utilization of care). Past studies indicated that higher medical costs in Texas during the early 2000s were primarily driven by overutilization of certain types of medical services. Specifically, Texas injured employees received more physical medicine services, surgical services, and diagnostic testing than similarly injured employees in other states.

The amount of medical care provided to injured employees can be measured by the percentage of injured employees receiving certain types of medical services, as well as the amount of those services received per injured employee. Table 5.5 shows that there has been little change over time in terms of the percentage of injured employees receiving professional and hospital services. The decrease in pharmacy services since 2011 resulted from the pharmacy closed formulary.

Table 5.5: Percentage of Injured Employees Receiving Health Care Services, by Service Year

Service Year	Professional Services	Hospital/ Institutional Services	Pharmacy Services
2000	96.3%	30.4%	
2001	96.1%	31.3%	
2002	97.0%	32.6%	
2003	97.5%	32.9%	
2004	97.5%	30.9%	
2005	92.4%	25.1%	47.0%
2006	92.3%	27.2%	47.3%
2007	92.0%	28.2%	49.1%
2008	91.8%	28.0%	49.1%
2009	92.7%	28.2%	49.1%
2010	93.7%	29.0%	49.4%
2011	94.2%	29.7%	48.5%
2012	94.4%	28.4%	47.0%
2013	94.4%	28.2%	45.6%
2014	94.5%	28.4%	43.3%
2015	94.9%	28.2%	41.1%
2016	95.1%	27.7%	39.9%
2017	95.0%	27.9%	38.0%

Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

The percentage of injured employees receiving specific professional services changed significantly. Utilization of services increased slightly in evaluation and management (E/M) services, diagnostic, pathology and laboratory services, and other surgery services (see Table 5.6). Utilization of services in two service groups—durable medical equipment, prosthetics, orthotics, and supplies (DMEPOS) and impairment rating (IR) examination and report services—increased substantially while spinal surgery and "other" services declined significantly. Utilization of physical medicine services increased until 2004, but by 2006 it had decreased to its 2000 level. As expected, injured employees with lost-time claims received more services than medical-only claims in all service categories.

Table 5.6: Percent of Claims Receiving Certain Professional Services by Claim Type, by Injury Year at 12 Months Post Injury

Injury Year	DMEPOS	Diag/Path/ Lab	E/M	IR Exam & Report	Other Services	Physical Medicine	Surgery - Other	Surgery - Spinal
Lost-time Claims								
2000	47.1%	78.9%	95.0%	74.1%	55.8%	60.4%	39.1%	9.9%
2001	47.1%	80.2%	95.6%	79.7%	57.4%	62.3%	42.1%	10.9%
2002	52.0%	84.1%	97.0%	83.8%	61.0%	64.3%	45.0%	11.1%
2003	61.2%	85.5%	97.0%	85.5%	56.2%	65.3%	47.3%	10.4%
2004	64.1%	82.2%	95.4%	85.5%	45.1%	63.5%	46.1%	9.0%
2005	61.9%	84.6%	96.3%	86.6%	46.0%	62.5%	49.5%	8.4%
2006	65.6%	84.4%	96.4%	86.2%	45.7%	59.4%	50.1%	7.2%
2007	67.4%	85.4%	97.0%	85.6%	45.6%	58.5%	49.6%	5.9%
2008	66.5%	85.8%	97.3%	86.6%	46.1%	57.7%	49.9%	5.2%
2009	67.4%	86.7%	97.8%	88.2%	46.0%	58.9%	49.4%	4.9%
2010	66.2%	86.5%	98.1%	87.9%	45.1%	58.4%	49.0%	4.5%
2011	65.6%	86.1%	98.2%	87.6%	45.3%	57.2%	50.2%	4.0%
2012	65.5%	85.7%	98.2%	87.4%	44.3%	57.0%	49.5%	3.6%
2013	64.8%	85.5%	98.0%	86.7%	44.8%	57.7%	49.2%	3.4%
2014	63.6%	84.5%	97.7%	86.9%	43.8%	57.7%	48.0%	3.0%
2015	63.6%	84.4%	98.0%	87.4%	43.2%	57.7%	47.5%	2.7%
2016	64.3%	84.1%	98.3%	87.4%	41.9%	57.4%	46.2%	2.4%
Medical-only Claims								
2000	24.0%	50.7%	88.4%	50.2%	34.5%	20.9%	17.1%	0.6%
2001	22.6%	51.2%	89.3%	56.6%	34.6%	22.4%	17.2%	0.7%
2002	23.5%	52.9%	90.9%	59.6%	36.5%	22.2%	17.5%	0.6%
2003	30.5%	54.8%	91.1%	61.9%	30.0%	22.7%	18.6%	0.5%
2004	36.6%	54.6%	91.4%	64.3%	17.6%	23.4%	17.9%	0.5%
2005	33.8%	55.5%	92.4%	64.6%	17.3%	21.9%	19.3%	0.4%
2006	36.4%	56.1%	92.3%	66.0%	18.0%	21.2%	19.2%	0.4%
2007	37.7%	57.3%	92.9%	65.9%	18.4%	20.8%	18.4%	0.3%
2008	36.5%	57.5%	93.4%	66.8%	18.6%	19.4%	18.4%	0.2%
2009	36.5%	58.2%	94.1%	68.9%	18.7%	19.6%	18.2%	0.2%
2010	35.1%	57.6%	94.3%	68.9%	17.9%	19.1%	18.4%	0.2%
2011	34.7%	57.1%	94.7%	69.1%	17.5%	18.5%	18.7%	0.2%
2012	34.9%	56.2%	94.8%	69.9%	17.6%	19.0%	18.3%	0.1%
2013	34.2%	56.5%	94.2%	69.4%	18.1%	20.0%	17.4%	0.1%
2014	32.8%	55.8%	94.0%	69.8%	18.4%	20.5%	16.7%	0.1%
2015	32.0%	55.5%	94.5%	69.6%	18.0%	19.4%	16.7%	0.1%
2016	33.0%	55.8%	95.2%	70.1%	18.6%	19.0%	16.7%	0.1%

Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

In terms of per-claim services provided to injured employees, Table 5.7 shows that there have been significant reductions in the utilization of E/M Services, Physical Medicine Services, and Other Services over time.[18] Spinal surgeries also decreased, but at a more moderate rate. On the other hand, IR Exam

[18] While the unit of service is a bill for most services, the unit of service for physical medicine services is a 15-minute session or other billing unit specified by DWC.

and Report Services increased significantly. Utilization of Diagnostic, Pathology, and Laboratory services increased among lost-time claims until 2014 and has decreased noticeably since then.

Table 5.7: Average Number of Services per Claim Receiving Certain Professional Services by Claim Type, by Injury Year at 12 Months Post Injury

Injury Year	DMEPOS	Diag/Path/ Lab	E/M	IR Exam & Report	Other Services	Physical Medicine	Surgery - Other	Surgery - Spinal
Lost-time Claims								
2000	6.9	8.3	17.3	5.9	6.5	110.6	3.9	4.9
2001	7.4	9.1	18.8	7.6	7.0	125.2	4.3	5.1
2002	7.9	9.8	20.2	8.4	6.8	145.7	4.6	5.3
2003	11.4	10.1	16.8	8.8	6.1	139.0	4.5	4.8
2004	13.1	8.6	13.2	8.2	4.5	118.0	4.5	4.4
2005	13.7	9.1	12.7	9.2	4.6	107.3	5.1	5.0
2006	11.5	8.7	10.9	8.5	4.2	80.2	5.1	4.9
2007	10.9	8.7	10.2	8.3	4.0	72.7	5.0	4.7
2008	10.4	9.0	10.4	8.6	3.9	72.3	5.0	4.5
2009	9.9	8.7	10.1	8.5	3.7	69.3	5.0	4.5
2010	8.8	8.8	10.0	8.2	3.6	67.4	5.0	4.1
2011	8.5	9.7	9.9	8.2	3.6	65.3	5.2	3.9
2012	8.1	9.7	9.8	8.2	3.4	67.4	5.2	4.0
2013	7.8	10.1	10.0	8.6	3.5	70.4	5.0	3.6
2014	7.7	10.7	10.0	8.5	3.4	69.4	5.2	3.6
2015	7.5	9.3	9.8	8.0	3.4	62.7	5.1	3.8
2016	7.4	7.7	9.7	7.8	3.3	59.0	5.0	3.6
Medical-only Claims								
2000	3.0	2.6	3.8	2.3	3.1	38.0	1.7	3.6
2001	3.0	2.7	3.9	2.8	3.1	39.0	1.8	3.7
2002	3.1	2.6	3.7	2.9	3.1	39.0	1.7	3.7
2003	3.7	2.6	3.4	3.0	2.8	38.2	1.7	3.5
2004	4.2	2.5	3.0	2.9	2.2	32.1	1.7	3.2
2005	4.3	2.6	3.0	3.2	2.1	31.7	1.7	3.4
2006	4.1	2.6	3.0	3.0	2.1	27.4	1.8	3.5
2007	3.8	2.5	2.9	2.8	2.0	25.1	1.8	3.3
2008	3.7	2.5	2.9	2.8	2.0	24.5	1.7	2.9
2009	3.5	2.5	2.8	2.8	1.9	24.6	1.6	3.3
2010	3.3	2.6	2.8	2.8	1.9	25.3	1.6	2.7
2011	3.1	2.7	2.9	2.9	1.9	25.3	1.7	2.8
2012	3.0	2.6	2.9	2.8	1.9	26.1	1.7	2.6
2013	3.0	2.6	2.9	2.9	2.0	27.3	1.7	2.3
2014	2.8	2.7	2.9	2.9	2.0	28.1	1.7	2.4
2015	2.7	2.6	2.8	2.7	2.0	24.1	1.6	2.6
2016	2.8	2.6	2.8	2.7	2.1	23.5	1.7	2.6

Note: Non-payable functional reporting G-codes in the HCPCS Level II (required since 2013) are not included in the utilization metrics. Drug screening and drugs of abuse test G-codes (effective from 2015) are included in the Diag/Path/Lab service group. All other HCPCS Level II codes are included in the DMEPOS service group.
Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

Costs and Utilization in Workers' Compensation Healthcare Networks

Information from TDI's annual Workers' Compensation Network Report Card in September 2016 provided some insight into the early implementation of networks.[19] Thirteen certified networks (Alliance, 504-Dallas County Schools, Corvel, Coventry, First Health, Genex, IMO, Liberty, Sedgwick, Texas Star, Travelers, Zenith, and Zurich) had sufficient claim volume to be compared with each other and with non-network claims. The 2018 report card also included a separate group of networks authorized under Texas Labor Code Chapter 504.

The report referred to the group as "504-Others" and it included Brownsville ISD, Blackstone, City of San Angelo, Houston ISD, La Joya ISD, My Texas Direct, River View Provider Group, Valley Healthcare Network, the Trinity Occupational Program (Fort Worth ISD), and Weslaco ISD. The remaining eight certified networks that reported treating injured employees (according to TDI's October 2015 certified network data call) were combined into an "Other Networks" category for comparison purposes.

All cost and utilization findings presented in the report card had been statistically adjusted to account for differences in injury or claim types (that is, medical-only and lost-time claims) that might have occurred in these claim populations over time. As a result, changes in costs and utilization over time cannot be attributed to changes in the types of injuries sustained by injured employees, or the relative severity of those injuries. Cost and utilization differences between network and non-network outcomes, as well as between the networks, can be the result of a wide range of factors, such as differing methods of medical care delivery, fees, and utilization review.

In general, differences arose among individual networks. As Figure 5.4 shows, at six months post-injury, the average medical cost per claim for the networks was lower than for non-network claims. Generally, in 2018 the average medical cost per network claim was 4 percent lower than non-network claims, down 16 percent from 2016. Most networks experienced either cost reductions or lower increases than non-network, while non-network average costs decreased by 13 percent from 2016.

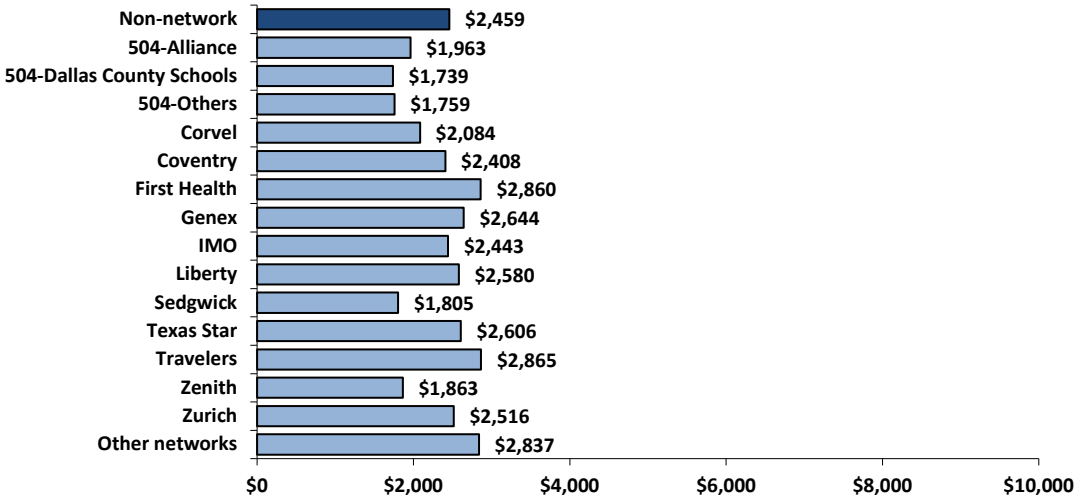
When medical costs are further broken down into professional, hospital, and pharmacy services, the average medical cost per claim for hospital services was larger for network claims than non-network claims at six months post injury (see Figure 5.5). However, network claims had lower professional and pharmacy costs per claim than non-network claims at six months post-injury (see Figure 5.6 and Figure 5.7). To be certified by TDI, a network must offer hospital, as well as professional services. HB 7 excluded the delivery of pharmacy services from networks, meaning that networks are not allowed to direct injured

[19] For more information about how individual networks compare with each other and with non-network claims on a variety of cost, utilization, access to care, satisfaction with care, return-to-work, and health outcomes measurements, see "*2018 Workers' Compensation Network Report Card Results*" by Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, available online at www.tdi.texas.gov/reports/wcreg/index.html.

employees to an "in-network" pharmacy, but rather injured employees are able to get prescriptions filled at any pharmacy participating in the Texas workers' compensation system.

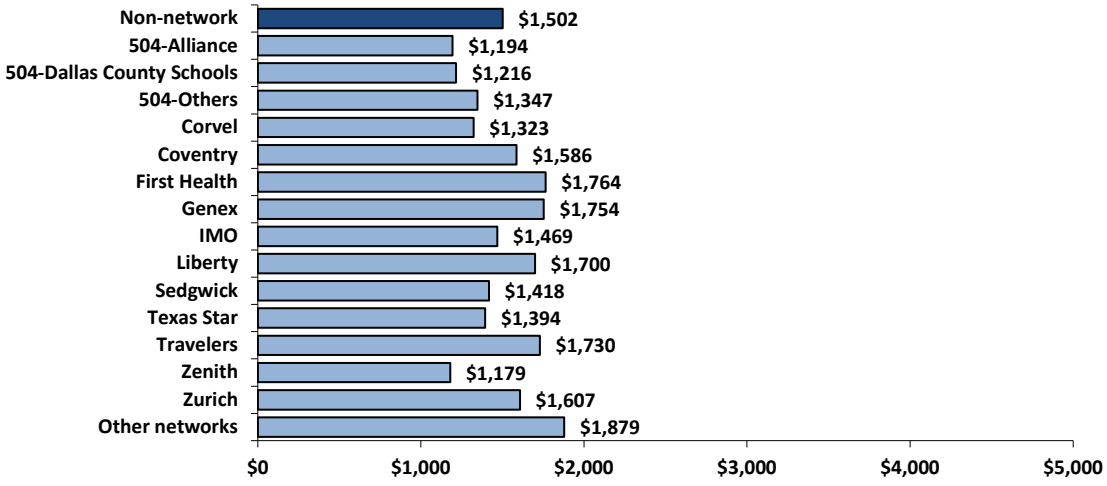
When TDI certified networks were starting to form, networks and hospitals engaged in fierce fee negotiations, which resulted in many hospital fee contracts being reimbursed at levels that were higher than what hospitals are paid for similar services under TDI's hospital fee guidelines.

Figure 5.4: Average Medical Cost per Claim, Network and Non-Network Claims, Six Months Post Injury



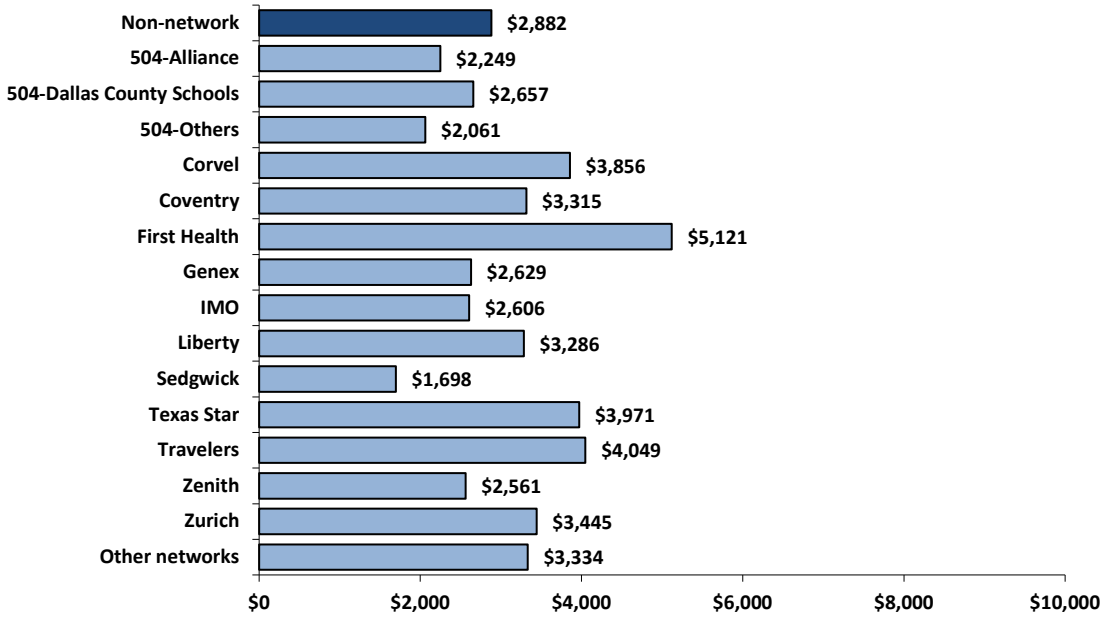
Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

Figure 5.5: Average Medical Cost per Claim for Professional Medical Services, Network and Non-Network Claims, Six Months Post Injury



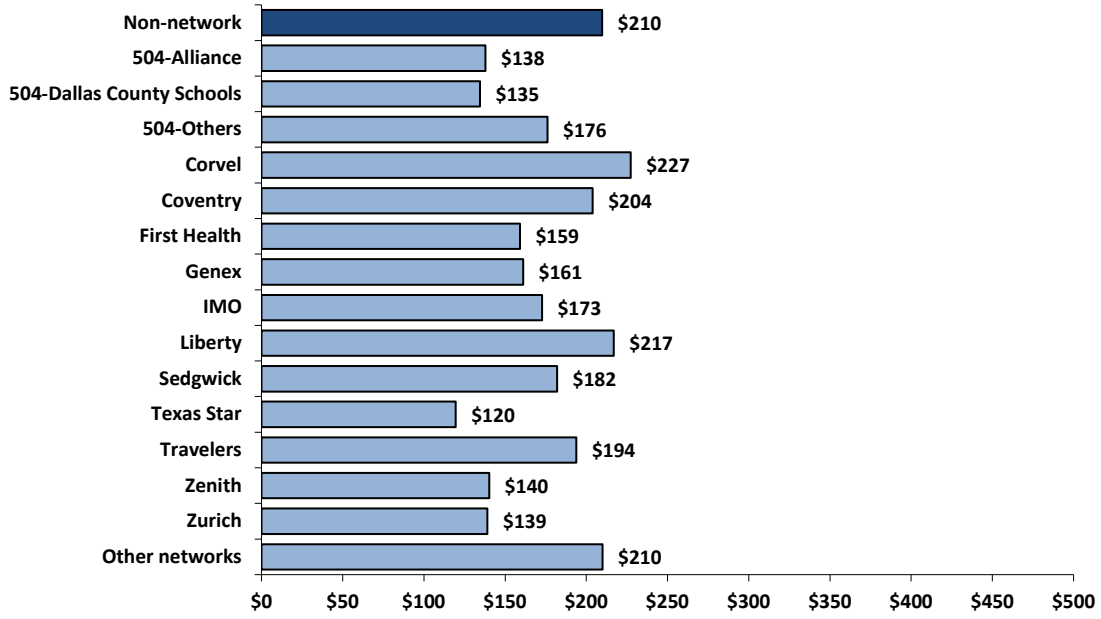
Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

Figure 5.6: Average Medical Cost per Claim for Hospital Medical Services, Network and Non-Network Claims, Six Months Post Injury



Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

Figure 5.7: Average Medical Cost per Claim for Pharmacy Medical Services, Network and Non-Network Claims, Six Months Post Injury



Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

Networks as a group have improved medical cost performance relative to non-network. Networks' average medical costs decreased by 16 percent ($2,801 in 2016, to $2,356 in 2018) but are now slightly lower than non-network average claim costs, which decreased by 13 percent ($2,813 in 2016, to $2,459 in 2018).

Generally, a higher percentage of injured employees in networks received professional and pharmacy services compared to non-network claims, while a lower percentage of network claims received hospital services (services in inpatient or outpatient hospital settings and ambulatory surgical centers).

When the percentage of injured employees receiving professional medical services is examined more closely, it appears that, with some exceptions, a higher percentage of injured employees in networks received E/M services, other physical medicine services, other diagnostic tests, and other professional services than non-network claims (see Table 5.8).

Networks generally provided more pharmacy services (in terms of writing more prescriptions to a higher percentage of similarly injured employees) than non-network care (see Table 5.9). This was likely due to the provision in HB 7 that allows certified networks to designate the specialties of doctors who serve as treating doctors (that is, primary care providers). As of this report, certified networks have only designated MDs or DOs as network treating doctors.

Chiropractors do not generally serve as network treating doctors, but rather as referral providers. This differs from non-network medical care, because the Texas Labor Code and DWC rules allow non-network employees to select chiropractors as well as MDs, DOs, podiatrists, dentists, and optometrists as treating doctors. As a result, the doctors who serve as treating doctors in networks are providers who are authorized to write prescriptions and use pharmacy services as part of their treatment protocols.

In addition to a higher percentage of network employees receiving certain types of professional medical services, networks generally provided higher amounts of service per claim in E/M services than non-network claims (see Table 5.10). Networks provide lower amounts of service per claim in other types of professional services, such as PM-Modalities, CT scans, MRIs, nerve conduction studies, and other diagnostic testing services than non-network claims.

Table 5.8: Percentage of Injured Employees Receiving Professional Medical Services, by Type of Professional Service, Six Months Post-Injury

Type of service	Non-network	504-Alliance	504-Dallas County Schools	504-Others	Corvel	Coventry	First Health	Genex	IMO	Liberty	Sedgwick	Texas Star	Travelers	Zenith	Zurich	Other networks
Evaluation & Management	95%	97%*	99%*	98%*	97%*	98%*	98%*	98%*	99%*	98%*	99%*	97%*	98%*	97%*	97%*	96%*
PM-Modalities	3%	6%*	3%	5%*	5%*	4%	4%*	6%*	4%*	3%	4%	4%	4%*	2%*	3%	4%*
PM-Other	25%	21%*	22%*	28%*	28%*	34%*	36%*	35%*	23%*	37%*	34%*	27%*	34%*	25%	31%*	38%*
DT-CT SCAN	2%	2%	1%*	2%*	2%*	2%*	3%	3%	3%	2%*	1%*	3%*	2%	2%	2%	2%
DT-MRI	13%	13%	13%	13%	9%*	14%*	12%	18%*	17%*	14%	14%	13%	14%	10%*	12%	18%*
DT-Nerve Conduction	1%	1%*	1%	1%*	2%*	1%*	1%	1%	1%	1%	1%	1%*	1%	1%	1%	1%
DT-Other	55%	54%*	64%*	62%*	50%*	56%*	61%*	63%*	60%*	58%*	52%*	55%*	62%*	50%*	57%*	62%*
Spinal Surgery	0.1%	0.1%	0.0%	0.0%	0.1%	0.1%	0.2%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%*	0.0%	0.1%	0.2%
Other Surgery	23%	18%*	10%*	16%*	25%*	21%*	24%	21%*	19%*	24%	15%*	27%*	26%*	28%*	24%	25%*
Path. & Lab	10%	7%*	3%*	6%*	5%*	11%*	11%*	8%*	6%*	6%*	8%*	9%*	12%*	6%*	12%*	13%*
All Others	77%	78%*	98%*	89%*	73%*	88%*	91%*	92%*	86%*	92%*	90%*	84%*	91%*	84%*	89%*	88%*

Note: The * denotes where differences between the network and non-network are statistically significant.
Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

Table 5.9: Percentage of Injured Employees Receiving Pharmacy Services, by Pharmaceutical Classification Group, Six Months Post-Injury

Type of service	Non-network	504-Alliance	504-Dallas County Schools	504-Others	Corvel	Coventry	First Health	Genex	IMO	Liberty	Sedgwick	Texas Star	Travelers	Zenith	Zurich	Other networks
Analgesics-Opioid	43%	38%*	47%	36%*	43%	40%*	44%	49%*	45%	46%*	35%*	47%*	44%	43%	43%	44%
Analgesics-Anti-inflammatory	61%	63%*	70%*	71%*	64%*	67%*	63%	68%*	64%*	71%*	68%*	60%	65%*	58%	65%*	67%*
Musculoskeletal therapy	35%	33%*	40%*	33%*	35%	40%*	42%*	39%*	35%	39%*	39%*	32%*	37%*	33%	37%	40%*
Central Nervous System Drugs	6%	4%*	4%	3%*	4%*	5%*	5%	7%	5%	7%	3%*	6%*	5%*	4%*	4%*	5%
Other	41%	38%*	29%*	32%*	40%	40%	39%	36%*	35%*	38%*	36%*	41%	39%	42%	43%	39%

Note: The * denotes where differences between the network and non-network are statistically significant.
Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

Table 5.10: Average Number of Professional Services Billed per Claim by Type of Professional Service, Six Months Post-Injury

Type of service	Non-network	504-Alliance	504-Dallas County Schools	504-Others	Corvel	Coventry	First Health	Genex	IMO	Liberty	Sedgwick	Texas Star	Travelers	Zenith	Zurich	Other networks
Evaluation & Management	4.0	3.7*	4.1	4.0	4.5*	4.7*	4.7*	4.9*	5.0*	5.1*	3.9	4.3*	4.9*	3.7*	4.6*	4.8*
PM-Modalities	9.6	8.4*	6.0*	6.4*	7.9*	6.7*	7.8	6.6*	7.2*	6.2*	6.2*	7.8*	7.7*	4.9*	12.6	8.2
PM-Other	31.9	23.0*	24.9*	30.4	29.8*	27.4*	30.2	33.7	31.2	32.6	24.5*	28.0*	34.3*	26.8*	32.4	33.2
DT-CT SCAN	1.5	1.3*	1.3	1.2*	1.5	1.5	1.4	1.3	1.4	1.5	1.3	1.5*	1.4	1.3	1.5	1.4
DT-MRI	1.4	1.3*	1.3	1.3*	1.5*	1.3*	1.3	1.2*	1.4	1.4	1.2*	1.3*	1.3*	1.3	1.5*	1.4
DT-Nerve Conduction	3.6	3.1	2.4	2.7	3.0	3.3	3.8	2.7	2.8	5.3*	2.9	2.8*	3.0	2.3	2.7	3.5
DT-Other	2.4	2.1*	2.2*	2.3	2.3	2.3	2.4	2.1*	2.5*	2.1*	1.9*	2.5*	2.4	2.2	2.5	2.6*
Spinal Surgery	4.4	3.2	0.0	2.0	5.8	5.9	2.3	2.7	3.3	3.8	3.2	4.3	2.1	0.0	6.0	2.8
Other Surgery	2.8	2.6*	2.6	2.8	2.9	2.9	3.2	3.0	2.9	3.3*	2.8	2.9	3.0	2.2*	3.3*	3.2*
Path. & Lab	6.0	5.6	7.0	5.1	5.4	6.5	5.6	6.8	7.0	7.1	5.2	7.2*	4.7*	4.6	6.0	5.0
All Others	10.8	8.8*	8.2*	8.9*	10.2	11.3	13.5*	12.1*	10.3	11.8	9.3*	10.7	14.1*	9.6	11.9	12.4*

Note: The * denotes where differences between the network and non-network are statistically significant.
Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

Effects of the Pharmacy Closed Formulary

DWC adopted one of the nation's first workers' compensation pharmacy closed formularies in September 2011. For injuries on or after September 1, 2011, pharmacy benefits were subject to the closed formulary. The closed formulary includes all FDA-approved drugs, except for drugs identified with a status of "N" in the current edition of the *Official Disability Guidelines Treatment in Workers' Comp, Appendix A – ODG Workers' Compensation Drug Formulary*, any compound that contains an "N" status drug, and any investigational or experimental drug. By rule, all drugs that are excluded from the closed formulary must be preauthorized by the insurance carrier prior to being dispensed by a pharmacy. Legacy claims (injuries that occurred prior to September 1, 2011) were subject to the closed formulary on September 1, 2013.

In general, N-drug usage is higher in older claims and prior to the formulary. Before the closed formulary in 2010, N-drugs accounted for 26 percent of the total pharmacy costs among newer claims (with three years or less maturity), and 37 percent of the total pharmacy costs among older claims (with more than three years maturity). By 2014, N-drugs accounted for only 3 percent of the total cost for new claims, and 11 percent of total cost for older claims. In 2017, N- drugs accounted for 2.3 percent of total cost for new claims, and 8.1 percent of total cost for older claims.

To evaluate the effects of the pharmacy closed formulary on cost and utilization, REG compared a group of pre- and post-formulary claims.[20] Accounting for the first 24 months of service from the injury date, Table 5.11 shows a significant drop in the cost and utilization of N-drugs among the post-formulary group (beginning with the 2012 fiscal injury year covering new claims from September 1, 2011, to August 31, 2012). Total N-drug costs dropped by 78 percent, and their share in all pharmacy costs decreased by 74 percent (from 20 percent to 5 percent) after adopting the closed formulary. The total number of N-drug prescriptions decreased by 77 percent and the average cost per N-drug prescription dropped by 5 percent.

Table 5.11: Cost and Utilization of N-drugs in Sample Cohorts Before and After the Pharmacy Closed Formulary

	Fiscal injury year					2011-2012 percentage change
	2009	2010	2011	2012	2013	
Total cost of N-drug prescriptions	$11,852,476	$11,293,506	$8,912,618	$1,950,151	$1,007,033	-78%
Total cost of Other drug prescriptions	$37,764,273	$34,969,165	$35,632,424	$36,069,681	$35,663,481	1%
Number of N-drug prescriptions	113,333	98,251	74,081	16,974	8,979	-77%
Number of Other drug prescriptions	575,131	559,253	591,017	576,221	536,889	*-3%*
Number of N-drug claims	31,556	29,835	24,286	8,120	4,181	-67%
Number of Other drug claims	101,947	99,746	103,219	102,663	95,622	-1%
N-drug cost as a percentage of total drug costs	23.89%	24.41%	20.01%	5.13%	2.75%	-74%
Average cost per N-drug prescription	$105	$115	$120	$115	$112	-5%
Average N-drug cost per claim	$376	$379	$367	$240	$241	-35%

Note: A fiscal injury year begins on September 1 of the previous year and ends on August 31 of the injury year.
Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

While the closed formulary significantly reduced N-drug cost and utilization, it also led to slight decreases in the utilization for other drugs. This indicates that the closed formulary did not simply shift N-drug usage to non-N drugs. The report also shows a significant drop in N-drug usage among legacy claims that were subject to the formulary in September 2013.

Cost and Utilization of Compounded Drugs

Drug compounding is a specialty service that provides injured employees with certain pharmaceutical products in dosage forms, strength, or delivery methods that are not available commercially. Most compounded drugs are topical pain medications, for which there is a growing debate about their

[20] For more details, see REG's report titled "*Impact of the Texas Pharmacy Closed Formulary*" (July 2016) available at www.tdi.texas.gov/reports/wcreg/index.html.

effectiveness and cost. This section presents estimates of the number and cost of compounded drugs in the Texas workers' compensation system.

One difficulty in analyzing compounded drugs, is the fact that pharmacy bills do not have data that identifies them as a compounded drug prescription. However, Texas regulation requires each ingredient (billing line) of a compounded drug to be listed and calculated separately (see 28 Texas Administrative Code §134.502). Therefore, REG used chemicals and pharmaceutical adjuvants as an indicator for compounding and separated bills that contained one or more billing lines of these ingredients as compounded drugs.

The number of compounded drug prescriptions increased from 18,491 in 2010, to 21,486 in 2014, and then decreased to 5,246 in 2017 (see Table 5.12). The total cost of compounded drugs increased substantially from about $6 million in 2010, to $14 million in 2014, and $11.8 million in 2016.[21] However, it decreased significantly in 2017 to about $2.5 million. The average cost of a compounded drug also increased from $320 in 2010, to $780 in 2016, but it also decreased significantly in 2017 to $476. The decrease of compounded drugs in 2017 was related to DWC's compounded drug audit, and the June 2016 SOAH medical fee dispute decision that compounded drugs were investigational or experimental and therefore required preauthorization. A new rule, adopted by DWC in April 2018 excludes all prescription drugs created through compounding prescribed and dispensed on or after July 1, 2018, from the closed formulary.

Table 5.12: Number and Cost of Compounded Drug

Service Year	Number of Compounded Drugs	Number of Ingredients (Lines)	Total Cost	Average Cost per Compounded Drug	Average Number of Ingredients (Lines) per Compounded Drug
2010	18,491	51,037	$5,915,571	$320	2.8
2011	18,347	55,993	$6,125,896	$334	3.1
2012	20,563	69,269	$9,287,207	$452	3.4
2013	19,675	60,383	$13,043,228	$663	3.1
2014	21,486	68,721	$14,048,517	$654	3.2
2015	16,488	57,690	$12,210,341	$741	3.5
2016	15,084	47,968	$11,766,394	$780	3.2
2017	5,246	16,031	$2,496,507	$476	3.1

Note: Bill lines with no payment are included if there are one or more ingredients with non-zero payment in the compounded drug.
Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

[21] See also REG's report "Baseline Evaluation of the Utilization and Cost Patterns of Compounded Drugs" published in May 2017 at www.tdi.texas.gov/reports/wcreg/documents/compdrugs2017.pdf.

Summary

Overall, the average medical cost per claim for professional services decreased significantly from the peak in 2002 until 2007. Stabilized costs and the substantial reduction in utilization of care between 2001 and 2007 were directly related to various reform measures of HB 2600 and HB 7, especially the 2003 adoption of professional services medical fee guidelines and the expanded preauthorization requirement for physical medicine services.

Over the same period, much of the reduction in total medical payments occurred because of reduced injury rates and the total number of reportable claims filed with DWC. Overutilization and medical cost inflation in Texas also decreased due to increased scrutiny by insurance carriers in terms of compensability and medical necessity issues, changes in reimbursement amounts, adoption of the Medicare payment policies in 2003, and treatment guidelines.

Nonetheless, a combination of decreasing number of claims, increasing utilization in some professional and hospital services, and the 2008 professional service medical fee guideline's annual adjustments for inflation resulted in increasing average costs between 2008 and 2011. Between 2011 and 2013, average costs remained stable as Medicare prices stabilized. From 2014, average costs per claim decreased as the number of claims decreased substantially among lost-time claims and the price per service decreased among medical-only claims. Hospital service costs continued to outpace professional service costs. From 2011, pharmacy costs decreased substantially because of the pharmacy closed formulary.

During the 2005 legislative session, as well as during the adoption of workers' compensation network rules and certification processes at TDI, various system participants expressed concerns about whether implementing a new "managed care" health care delivery model in the Texas workers' compensation system would result in employees receiving significantly less medical care or poor quality medical care. Twelve years after implementing the first network in 2006, it appears that injured employees in networks are receiving as much medical care as non-network claims and, in some cases, earlier medical care than non-network claims with similar types of injuries.

The most recent Network Report Card in 2018 indicated that networks delivered these medical services sooner and at lower costs. DWC and REG will continue to monitor the impact of networks, medical fee guidelines, treatment guidelines, the pharmacy closed formulary, and compound drug rules on medical costs and utilization of care outcomes for Texas injured employees.

6. Access to Medical Care

One of the primary goals of an effective workers' compensation program is to ensure that injured employees receive prompt and appropriate medical treatment. Delayed medical care may harm health outcomes, result in increased costs, and cause delays in returning injured employees to work. Obtaining timely medical care in workers' compensation can be a complex process. That process involves reporting the injury, determining compensability and extent of injury, utilization reviews, preauthorization of services, and others. Once the workers' compensation claim is found to be compensable, timely and appropriate medical care depends on the availability of health care providers who accept workers' compensation patients.

Policymakers and system participants continue to express the need for increased numbers of health care providers in the Texas workers' compensation system. To measure access to care, the REG conducted an extensive study of the availability and participation of treating doctors in the workers' compensation system and evaluated the accessibility and timeliness of medical care.[22] Covering the period from 2005 to 2017, the study's results indicate that access to care conditions for Texas workers' compensation patients have improved, but some access challenges exist.

Access to Care Measurements and Data

REG's report measures the availability of care by the rate of physician (either MD or DO) participation in treating work-related injuries and the rate of physician retention. The report also measures the accessibility of care by the timeliness of first non-emergency medical treatment.

The workers' compensation participation rate is the number of participating physicians in workers' compensation divided by the total number of active physicians in Texas. To survey physician supply conditions, DWC obtained annual lists of licensed physicians from the Texas Medical Board (TMB). Then, active physicians in the TMB lists were matched to DWC medical billing and payment data to measure workers' compensation participation. "Active" physicians are those licensed by TMB, whose registration status is active, not in military practice, directly providing patient care, and whose practice locations are in Texas. "Participating" physicians are those who submitted medical bills for one or more workers' compensation patients in a given year.

In addition to physicians, the report examines the availability and participation by non-physician health care providers, such as DCs, physician assistants (PAs) functioning under physician's delegation, physical therapists (PTs), and occupational therapists (OTs). About 75 percent of workers' compensation health care providers are physicians, and they provide the first treatment after injury in about 90 percent of the claims. However, in recent years, more injured employees are receiving first treatment from non-physician health care providers, especially PAs.

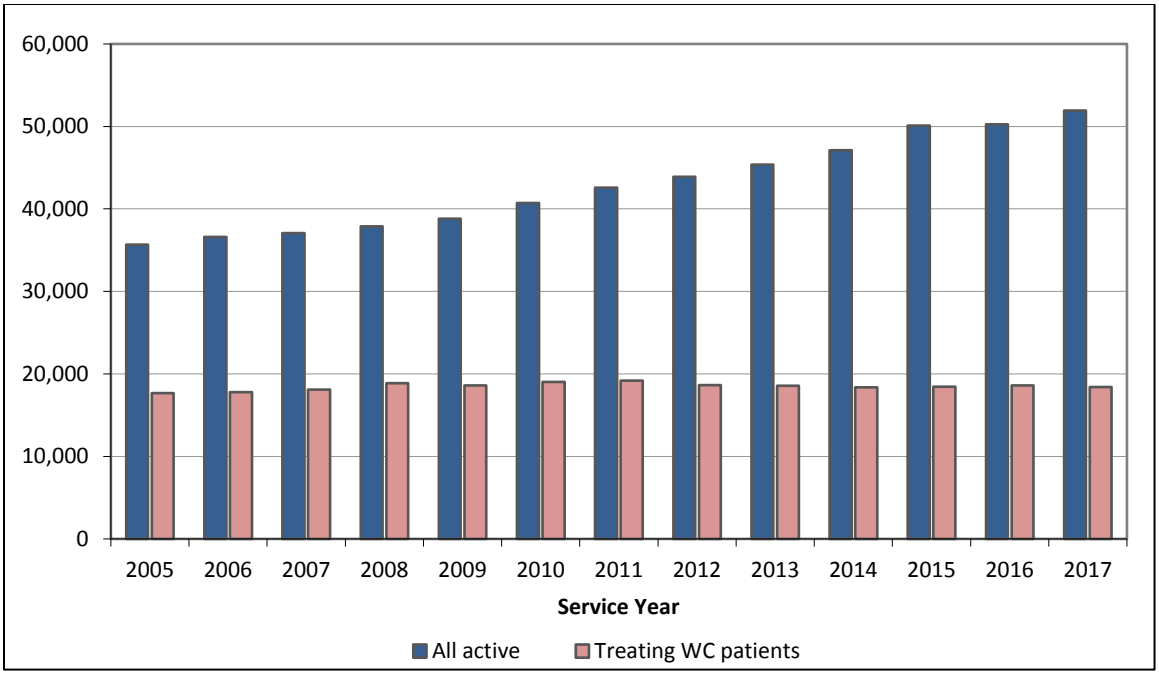
[22] For more details, see REG's access to medical care reports and updates available at www.tdi.texas.gov/reports/wcreg/index.html.

For non-emergency professional services, access to care is measured by how timely an initial treatment was received after an injury. Timeliness of care is defined by the number of days from the date of injury to the first non-emergency treatment. All claims are evaluated within six months from the injury date. This timeliness measure is influenced by the number of claims (demand) and the number of treating physicians (supply).

Physician Participation in Workers' Compensation

The total number of active physicians in Texas increased steadily, from 35,659 in 2005, to 51,930 in 2017, at an average annual growth rate of 3.2 percent (see Figure 6.1). At the same time, the number of physicians participating in workers' compensation increased by 4 percent, from 17,656 in 2005, to 18,419 in 2017.

Figure 6.1: Number of Active and Workers' Compensation Participating Physicians

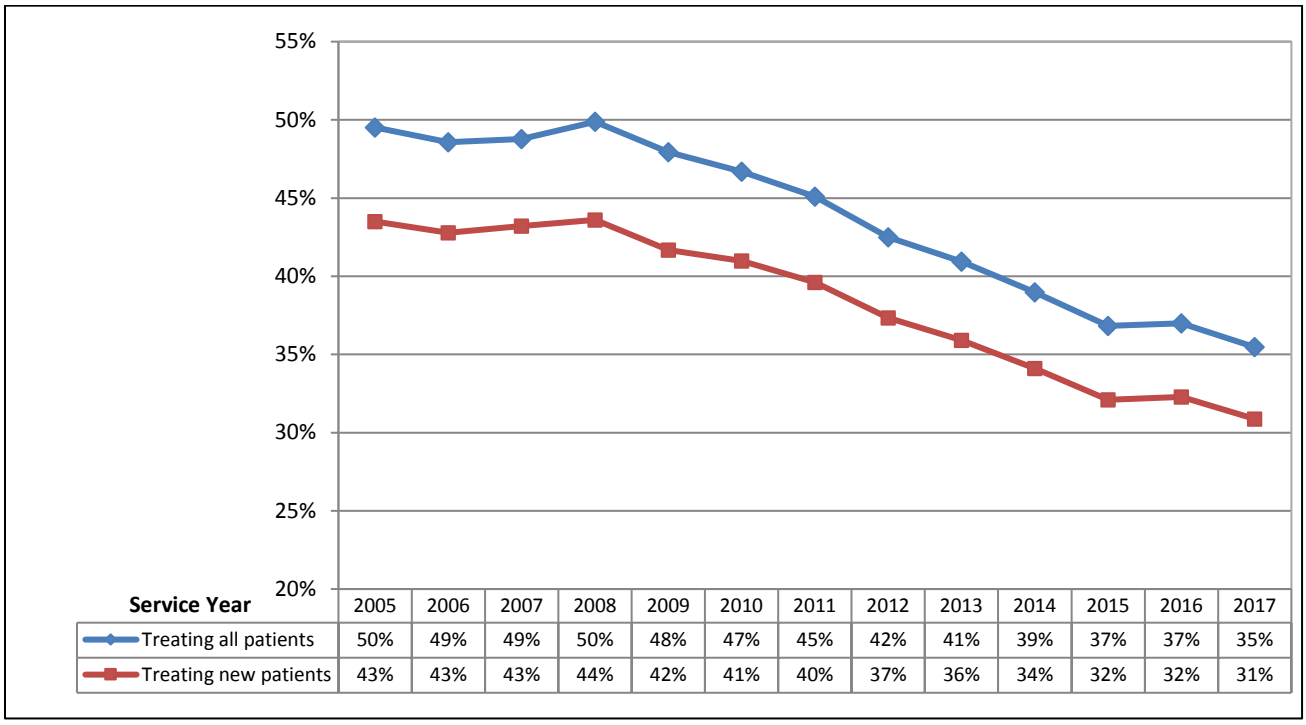


Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

Because the total number of active physicians in Texas grew faster than the number of physicians participating in workers' compensation, the workers' compensation participation rate for physicians decreased from 50 percent in 2005, to 35 percent in 2017 (see Figure 6.2). Figure 6.2 shows the participation rate for workers' compensation physicians in a service year treating all workers' compensation patients (both old and new injury claims) and the rate based on new patients only. The latter group may also treat both old and new patients but excludes physicians who treat only established patients whose injuries occurred in prior years.

The participation rate began declining steadily after 2008, mostly because of the relatively rapid increase in the aggregate number of doctors in Texas than from actual reductions in the number of participating doctors (see Figures 6.1 and 6.2). The number of participating doctors has been stable since 2008.

Figure 6.2: Participation Rate - Percent of Workers' Compensation Treating Physicians Among Active Physicians



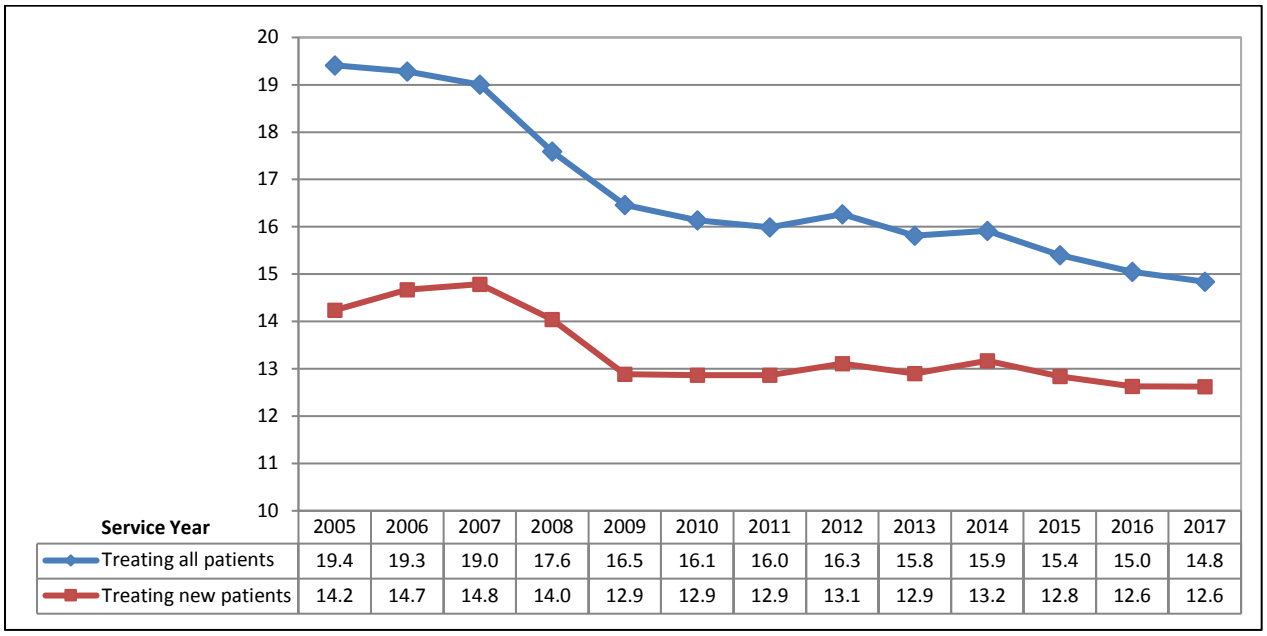
Service Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Treating all patients	50%	49%	49%	50%	48%	47%	45%	42%	41%	39%	37%	37%	35%
Treating new patients	43%	43%	43%	44%	42%	41%	40%	37%	36%	34%	32%	32%	31%

Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

While the number of physicians participating in workers' compensation did not change greatly, the number of workers' compensation claims decreased steadily. The number of all claims decreased from 342,734 total claims in 2005 (all those that received at least one health care service in 2005 regardless of the year of injury), to 273,328 in 2017.[23] As a result, the average number of workers' compensation patients per participating physician decreased from 19.4 patients per physician in 2005, to 14.8 patients per physician in 2017, a 24 percent decrease (see Figure 6.3). Considering new claims only, there were 220,784 new claims in 2005, which decreased to 202,406 in 2017. The average number of new claims per participating physician decreased from 14.2 in 2005, to 12.6 in 2017.

[23] Note that these claim numbers are calculated using professional service bills only. And they do not match the number of claims reported to DWC according to Texas Labor Code, which includes only fatalities, occupational diseases, and injuries that result in at least one day of lost time.

Figure 6.3: Average Number of Claims per Workers' Compensation Participating Physician



Service Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Treating all patients	19.4	19.3	19.0	17.6	16.5	16.1	16.0	16.3	15.8	15.9	15.4	15.0	14.8
Treating new patients	14.2	14.7	14.8	14.0	12.9	12.9	12.9	13.1	12.9	13.2	12.8	12.6	12.6

Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

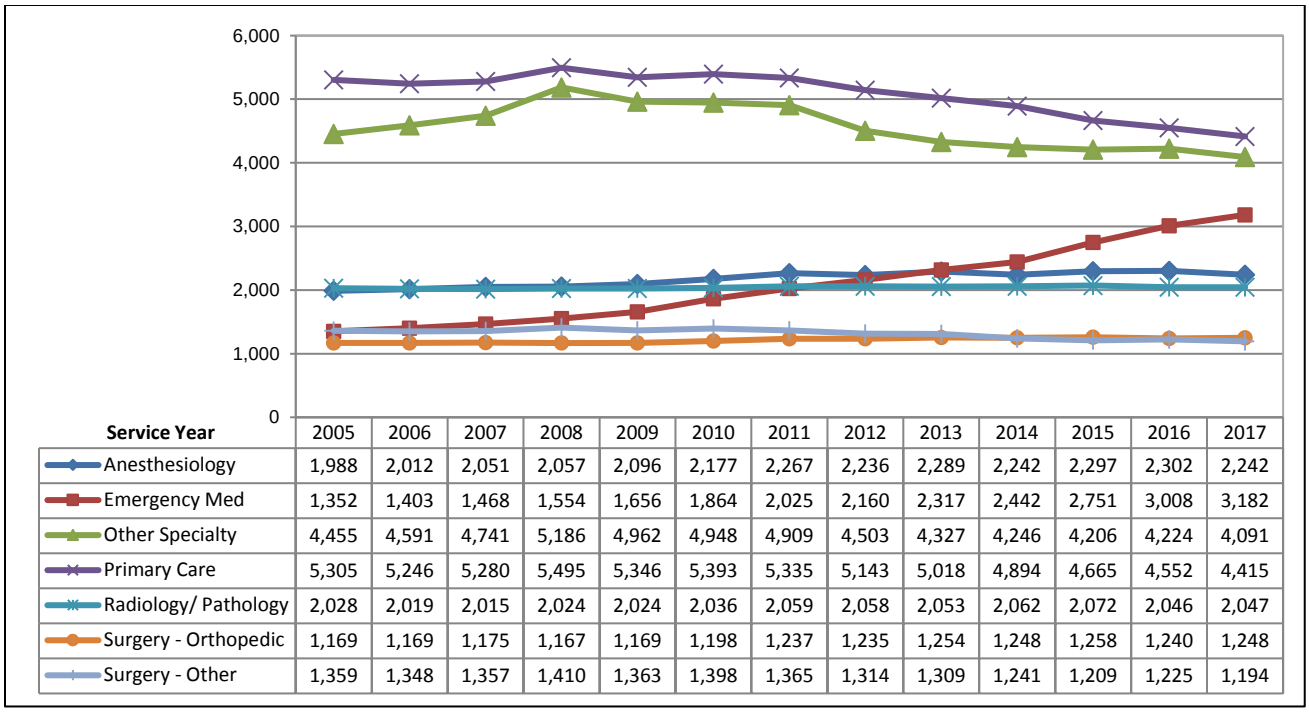
Physician Workers' Compensation Participation by Specialty

Participation rates are not identical across physicians with different specialties. A critical factor in the initial access to non-emergency medical care is the workers' compensation participation of primary care physicians. In 2005, there were 5,305 primary care physicians participating in workers' compensation. In 2017, this decreased to 4,415 (see Figure 6.4). Participation rates of primary care physicians decreased from 50 percent in 2005, to 32 percent in 2017 (see Figure 6.5). In the same period, the total active primary care physicians in Texas increased by 33 percent, from 10,548 in 2005, to 13,994 in 2017.

The decrease in primary care physicians' participation in workers' compensation was somewhat relieved by increased participation from emergency medicine specialists, whose workers' compensation participation number increased from 1,352 in 2005, to 3,182 in 2017. Emergency medicine physicians are a small group relative to others, but they are the fastest growing participant group. A related trend is the rapid participation growth by PAs, discussed below.

Also increasing in number are radiology and pathology, anesthesiology, and orthopedic surgeons participating in workers' compensation. Eighty three percent of active orthopedic surgeons and 86 percent of emergency medicine physicians participated in 2017, while only 18 percent of other specialty physicians participated in the system. To some extent, this is expected because "Others" include specialties that are less relevant for workers' compensation, such as pediatrics, and obstetrics and gynecology (OB/GYN).

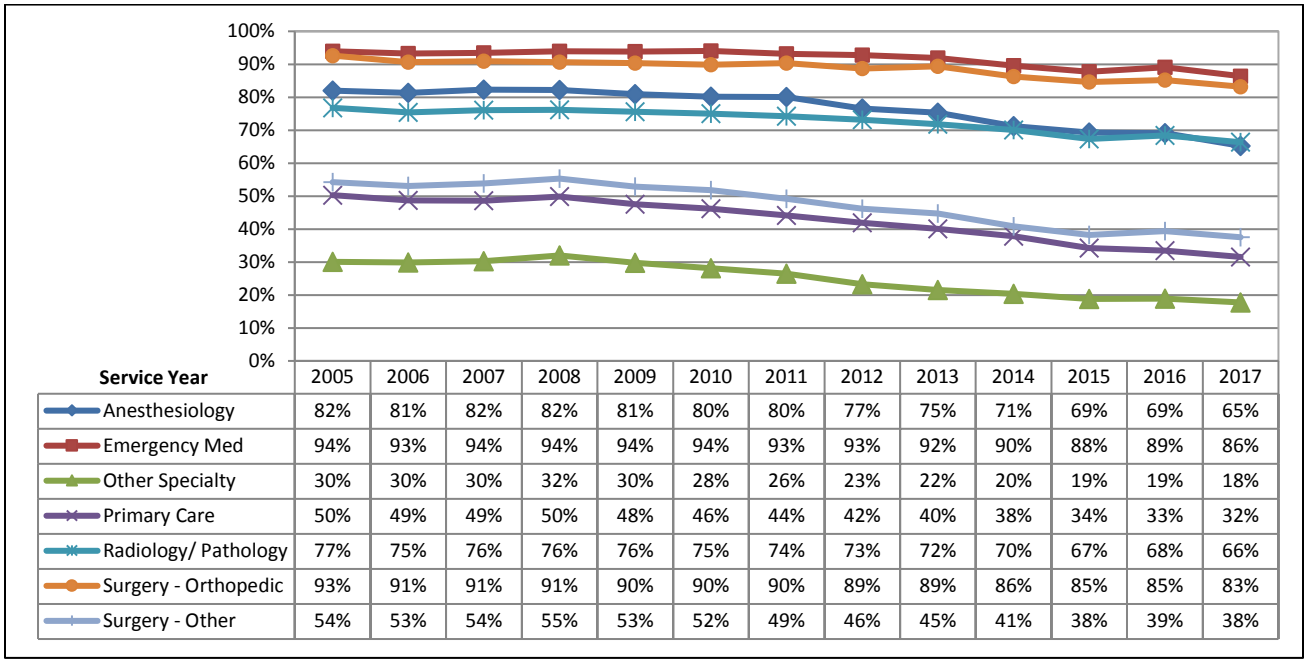
Figure 6.4: Number of Workers' Compensation Participating Physicians by Specialty



Service Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Anesthesiology	1,988	2,012	2,051	2,057	2,096	2,177	2,267	2,236	2,289	2,242	2,297	2,302	2,242
Emergency Med	1,352	1,403	1,468	1,554	1,656	1,864	2,025	2,160	2,317	2,442	2,751	3,008	3,182
Other Specialty	4,455	4,591	4,741	5,186	4,962	4,948	4,909	4,503	4,327	4,246	4,206	4,224	4,091
Primary Care	5,305	5,246	5,280	5,495	5,346	5,393	5,335	5,143	5,018	4,894	4,665	4,552	4,415
Radiology/ Pathology	2,028	2,019	2,015	2,024	2,024	2,036	2,059	2,058	2,053	2,062	2,072	2,046	2,047
Surgery - Orthopedic	1,169	1,169	1,175	1,167	1,169	1,198	1,237	1,235	1,254	1,248	1,258	1,240	1,248
Surgery - Other	1,359	1,348	1,357	1,410	1,363	1,398	1,365	1,314	1,309	1,241	1,209	1,225	1,194

Note: "Other Specialty" includes all other specialties such as ophthalmology, cardiovascular diseases, physical medicine, neurology, pediatrics, and OB/GYN.
Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

Figure 6.5: Workers' Compensation Participation Rates by Specialty



Service Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Anesthesiology	82%	81%	82%	82%	81%	80%	80%	77%	75%	71%	69%	69%	65%
Emergency Med	94%	93%	94%	94%	94%	94%	93%	93%	92%	90%	88%	89%	86%
Other Specialty	30%	30%	30%	32%	30%	28%	26%	23%	22%	20%	19%	19%	18%
Primary Care	50%	49%	49%	50%	48%	46%	44%	42%	40%	38%	34%	33%	32%
Radiology/ Pathology	77%	75%	76%	76%	76%	75%	74%	73%	72%	70%	67%	68%	66%
Surgery - Orthopedic	93%	91%	91%	91%	90%	90%	90%	89%	89%	86%	85%	85%	83%
Surgery - Other	54%	53%	54%	55%	53%	52%	49%	46%	45%	41%	38%	39%	38%

Note: "Other Specialty" includes all other specialties such as ophthalmology, cardiovascular diseases, physical medicine, neurology, pediatrics, and OB/GYN.
Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

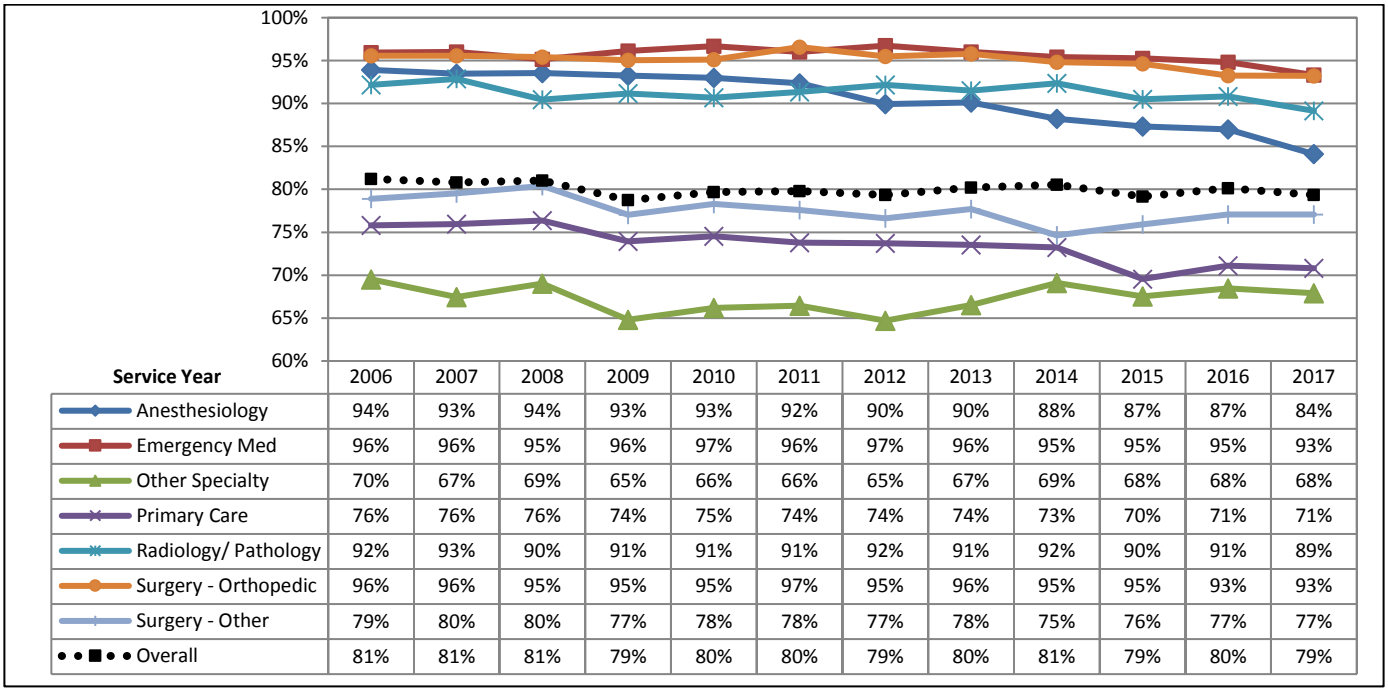
Retaining Physicians as Workers' Compensation Participants

One of the major goals of the workers' compensation system is to maintain a sufficient and effective number of participating physicians. The group of physicians treating injured employees does not remain static from year to year. In a given year, some physicians decide to leave the workers' compensation provider market, while others enter as new providers. While it is difficult to identify specific reasons for exit and entry, retention rates reveal a general trend.

Retention rate is measured as the percentage of a prior year's workers' compensation participants who also participated in workers' compensation in the following year. From 2006 to 2017, the overall retention rate remained stable at around 80 percent (see Figure 6.6). In other words, about 80 percent of all physicians in one year continued to treat injured employees in the following year. That retention rate is a relatively high percentage, considering changes in practice patterns. This implies that, for any given year, 20 percent of the participants did not treat any workers' compensation patients in the following year. However, new physicians entering the system are not reflected in the retention measure.

Retention rates also differ across medical specialties. Retention rates for physicians with specialties in orthopedic surgery, emergency medicine, and radiology and pathology were above 90 percent (see Figure 6.6). Anesthesiology and primary care specialties showed a noticeable decline in the retention rate, while the rate increased significantly for emergency medicine specialists. The retention rate for primary care physicians decreased from 81 percent in 2006, to 71 percent in 2017.

Figure 6.6: Year-to-Year (Consecutive) Retention Rate by Specialty



Service Year	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Anesthesiology	94%	93%	94%	93%	93%	92%	90%	90%	88%	87%	87%	84%
Emergency Med	96%	96%	95%	96%	97%	96%	97%	96%	95%	95%	95%	93%
Other Specialty	70%	67%	69%	65%	66%	66%	65%	67%	69%	68%	68%	68%
Primary Care	76%	76%	76%	74%	75%	74%	74%	74%	73%	70%	71%	71%
Radiology/ Pathology	92%	93%	90%	91%	91%	91%	92%	91%	92%	90%	91%	89%
Surgery - Orthopedic	96%	96%	95%	95%	95%	97%	95%	96%	95%	95%	93%	93%
Surgery - Other	79%	80%	80%	77%	78%	78%	77%	78%	75%	76%	77%	77%
Overall	81%	81%	81%	79%	80%	80%	79%	80%	81%	79%	80%	79%

Note: "Other specialty" includes all other specialties such as ophthalmology, cardiovascular diseases, physical medicine, neurology, pediatrics, and OB/GYN.
Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

Participation by Top 20 Percent Physicians

Retention rates presented above are calculated based on all physicians who treated at least one injured employee in a year. How one defines the level of workers' compensation participation may influence the number of participating physicians, and the retention rate because workers' compensation medical expenses, as well as physician participation, are highly skewed by a small number of claims and doctors. We have defined a Top 20 Percent physician by the number of workers' compensation patients they treat in a given year. On average, a Top 20 Percent physician treats between 22 and 47 different injured employees in a year. In 2017, there were 3,751 physicians in the Top 20 Percent group, and they accounted for 87 percent of the total medical payments to physicians.

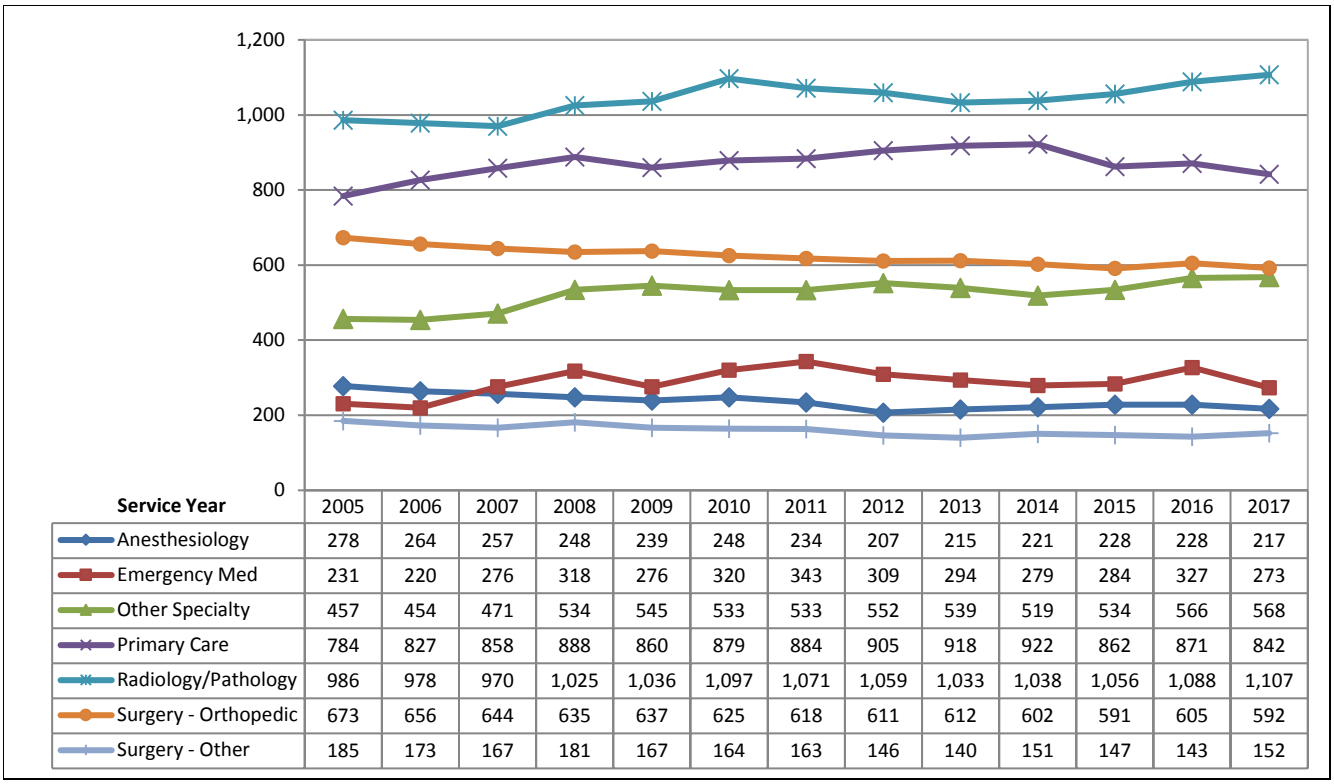
Top 20 Percent physicians have higher workers' compensation participation and retention rates than the lower 80 percent, which includes physicians who treat injured employees only occasionally. The annual exit rate of the Top 20 Percent group is 3 percent, resulting in a 97 percent annual retention rate. In addition, about 85 percent of these physicians continue to be in the Top 20 Percent in the following year. They account for more than 87 percent of total medical payments, and continue to participate in workers' compensation year in and year out. This reflects the fact that the workers' compensation health care market is highly specialized, due to the nature of occupational injuries, reimbursement and review process, regulatory rules, and the initial investment costs for the providers (training for disability exams and reports, adapting to rules and procedures, special devices, etc.). This concentrated nature of the workers' compensation health care market is similar across all states.[24]

The composition of the Top 20 Percent physicians participating in workers' compensation by specialty also indicates that they have market incentives different from those of the 80 percent of physicians with a lower number of claims treated. Figure 6.7 shows the absolute numbers of the Top 20 Percent physicians by specialty. Primary care, radiology and pathology, emergency medicine, and other specialty physicians increased, while orthopedic surgery, other surgery, and anesthesiology physicians decreased. Orthopedic surgeons decreased from 19 percent in 2005 to 16 percent of the total in 2017.

Significant changes occurred in 2005 when major workers' compensation reforms were implemented. It is noteworthy that primary care physicians represent a larger share of the Top 20 Percent since 2005, which is consistent with specific changes made in the 2008 Medical Fee Guideline to give incentives to primary care and encourage health care provider participation in the Texas workers' compensation system. Although primary care physicians participate in workers' compensation at a decreased rate overall, their share in the Top 20 Percent group of providers has increased slightly from 21.8 percent in 2005 to 22.4 percent in 2017.

[24] Bernacki et al. reports that 3.8% of physicians accounted for 78% of medical costs in Louisiana in 1998–2002. See Bernacki, Tao, and Yuspeh, "The impact of cost-intensive physicians on workers' compensation", *Journal of Occupational and Environmental Medicine*, 52(1): 22–29, January 2010.

Figure 6.7: Number of Participating Physicians by Specialty – Top 20 Percent



Service Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Anesthesiology	278	264	257	248	239	248	234	207	215	221	228	228	217
Emergency Med	231	220	276	318	276	320	343	309	294	279	284	327	273
Other Specialty	457	454	471	534	545	533	533	552	539	519	534	566	568
Primary Care	784	827	858	888	860	879	884	905	918	922	862	871	842
Radiology/Pathology	986	978	970	1,025	1,036	1,097	1,071	1,059	1,033	1,038	1,056	1,088	1,107
Surgery - Orthopedic	673	656	644	635	637	625	618	611	612	602	591	605	592
Surgery - Other	185	173	167	181	167	164	163	146	140	151	147	143	152

Note: "Other specialty" includes all other specialties such as ophthalmology, cardiovascular diseases, physical medicine, neurology, pediatrics, and OB/GYN.
Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

Non-Physician Participation in Workers' Compensation

In addition to physicians, other health care providers such as DCs, PAs, PTs, and OTs also provide medical services to injured employees. The number of DCs treating injured employees decreased from 4,743 (13 percent of total health care providers) in 2005, to 1,312 (4 percent of total health care providers) in 2017 (see Table 6.1). Participation by other health care provider types have also experienced measurable changes. For example, participation by PAs more than doubled, from 1,040 participants in 2005, to 2,527 in 2017 (8 percent of total health care providers).

Table 6.1: Participating Health Care Providers in the Professional Billing Data, by Service Year

Service Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
DC	4,743	3,076	2,801	2,746	2,356	2,181	1,957	1,672	1,712	1,675	1,536	1,362	1,312
Participating MD/DO	17,656	17,788	18,087	18,893	18,616	19,014	19,197	18,649	18,567	18,375	18,458	18,597	18,419
Other billing MD/DO	8,469	9,748	11,138	11,983	10,657	9,852	8,973	8,018	7,408	7,793	7,148	6,889	5,849
PA	1,040	1,091	1,210	1,316	1,320	1,518	1,737	1,980	2,065	2,168	2,272	2,484	2,527
PT/OT	5,241	4,354	4,419	4,062	3,786	3,611	3,693	3,808	3,755	3,923	3,914	4,176	4,279
Total	37,149	36,057	37,655	39,000	36,735	36,176	35,557	34,127	33,507	33,934	33,328	33,508	32,386

Note: "Other billing MD/DO" includes out-of-state physicians and those who are military or non-direct patient care physicians but submitted one or more workers' compensation bills.
Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

On the first day of treatment after injury, about 86 percent of the injured employees received services from an MD or DO (see Table 6.2). Since 2005, a decreasing share of injured employees receive services from DCs. On the other hand, the share of PAs increased rapidly, from 1 percent of the injured employees seeing a PA on the first day of treatment in injury year 2005, to 12 percent of the injured employees seeing a PA in injury year 2016.

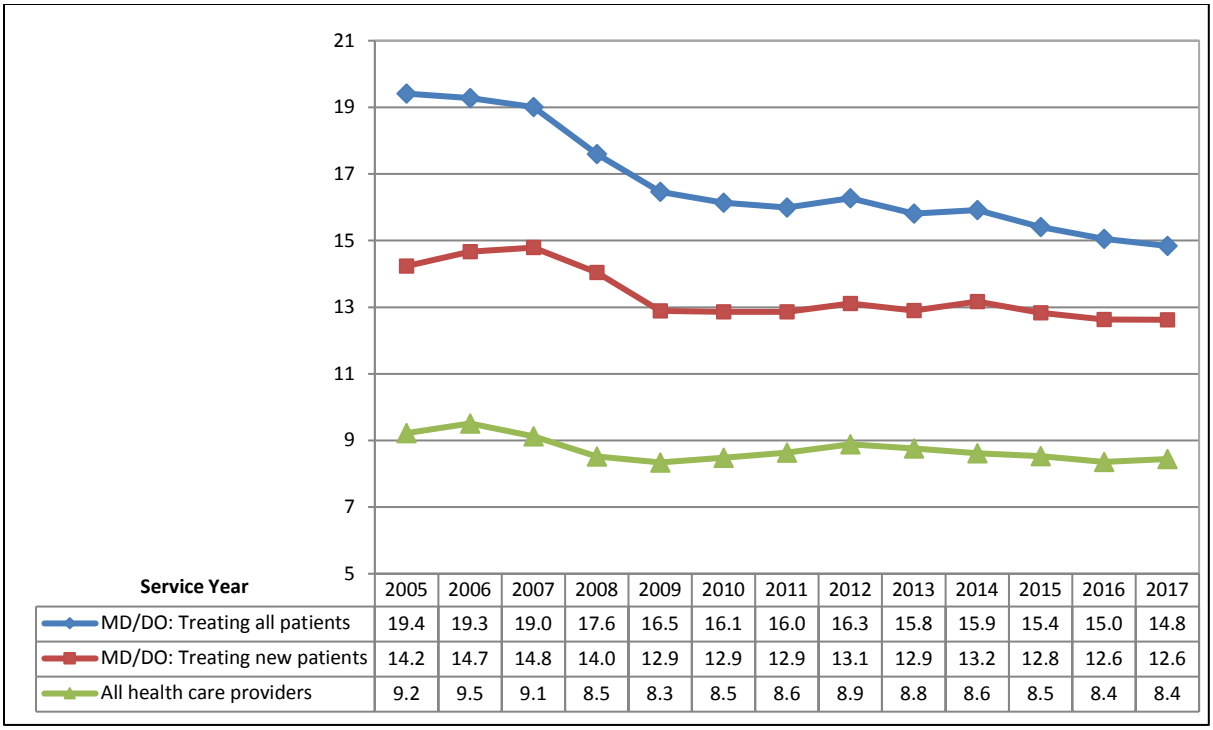
Table 6.2: Share of Health Care Providers on First Visit, New Claims by Injury Year

Injury Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
DC	6%	4%	3%	3%	2%	2%	2%	2%	1%	1%	2%	1%
MD/DO	92%	94%	95%	95%	95%	94%	93%	90%	90%	89%	88%	86%
PA	1%	1%	1%	1%	2%	4%	5%	10%	10%	10%	11%	12%
PT/OT	6%	6%	5%	4%	3%	3%	2%	3%	4%	4%	4%	5%

Notes: A patient may see multiple health care providers on the same day and the sum of percentages may exceed 100%. Figures were calculated considering services within six months from injury. Injury year 2016 data covers services up to June 30, 2017.
Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

Measures for access to medical care are improved by the availability of, and participation by, non-physician health care providers. When non-physician health care providers were considered in addition to physicians, the number of injured employees per health care provider stayed stable since 2005, at around nine injured employees per participating physician (see Figure 6.8). While there is concern regarding the decreasing number of participating primary care physicians, the increase in emergency medicine specialists and PAs appear to offset those declining numbers of workers' compensation participating primary care physicians.

Figure 6.8: Number of Injured Employees per Health Care Provider



Service Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
MD/DO: Treating all patients	19.4	19.3	19.0	17.6	16.5	16.1	16.0	16.3	15.8	15.9	15.4	15.0	14.8
MD/DO: Treating new patients	14.2	14.7	14.8	14.0	12.9	12.9	12.9	13.1	12.9	13.2	12.8	12.6	12.6
All health care providers	9.2	9.5	9.1	8.5	8.3	8.5	8.6	8.9	8.8	8.6	8.5	8.4	8.4

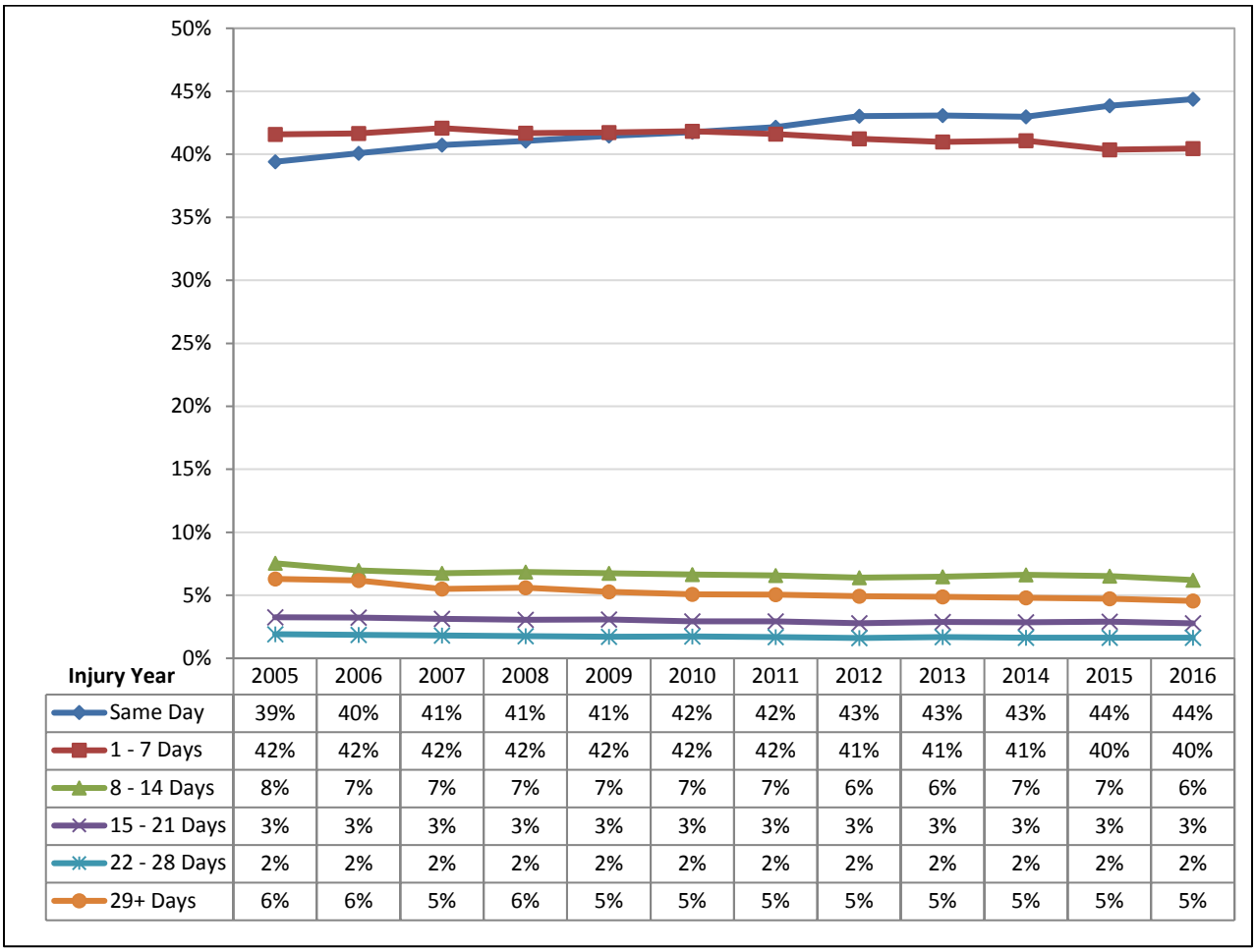
Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

Timeliness of Care

Workers' compensation participation and retention rates for treating physicians show that there are physicians available to treat injured employees, but other reasons also affect how promptly an injured employee receives medical treatment. Reasons affecting timeliness of care include promptness in injured employees seeking treatment, procedures and barriers established by employers in reporting work-related injuries and referring to physicians, and appointment and scheduling conflicts with doctors. Timeliness of care is defined as the number of days between the reported injury date and the first non-emergency medical treatment, and it approximates initial access-to-care conditions influenced by all these factors.

Claims are broken down into six groups by the number of days between injury and first treatment, and the shares of these groups are shown in Figure 6.9 About 84 percent of new workers' compensation patients in injury year 2016 received initial care either on the same day of injury or within seven days, up from 81 percent in injury year 2005. The percentage of "Same Day" treatment group increased steadily, reaching 44 percent in injury year 2016.

Figure 6.9: Percentage of Claims by Number of Days between Injury and First Non-Emergency Visit to Physician



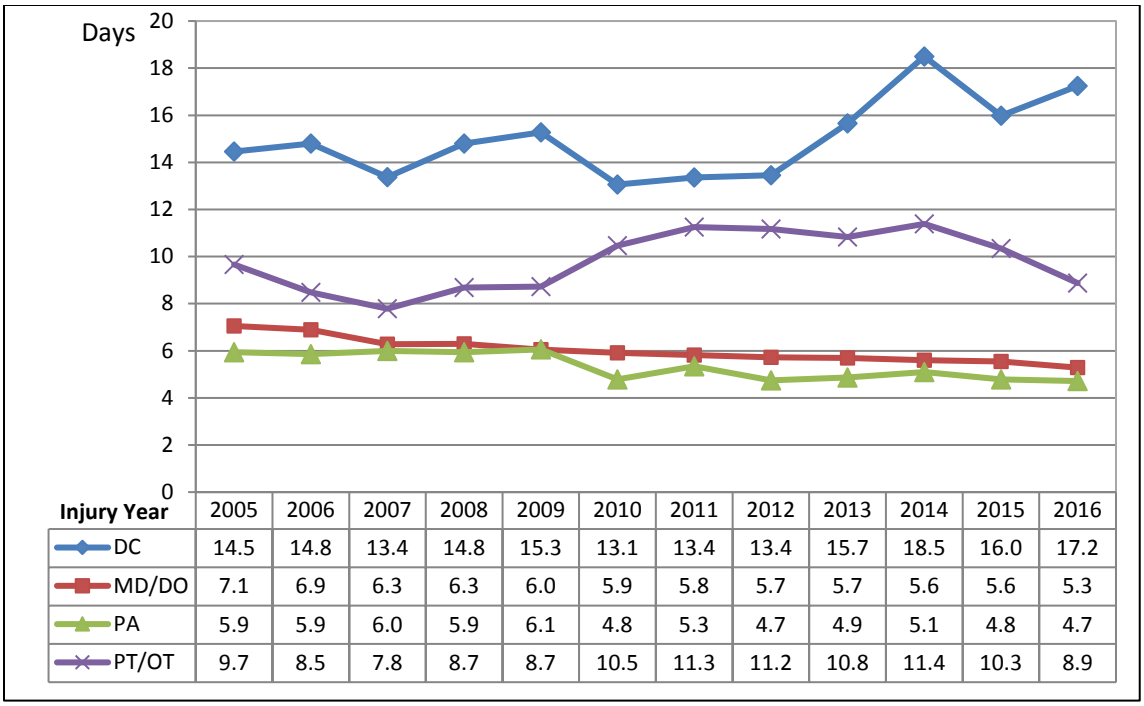
Injury Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Same Day	39%	40%	41%	41%	41%	42%	42%	43%	43%	43%	44%	44%
1 - 7 Days	42%	42%	42%	42%	42%	42%	42%	41%	41%	41%	40%	40%
8 - 14 Days	8%	7%	7%	7%	7%	7%	7%	6%	6%	7%	7%	6%
15 - 21 Days	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
22 - 28 Days	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
29+ Days	6%	6%	5%	6%	5%	5%	5%	5%	5%	5%	5%	5%

Note: For this measure, services within 6 months after injury were examined. Injury year 2016 figures considered services up to June 30, 2017.
Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

In terms of the number of days between the injury and the first non-emergency medical treatment, the average number of days in injury year 2005 was 7.1 days for MD or DO physicians, decreasing to 5.3 days in injury year 2016 (see Figure 6.10). This number for initial treatment was higher for those who saw DCs, PTs, and OTs, which is partially explained by the fact that those with low back and other musculoskeletal injuries may not seek immediate treatment. Injured employees receiving first treatment from PAs had the lowest number of days between injury and first treatment. For most providers, the number of days continued to decrease except for DCs. Since injury year 2012, many of the services provided by DCs were related to IR examinations and reporting, which tended to occur later.

It should also be noted that these average numbers are affected by extreme values. The differences shown by the averages are indications of how many extreme cases there are. On the other hand, using medians, the median number of days between injury and first treatment was one day for physicians and PAs, two days for PTs and OTs, and three days for DCs. Medians also did not change year to year.

Figure 6.10: Average Number of Days between Injury and First Visit



Injury Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
DC	14.5	14.8	13.4	14.8	15.3	13.1	13.4	13.4	15.7	18.5	16.0	17.2
MD/DO	7.1	6.9	6.3	6.3	6.0	5.9	5.8	5.7	5.7	5.6	5.6	5.3
PA	5.9	5.9	6.0	5.9	6.1	4.8	5.3	4.7	4.9	5.1	4.8	4.7
PT/OT	9.7	8.5	7.8	8.7	8.7	10.5	11.3	11.2	10.8	11.4	10.3	8.9

Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

7. Return-to-Work Outcomes in the Texas Workers' Compensation System

An important goal of the Texas workers' compensation system is to return injured employees to safe and productive employment. Effective return-to-work programs can help alleviate the economic and psychological impact of a work-related injury on an injured employee, reduce income benefit payment costs, and increase employee productivity for Texas employers.

Studies conducted by the former Research and Oversight Council on Workers' Compensation and the Workers' Compensation Research Institute indicated that, prior to the HB 7 reforms, Texas injured employees were generally off work for longer periods of time when compared to injured employees in other states. They were also more likely to report that their take-home pay was less than their pre-injury pay. Policymakers acknowledged the importance of return-to-work in HB 7 by including the following requirements:

- adopting return-to-work guidelines;
- instituting a return-to-work pilot program geared toward businesses with fewer than 50 employees;
- improving coordination of injured employee referrals for vocational rehabilitation services;
- referring injured employees to the Texas Workforce Commission and local workforce development centers for employment opportunities;
- improving system participant return-to-work outreach efforts; and
- adopting rules to implement changes in the work-search requirements for injured employees who qualify for Supplemental Income Benefits (SIBs).

Return-to-Work Rates Improved Since HB 7

When workers' compensation data was compared with employee wage information from the Texas Workforce Commission, the most recent results showed improvements in the percentage of injured employees who returned to work within six months after their injuries. This analysis examined the return-to-work rates of injured employees who received Temporary Income Benefits (TIBs) for their lost time from work.

One of the key factors that contributed to improving these rates is the economic well-being of the job market. In economic downturns (like the nation experienced beginning in 2008), injured employees who are fully recovered from their injuries and are ready to go back to work may return to an economy with high unemployment in which their positions or companies are no longer in existence. During the 2008 recession, the unemployment rate in Texas rose as high as 8 percent[25]. The percentage of injured

[25] U.S. Department of Labor, Bureau of Labor Statistics Economy at a Glance, 2018.

employees who returned to employment within six months post-injury decreased from 80 percent in 2008, to 76 percent in 2011 (see Table 7.1).

Conversely, robust economic growth (like Texas experienced during the post-recession recovery), can positively impact return-to-work rates. When the Texas unemployment rate fell to 5.6 percent in 2012, the return-to-work rate for 2012-2016 stabilized at roughly 78 percent. Three years after their injuries in 2008-2014, approximately 95 percent of those injured employees had returned to some initial employment.

Overall, HB 7 reforms appeared to have helped alleviate the effects of the economic downturn in Texas. Despite the economic decline in 2008-2016, the initial return-to-work rate never dipped below 76 percent (compared to 74 percent in 2004).

Table 7.1: Initial Return-to-Work Rates – Percentage of Injured Employees Receiving TIBs Who Have Initially Returned to Work (Six Months to Three Years Post-Injury)

	6 Months Post Injury	1 Year Post Injury	1.5 Years Post Injury	2 Years Post Injury	3 Years Post Injury
2008	80%	85%	89%	91%	94%
2009	77%	84%	89%	91%	94%
2010	78%	85%	89%	92%	94%
2011	76%	85%	90%	92%	95%
2012	78%	88%	92%	94%	95%
2013	77%	88%	92%	94%	96%
2014	79%	89%	92%	94%	95%
2015	76%	86%	90%	92%	
2016	78%	87%			

Note 1: The study population consists of employees injured in 2009-2016 who also received Temporary Income Benefits.
Note 2: The third year of 2015, and the 1.5, second, and third years of 2016 are excluded due to insufficient data.
Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

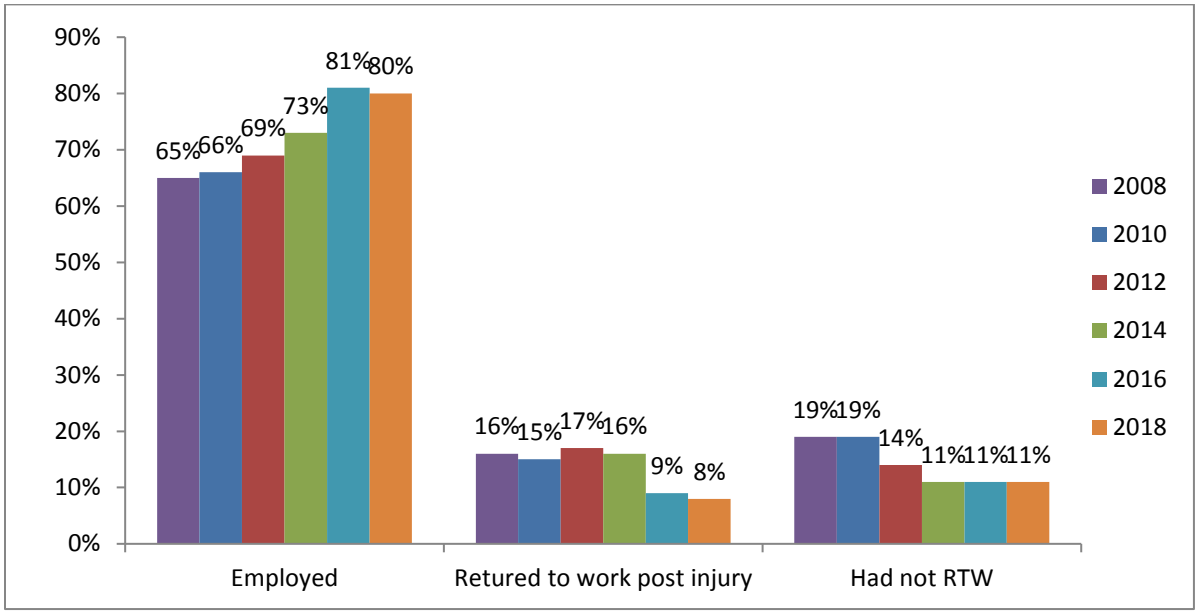
Comparison of Injured Employee Survey Results Pre- and Post- HB 7 Implementation

In 2018, REG surveyed 3,200 injured employees about their experience in the Texas workers' compensation system. It is clear from that survey, and from looking at return-to-work rates shown in Table 7.1, that despite the slowdown during the recession, return-to-work rates have continued to improve since the 2005 reforms.

As Figure 7.1 shows, 80 percent of workers surveyed in 2018 reported that they were currently employed (compared with 65 percent in 2008), and a significantly lower percentage of workers surveyed in 2018 reported that they had not yet returned to work 12-24 months after their injuries (11 percent in 2018, compared with 19 percent in 2008).

Also, the percentage of injured employees who reported that they had some initial employment after their injuries, but were not currently employed, decreased dramatically (8 percent in 2018, compared to 17 percent in the 2012 survey).

Figure 7.1: Return-to-Work Experiences of Injured Employees



Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, Survey of Injured Employees, 2008, 2010, 2012, 2014, 2016, and 2018.

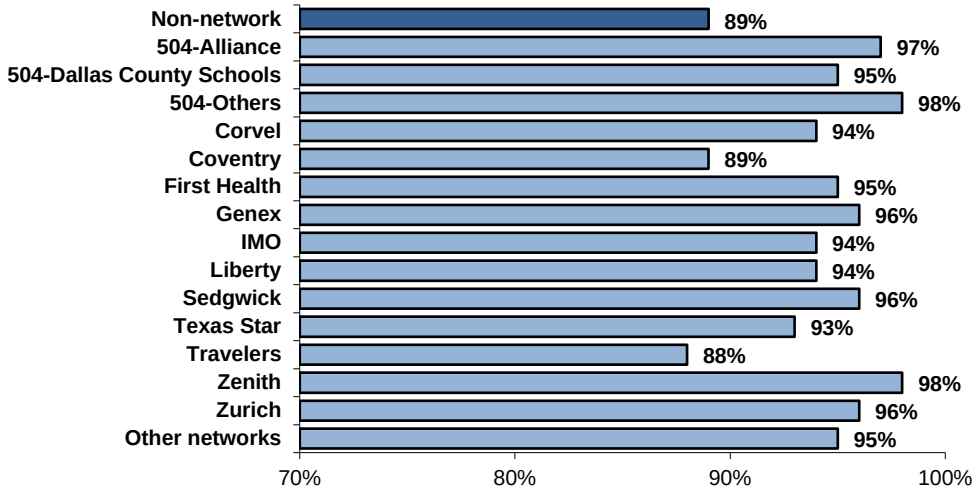
Comparisons Between Network and Non-Network Claims

Return-to-work rates have been improving in the Texas workers' compensation system since 2001, especially after the passage of HB 7. One important feature of HB 7 was the formation of networks, which led to continued improvements in return-to-work outcomes. Legislators increased the focus on disability management in this new health care delivery model by requiring networks to adopt return-to-work guidelines and increase the use of case management.

Legislators also envisioned that networks would be better positioned to help with communication between treating doctors and employers about injured employees' physical abilities to return to work, and employers' job requirements or the availability of alternative duty assignments.

Results from the REG's 2018 Workers' Compensation Network Report Card indicate that, except for one network, injured employees from the Network group (including the Other Networks group of eight smaller networks) had higher initial return-to-work rates than Non-network injured employees (see Figure 7.2), and were returned to work faster than those in the Non-network category (see Figure 7.3).

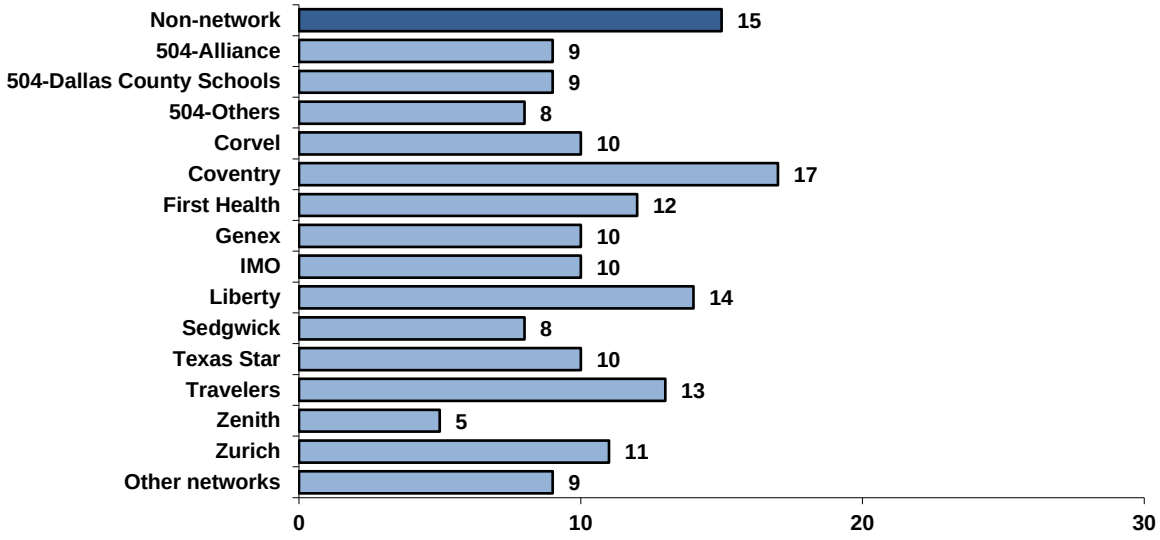
Figure 7.2: Percentage of Injured Employees Who Indicated That They Went Back to Work at Some Point After Their Injury



Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

It should be noted that these return-to-work outcomes are heavily affected by whether the employers of these injured employees have effective return-to-work programs and are able to bring injured employees back to safe and appropriate employment. The improved performance of most Networks over Non-networks may be the result of coordination between system participants to return injured employees to work.

Figure 7.3: Average Number of Weeks Injured Employees Reported Being off Work Because of Their Work-Related Injury



Source: Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

Continuous monitoring of these return-to-work measures is necessary to track the effects of implementing treatment and return-to-work guidelines, as well as the impact of networks on return-to-work outcomes in Texas. While system-wide return-to-work rates continue to improve, the increased focus on disability management under the HB 7 reforms seems to have resulted in return-to-work improvements in most networks over non- network claims.

8. Medical Dispute Resolution and Complaint Trends

This section examines how the frequency, duration, and outcomes of medical disputes have changed since the 2005 legislative reforms. This section also reports the number of complaints received by TDI and DWC, including complaints regarding workers' compensation health care networks.

Number and Time Frame to Resolve Medical Disputes

Generally, there are three types of medical disputes raised in the workers' compensation system:

- fee disputes (i.e. disputes over the amount of payment for medical services provided to injured employees);
- preauthorization disputes[26] (i.e., disputes regarding the medical necessity of certain medical treatments and services that were denied prospectively by the insurance carrier); and
- retrospective medical necessity disputes (i.e., disputes regarding the medical necessity of medical treatments and services that have already been rendered and billed by the health care provider).

As Table 8.1 shows, DWC experienced a significant reduction in the number of medical disputes filed. In 2005, DWC received approximately 13,257 medical disputes. By 2017 that number fell to 4,849[27] (by about 63 percent). The decrease in disputes is related to several factors; fewer claims filed, health care networks created in 2006, DWC's medical treatment guidelines adopted in 2007, and DWC's adoption of new professional, inpatient and outpatient hospital and ambulatory surgical center fee guidelines in 2008.

[26] Texas Labor Code §413.014 and 28 Texas Administrative Code §134.600 include a list of medical treatments and services that require preauthorization by the insurance carrier before they can be provided to an injured employee. Networks are not subject to these preauthorization requirements and may establish their own lists of medical treatments and services that require preauthorization. See Texas Insurance Code §1305.351.

[27] From August 2008 to August 2009, one health care provider filed approximately 6,000 pharmacy fee disputes against one insurance carrier. DWC upheld a great majority of these disputes in favor of the insurance carrier (approximately 60 percent of all fee disputes decisions made during those years), and the requestor eventually withdrew all the disputes during the appeal process.

Table 8.1 Number and Distribution of Medical Disputes Submitted to DWC, by Type of Medical Dispute

Year Dispute Received	Pre-authorization	Fee Disputes	Retrospective Medical Necessity Disputes	Total
2005	13%	68%	19%	13,257
2006	16%	70%	14%	9,706
2007	27%	72%	1%	8,810
2008	22%	75%	3%	12,244
2009	24%	74%	2%	12,293
2010	41%	58%	1%	7,596
2011	35%	63%	2%	7,795
2012	37%	62%	1%	5,643
2013	26%	73%	1%	5,187
2014	26%	74%	Less than 1%	5,241
2015	23%	77%	Less than 1%	5,283
2016	20%	80%	Less than 1%	4,960
2017	17%	82%	Less than 1%	4,849

Source: Texas Department of Insurance: Division of Workers' Compensation and Workers' Compensation Research and Evaluation Group, 2018.

Additionally, the percentage of medical disputes associated with preauthorization denials increased from 13 percent of all medical disputes in 2005, to a high of 41 percent in 2010. By 2017, 17 percent of all medical disputes were associated with preauthorization denials. Over the same period, the percentage of retrospective medical necessity disputes decreased steeply from 19 percent in 2005, to less than 1 percent 2017. This is most likely the result of DWC's medical treatment guideline adoption in May 2007, which requires preauthorization for all medical services that are outside of the treatment guideline's recommendations.

In 2011, DWC also adopted one of the nation's first pharmacy closed formularies, which requires preauthorization by an insurance carrier for any prescription drug excluded from the closed formulary. The formulary took effect for new claims on September 1, 2011, and for older injuries on September 1, 2013. Although the number of prescription drugs that require preauthorization has increased as a result of the closed formulary, DWC's efforts to facilitate increased communication between insurance carriers and prescribing doctors has resulted in fewer medical necessity disputes since the formulary took effect in 2011.

In January 2007, DWC adopted a rule to streamline the intake of medical necessity disputes to more closely align processes for resolving workers' compensation medical necessity disputes with the dispute process in the group health system. This rule requires the insurance carrier's utilization review agent to send all medical evidence used to make the medical necessity decision directly to the Independent Review Organization (IRO), instead of sending multiple copies to DWC to compile for the IRO's review.

Another part of this process requires TDI to assign IROs, instead of DWC. TDI assigns the disputes electronically within 24 hours of the receipt of an IRO request. Fewer incoming fee disputes, combined with DWC's efforts to improve the efficiency of fee dispute resolution, have resulted in more timely resolution of fee disputes.

As a result of DWC's process improvement efforts, the mean time frames to resolve medical disputes have decreased significantly since 2005 for all dispute types (see Table 8.2). The average preauthorization dispute duration fell from 59 days in 2005, to 18 days in 2017 (a 70 percent decrease), the average fee dispute duration decreased from 335 days in 2005, to 67 days at the end of 2017 (a 80 percent decrease), and the average retrospective medical necessity dispute duration decreased from 123 days in 2005, to 20 days in 2017 (an 94 percent decrease).

The number of active fee disputes that needed to be resolved by DWC reached a peak of about 17,000 in August 2009. Issues involving previous inpatient hospital fee guidelines and previous pharmacy fee guidelines accounted for about 85 percent of those disputes. At the end of 2015, there were only 940 active medical fee disputes pending resolution. By 2016, the fee dispute population grew to 1,235, with issues involving reimbursement for air ambulance services accounting for 56 percent of that population. This increase is attributed to the abatement of air ambulance disputes starting on February 5, 2016, while DWC waits for state and federal litigation over air ambulance fees to conclude. These providers continue to file disputes at a rate of 25 per month.

New fee disputes received by DWC has decreased as well, from about 9,183 new fee disputes in calendar year 2008, to about 3,946 disputes for calendar year 2017.

Table 8.2: Mean Number of Days to Resolve Medical Disputes, by Type of Medical Dispute, 2005-2017

Year Dispute Received	Days to Resolve Pre-authorization Disputes	Days to Resolve Fee Disputes	Days to Resolve Retrospective Medical Necessity Disputes
2005	59	335	123
2006	55	309	132
2007	22	205	32
2008	19	197	36
2009	20	120	36
2010	19	166	26
2011	20	197	31
2012	18	225	22
2013	18	159	19
2014	19	155	32
2015	19	69	24
2016	18	70	20
2017	18	67	20

Source: Texas Department of Insurance: Division of Workers' Compensation and Workers' Compensation Research and Evaluation Group, 2018.

Over the past few years, the proportion of medical disputes decided in favor of the insurance carrier or the health care provider has changed depending on the type of dispute (see Table 8.3). For fee disputes, decisions in favor of the health care provider decreased from 72 percent in 2005, to 40 percent in 2017. For retrospective medical necessity disputes, the percentage of decisions in favor of the insurance carrier increased sharply from 17 percent in 2006, to 81 percent in 2017. In 2017, insurance carriers prevailed in 80 percent of the medical necessity decisions over preauthorization disputes.

These dispute outcomes, coupled with the decreasing number of new medical disputes being filed, suggest that more health care providers and insurance carriers are using DWC's evidence-based treatment guidelines when making medical necessity decisions, and that IROs are also basing their medical necessity determinations on these treatment guidelines (as required by Texas Labor Code §413.031(e-1)). This may mean that, when compared to previous years, the few medical disputes that now exist are more complicated and involve situations which lack clear guidance regarding reimbursement or treatment recommendations. These findings may also indicate that TDI needs to examine whether IROs are receiving all of the medical documentation relevant to the dispute from the insurance carrier, and whether health care providers are providing the insurance carrier with all of the relevant medical documentation to justify deviating from the guideline.

Table 8.3: Percentage of Concluded Medical Disputes Decided in Favor of Insurance Carrier or Health Care Provider, by Type of Medical Dispute, 2002-2017

Year Dispute Received	Preauthorization Disputes		Fee Disputes		Retrospective Medical Necessity Disputes	
	Carrier	Provider	Carrier	Provider	Carrier	Provider
2005	71%	29%	28%	72%	17%	83%
2006	65%	35%	28%	72%	17%	83%
2007	77%	23%	19%	81%	72%	28%
2008	75%	25%	79%	21%	57%	43%
2009	78%	22%	92%	8%	65%	35%
2010	73%	27%	58%	42%	69%	31%
2011	77%	23%	63%	37%	76%	24%
2012	83%	17%	58%	42%	71%	29%
2013	83%	17%	63%	37%	87%	13%
2014	81%	19%	58%	42%	60%	40%
2015	83%	17%	61%	39%	80%	20%
2016	82%	18%	61%	39%	100%	0%
2017	80%	20%	60%	40%	81%	19%

Source: Texas Department of Insurance: Division of Workers' Compensation and Workers' Compensation Research and Evaluation Group, 2018.

Note: From August 2008 to August 2009, approximately 6,000 pharmacy fee disputes were received by DWC from one pharmacy processing agent against one insurance carrier. They were all subsequently upheld in favor of the insurance carrier.

Trends in Complaints Filed

Both the number of workers' compensation claims and complaints received by DWC decreased measurably since the 2005 legislative reforms (see Table 8.4). Except for some fluctuations, the number of complaints decreased from 7,433 in 2004, to 5,555 in 2017.

Of the complaints received and closed in 2017, 2,431 (43.8 percent) were "monitoring complaints", meaning that DWC did not investigate the complaint for a violation of the Texas Workers' Compensation Act or DWC rules. However, DWC did send a letter to the party who was the subject of the complaint to ask them to resolve the complaint and remind them of their compliance duties. A total of 1,292 complaints (27.6 percent) were "not confirmed", meaning that there was not a violation of the Texas Workers' Compensation Act or DWC rules, or a violation could not be substantiated. A total of 641 complaints (11.5 percent) were confirmed as violations of the Texas Workers' Compensation Act or rules and warranted further investigation. The remaining complaints were not closed in 2017 and not included in the overall closure numbers.[28]

The most frequent types of complaints received by DWC in 2017 included complaints about communication issues (e.g., timely filing of required forms), complaints from health care providers about

[28] Complete results from DWC's System Monitoring and Oversight section are available at http://www.tdi.texas.gov/wc/pbo/index.html.

medical benefits (e.g., prompt payment), and complaints regarding the failure of a system participant to attend a required exam or hearing.

Table 8.4: Total Number of Complaints Received by DWC

Complaint Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Number of Complaints	7,433	5,883	3,820	6,715	8,621	6,516	6,808	6,267	5,792	5,402	5,399	4,676	5,462	5,555

Source: Texas Department of Insurance, Division of Workers' Compensation, 2018.
Note: Complaint counts for 2005 and 2006 should be viewed with caution since these numbers are incomplete due to the transition of the functions of the former Texas Workers' Compensation Commission to the newly created Division of Workers' Compensation. During that transition, the DWC's complaints were placed into TDI's existing complaint tracking system, which initially did not track complaints received through referrals from DWC field office staff. Complaints received through internal referrals are now tracked as part of DWC's complaint tracking system.

Aside from the general workers' compensation complaints received by DWC, TDI has received relatively few complaints about certified health care networks (given the fact that about 900,000 injured employees have been treated in these networks as of May 31, 2017). TDI received 818 complaints since 2005, and only about 30 percent were deemed justified.

The most frequent types of complaints about certified health care networks from health care providers included payment disputes related to preauthorization, failure to pay based on contracted rates, non-payment based on timely filing, and complaints about delayed payment for services provided. The most frequent types of complaints about certified health care networks by injured employees included complaints about access to care and the quality of care provided by network health care providers. Chapter 1305 of the Insurance Code, as well as TDI's network rules (Chapter 10 of the Texas Administrative Code) require networks to resolve complaints internally (including disputes over network fees), and to maintain a detailed complaint log that is subject to TDI examination.

The administration of workers' compensation disputes and complaints is a critical component of DWC's mission. Since the 2005 legislative reforms, the overall number of complaints have decreased with intermittent fluctuations, while the number of medical disputes decreased steadily. Effective streamlining has led to steep reductions in the average durations to resolve disputes. DWC and TDI will continue to monitor disputes and complaints, and to improve processes where possible.

9. Employer Participation in the Texas Workers' Compensation System

Introduction

Since the Texas workers' compensation law was first enacted in 1913, private sector employers have been allowed to either obtain workers' compensation coverage or become "non-subscribers" that do not participate in the workers' compensation system.[29] Prior to the 1970's, many states had elective workers' compensation laws. Since the 1972 publication of the *National Commission on State Workmen's Compensation Laws' essential recommendations*, 22 states have made workers' compensation coverage mandatory for most private-sector employers. Several states with mandatory workers' compensation laws provide statutory exemptions to allow small employers or employers from select industries to opt out of their workers' compensation systems.[30]

Texas is the only state that permits private-sector employers (regardless of employer size or industry) the option of not obtaining workers' compensation coverage.[31] Employers who choose not to have workers' compensation coverage (through either purchasing a workers' compensation insurance policy, becoming a certified self-insured employer or a member of a certified self-insurance group of employers) lose the protection of statutory limits on liability and may be sued for negligence by their injured employees.

Since 1993, the state has periodically monitored the percentage of employers that are non-subscribers, the percentage of employees who work for non-subscribers, the types of alternative workers' compensation programs used by non-subscribers, and the reasons employers choose to or choose not to participate in the Texas workers' compensation system. Non-subscription rates help measure employers' perspectives about whether the benefits of participating in the workers' compensation system outweigh the costs of obtaining coverage, and are an indicator of the relative "health" of the workers' compensation system. For this reason, the 79th Legislature required TDI (now DWC) to monitor and report the impact of the 2005 legislative reforms on employer participation in the Texas workers' compensation system as part of this biennial report.

Survey Design and Data Collection

In even-numbered years, REG draws a random probability sample from all year-round private-sector employers, stratified by industry and employment size, using the Texas Workforce Commission's

[29] Texas governmental entities, including the state and its political subdivisions are currently required to provide workers' compensation insurance coverage to their employees.

[30] Florida, for example, exempts non-construction employers with less than four employees. New Mexico exempts non-construction employers with less than three employees but allows some service and ranch employers the option to purchase coverage.

[31] In New Jersey, all employers are required to have workers' compensation coverage or be self-insured. Non-compliant employers are fined, and their injured employees receive income and medical benefits through the Uninsured Employers' Fund.

Unemployment Insurance database.[32] To address changing issues in the workers' compensation system, REG occasionally modifies the original survey instrument, but the core questions remain for long-term comparisons.

Typically, during the months of July through August of those years, the Public Policy Research Institute (PPRI) at Texas A&M University surveys the sampled employers on behalf of TDI. In 2018, they completed surveys of more than 2,300 Texas employers, and REG analyzed the results. [33] The results of the survey serve as the basis for the estimates provided in this report, and include:[34]

- employer non-subscription rates and the percentage of Texas employees working for non-subscribers;
- reasons employers give for purchasing workers' compensation coverage or becoming non-subscribers to the workers' compensation system;
- employers' recent experiences with workers' compensation premium costs;
- satisfaction levels for subscribers and non-subscribers; and
- employers' perceptions regarding the impact of the HB 7 legislative workers' compensation reforms on economic development.

The survey respondents who provided the information for this report included; company owners and executives (36 percent), human resources and claims administrators (31 percent), managers for accounting, finance, and legal (31 percent), and other company staff (2 percent). The subscription and non- subscription estimates have a 95 percent confidence interval of +/-2.5 percent.

Employer Participation and Employee Coverage

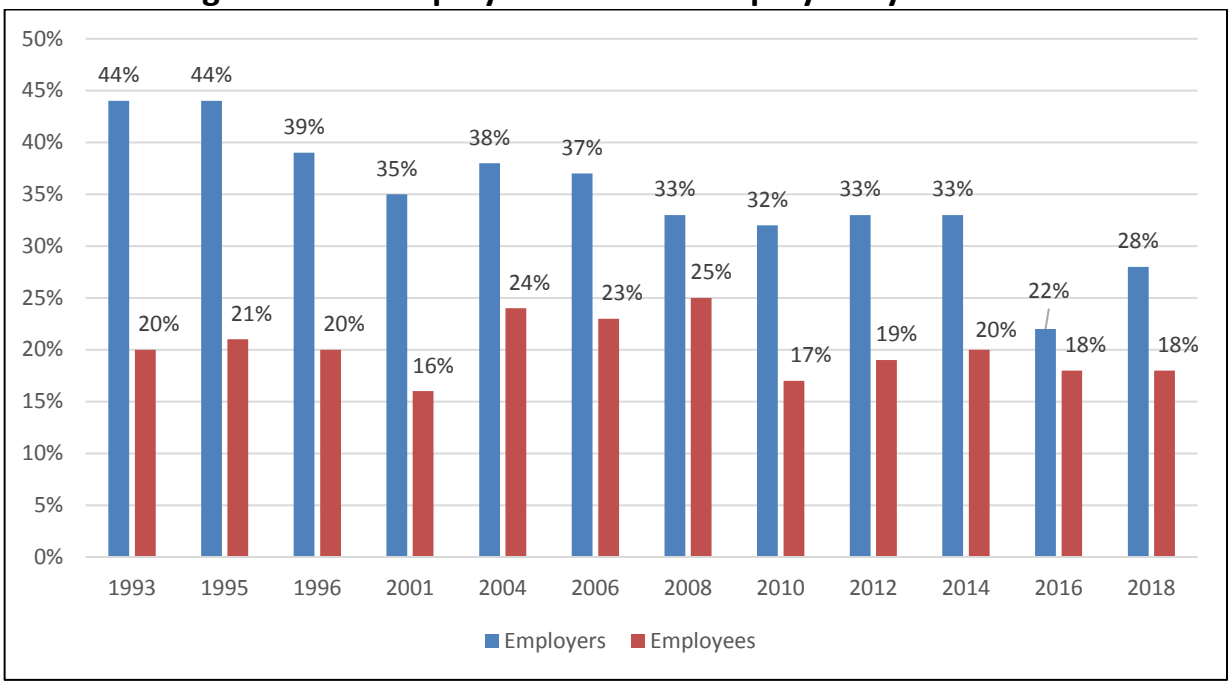
The percentage of year-round, non-subscribing, private-sector Texas employers remained essentially flat from 2008 to 2014, but experienced a sharp decrease in 2016, from 33 percent to 22 percent. In 2018, it increased to 28 percent (from about 82,000 employers in 2016, to 105,608 in 2018), which is still the second lowest percentage since 1993. Although the percentage of private, year-round employers who were non-subscribers increased in 2018, the percentage of Texas employees who work for non-subscribers did not change from 2016. An estimated 18 percent of Texas private-sector employees (representing approximately 1.8 million employees in 2018) worked for non-subscribing employers (see Figure 9.1). Conversely, 72 percent of private-sector employers (an estimated 267,000 employers) are subscribers to the workers' compensation system, and they employ 82 percent of Texas private-sector employees (an estimated 8.4 million employees).

[32] For the purposes of this study, "year-round" employers are employers with reported wages for four consecutive quarters. Employers with only seasonal employees were excluded from this analysis.
[33] The response rate for this survey was 37 percent.
[34] Additional findings from this survey, including information regarding the types of alternative occupational benefit programs offered by non-subscribers, can be viewed at www.tdi.texas.gov/report14.html.

About 88 percent of subscribing employers said they always had workers' compensation coverage. This suggests that 12 percent of subscribers were either new employers or non-subscribers in a previous year. About 12 percent of non-subscribers said that they were subscribers in the past.

Although non-subscribing employers opted not to provide workers' compensation coverage to their employees, some of these employers (about 30 percent in 2018) provide an alternative occupational benefit plan. It is important to note that these non-subscriber benefit plans are not regulated by DWC, and the benefits offered in these plans vary by employer. Because these employers who provide an alternate occupational benefit plan tend to be larger employers, they employ about 64 percent of the non-subscriber employee population. As a result, an estimated 6 percent of private-sector employees (about 638,340) had neither workers' compensation coverage nor coverage through a non-subscriber occupational benefit plan in the case of a work-related injury in 2018 (an increase from 4 percent of employees in 2016).

Figure 9.1: Percentage of Texas Employers That Are Non-subscribers and the Percentage of Texas Employees That Are Employed by Non-subscribers



Source: Survey of Employer Participation in the Texas Workers' Compensation System, 1993 and 1995 estimates from the Texas Workers' Compensation Research Center and the Public Policy Research Institute (PPRI) at Texas A&M University; 1996 and 2001 estimates from the Research and Oversight Council on Workers' Compensation and PPRI; and 2004-2018 estimates from the Texas Department of Insurance, Workers' Compensation Research and Evaluation Group and PPRI.

Non-subscription Rates by Employer Size

Large employers with 100 or more employees typically held the lowest non-subscription rates since 1995, while smaller employers with one to 49 employees held the highest non-subscription rates (see Table 9.1). The non-subscription rate for employers with one to four employees decreased from 43 percent in 2014 to 31

percent in 2016, but increased to 36 percent in 2018. Similar patterns occurred among employers with five to nine employees and those with 10 to 49 employees. Large employers with 100 to 499 employees decreased their non-subscription rate by 1 percent, while the largest employers (with 500 or more employees) increased 1 percent from 2016.

Table 9.1: Percentage of Texas Employers That Are Non-subscribers by Employment Size

Employment Size	1995	1996	2001	2004	2006	2008	2010	2012	2014	2016	2018
1-4 Employees	55%	44%	47%	46%	43%	40%	41%	41%	43%	31%	36%
5-9 Employees	37%	39%	29%	37%	36%	31%	30%	29%	27%	19%	27%
10-49 Employees	28%	28%	19%	25%	26%	23%	20%	19%	21%	10%	16%
50-99 Employees	24%	23%	16%	20%	19%	18%	16%	19%	18%	10%	10%
100-499 Employees	20%	17%	13%	16%	17%	16%	13%	12%	14%	11%	10%
500 + Employees	18%	14%	14%	20%	21%	26%	15%	17%	19%	19%	20%

Source: Survey of Employer Participation in the Texas Workers' Compensation System, 1995 estimates from the Texas Workers' Compensation Research Center and the Public Policy Research Institute (PPRI) at Texas A&M University; 1996 and 2001 estimates from the Research and Oversight Council on Workers' Compensation and PPRI; and 2004-2018 estimates from the Texas Department of Insurance, Workers' Compensation Research and Evaluation Group and PPRI.

Non-subscription Rates by Industry

The increase in non-subscription rates from 2016 to 2018 occurred across all except two industry sectors, Mining/Utilities/Construction and Finance/Real Estate/Professional Services. These two sectors continue to have the lowest non-subscription rates as in most of the previous years (17 percent and 21 percent respectively). The non-subscription rates for Other Services Except Public Administration increased the most, by 14 percent (see Table 9.2).

Table 9.2: Percentage of Texas Employers that are Non-subscribers by Industry

Industry Type	Non-subscription Rate							
	2004	2006	2008	2010	2012	2014	2016	2018
Agriculture/Forestry/Fishing/Hunting	39%	25%	27%	25%	29%	26%	14%	22%
Mining/Utilities/Construction	32%	21%	28%	19%	22%	20%	19%	17%
Manufacturing	42%	37%	31%	31%	29%	25%	21%	28%
Wholesale Trade/ Retail Trade/Transportation	40%	37%	29%	32%	26%	34%	20%	33%
Finance/Real Estate/Professional Services	32%	33%	33%	33%	32%	29%	24%	21%
Health Care/Educational Services	41%	44%	39%	32%	35%	41%	28%	39%
Arts/Entertainment/Accommodation/Food Services	54%	52%	46%	40%	40%	39%	24%	32%
Other Services Except Public Administration	39%	42%	36%	42%	49%	47%	22%	36%

Source: Survey of Employer Participation in the Texas Workers' Compensation System, Public Policy Research Institute at Texas A&M University, and the Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.
Note: Industry classifications were based on the 2002 North American Industry Classification System (NAICS) developed by the governments of the U.S., Canada, and Mexico, which replaced the Standard Industrial Classification (SIC) system previously used in the U.S. As a result of this change in industry classifications, industry non-subscription rates for 2004-2018 cannot be compared to previous years.

Reasons Employers Become Non-subscribers

The two primary reasons why employers choose not to purchase or obtain workers' compensation coverage were that their perception is that they had too few employees (24 percent), and that they had few on the job injuries (24 percent). It is possible that for these two reasons, smaller employers who became subscribers in 2016 opted out in 2018. Employers' perception that workers' compensation insurance premiums were too high increased slightly to 19 percent in 2018, but that was still significantly less than the 35 percent who reported this reason in 2006 (See Table 9.3).

Table 9.3: Most Frequent Reasons Non-subscribing Employers Gave for Not Purchasing Workers' Compensation Coverage

Primary Reasons Given by Surveyed Employers	Percentage of Non-subscribing Employers						
	2006	2008	2010	2012	2014	2016	2018
Workers' Compensation Insurance Premiums Were too High	35%	26%	32%	15%	17%	18%	19%
Employer Had Too Few Employees	21%	26%	25%	17%	21%	26%	24%
Employers Not Required to Have Workers' Compensation Insurance by Law	9%	11%	13%	17%	19%	24%	17%
Medical Costs in the Workers' Compensation System Were Too High	4%	4%	5%	10%	16%	6%	11%
Employer Had Few On-the-job Injuries	9%	9%	12%	17%	20%	18%	24%

Source: Survey of Employer Participation in the Texas Workers' Compensation System, Public Policy Research Institute at Texas A&M University, and the Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

When these reasons were examined by employer size, the results shifted slightly. For example, 41 percent of large employers with more than 500 employees in 2018 reported the primary reasons for not

participating in the workers' compensation system were that they felt they could do a better job managing costs or ensuring that injured employees received appropriate medical and income benefits. But this was a decrease from 61 percent in 2016.

About 26 percent of large employers reported that their reason for not participating in the workers' compensation system was that medical costs in the system were too high, and 22 percent said that premiums were too high, but this is down significantly from 50 percent in 2010.

Reasons Employers Gave for Purchasing Workers' Compensation Coverage

Of employers surveyed in 2018, 21 percent said they participated in the Texas workers' compensation system because the insurance rates were lower, and 20 percent said it was due to the fact that they were able to participate in a health care network. Lower percentages said that they purchased workers' compensation coverage because they were concerned about lawsuits (18 percent) or thought having workers' compensation coverage was required by law (see Table 9.4).

Table 9.4: Most Frequent Reasons Subscribing Employers Gave for Purchasing Workers' Compensation Coverage

Primary Reasons Given by Surveyed Employers	Percentage of Subscribing Employers						
	2006	2008	2010	2012	2014	2016	2018
Employer Thought Having Workers' Compensation Was Required by Law	22%	25%	22%	19%	22%	20%	17%
Employer Was Able to Provide Injured Employees with Medical Care Through a Workers' Compensation Health Care Network	20%	24%	27%	20%	22%	25%	20%
Employer Was Concerned About Lawsuits	20%	14%	18%	21%	20%	20%	18%
Employer Needed Workers' Compensation Coverage in Order to Obtain Government Contracts	6%	3%	6%	9%	10%	11%	9%
Workers' Compensation Insurance Rates Were Lower	NA	2%	2%	11%	10%	10%	21%

Source: Survey of Employer Participation in the Texas Workers' Compensation System, Public Policy Research Institute at Texas A&M University, and the Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

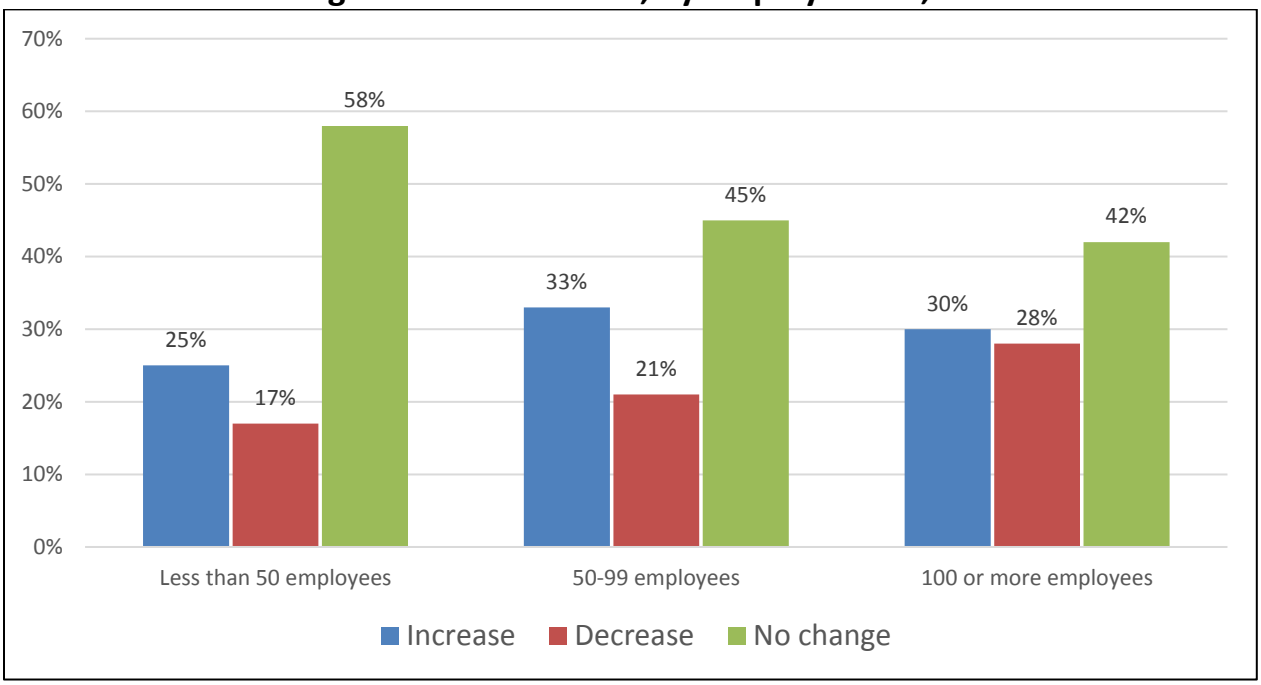
For employers with 500 or more employees, 28 percent said the ability to participate in a health care network continued to be the primary reason for participating in the Texas workers' compensation system. This finding indicates a slightly increased level of employer interest in health care networks since 2012, which may impact employers' decisions to remain subscribers, enter, or re-enter the Texas workers' compensation system.

Other key reasons large subscribers gave in 2018 for purchasing workers' compensation coverage included that they thought it was required by law (18 percent); the ability to reduce workers' compensation insurance costs through deductibles, certified self-insurance, group self-insurance, or other premium discounts (16 percent); and their concerns about lawsuits (12 percent).

Premium Pressures Decrease in 2018

The survey results indicated that premium pressures decreased in 2018. This conforms with the insurance rate decreases Texas employers have continued to experience since the 2005 legislative reforms. A majority of subscribing employers of all sizes experienced decreases or no changes in their premiums in 2018 (see Figure 9.2). A decreased percentage of large and small employers (by 4 and 5 percentage points respectively) reported increases in their workers' compensation premiums. The percentage of medium-sized employers with premium increases moved up slightly from 30 percent in 2016, to 33 percent in 2018.

Figure 9.2: Percentage of Subscribers That Experienced an Increase, Decrease, or No Change in Their Premium, by Employer Size, 2018



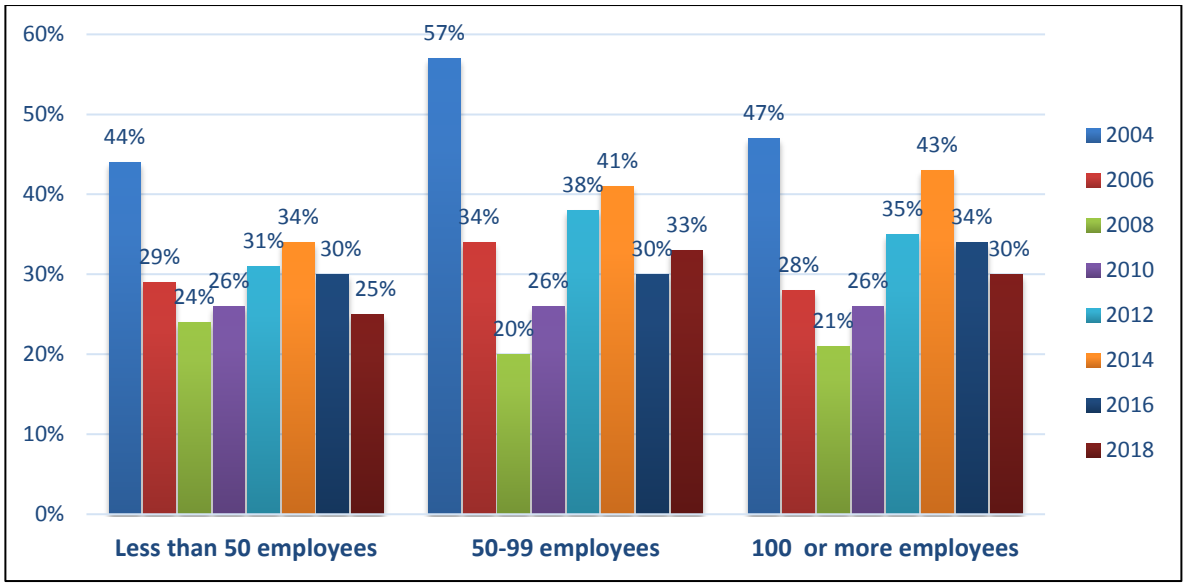
Source: Survey of Employer Participation in the Texas Workers' Compensation System, Public Policy Research Institute at Texas A&M University, and the Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

As Figure 9.3 shows, 25 percent of small employers experienced premium rate increases in 2018, the lowest percentage to experience rate increases since 2010. About 30 percent of large employers experienced premium rate increases in 2018, the lowest percentage since 2012. Overall, between 65 percent and 75 percent of subscribing employers experienced either decreases or no changes in their premium in 2018, compared to 70 percent in 2016. About 70 percent of large employers experienced decreases or no change in their 2018 premiums, compared to 65 percent in 2016.

The average premium rates in Texas continued to decrease between 2016 and 2018 (see Section 2) and may be a key driver behind the highest subscription rates since the survey began in 1993. In addition, some insurance companies now offer premium credits for participating in their network. An increased

percentage of subscribers responded to the survey that the availability of networks was the deciding factor in becoming subscribers.

Figure 9.3: Percentage of Subscribing Employers That Experienced an Increase in Their Workers' Compensation Premiums Compared to Previous Policy Years, by Employer Size



Source: Survey of Employer Participation in the Texas Workers' Compensation System, Public Policy Research Institute at Texas A&M University, and the Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

Nonsubscribers' Knowledge about Reporting Requirements in Texas

The 2018 employer survey also asked questions regarding non-subscribing employers' knowledge about their workers' compensation reporting requirements (see Table 9.5). About 18 percent of the non-subscribing employers reported that they were extremely knowledgeable about the reporting requirement to notify DWC of their coverage status yearly through the filing of the DWC Form-005. About 16 percent of the non-subscribing employers reported that they were extremely knowledgeable about the reporting requirement to report all work-related deaths, occupational diseases, and injuries resulting in at least one day of lost time by filing the DWC Form-007. These are slight improvements from 2016. In 2018, about 50 percent of non-subscribers (compared to 56 percent to 58 percent in 2016) report that they were not at all knowledgeable, while 32 percent (compared to 28 percent to 30 percent in 2016) reported they were somewhat knowledgeable about these requirements.

Table 9.5: Nonsubscribers' Knowledge of Reporting Requirements in Texas

Employers' Knowledge	Percent of all Employers Surveyed					
	Not at All Knowledgeable		Somewhat Knowledgeable		Extremely Knowledgeable	
	2016	2018	2016	2018	2016	2018
All employers without workers' compensation insurance coverage are required to notify DWC about their coverage status at least annually through the filing of DWC Form-005.	56%	50%	30%	32%	14%	18%
Employers without workers' compensation insurance coverage that have at least 5 employees are required to report all work-related deaths, occupational diseases, and injuries resulting in at least one day of lost time to DWC through the filing of DWC Form-007.	58%	51%	28%	32%	14%	16%

Source: Survey of Employer Participation in the Texas Workers' Compensation System, Public Policy Research Institute at Texas A&M University, and the Texas Department of Insurance, Workers' Compensation Research and Evaluation Group, 2018.

Summary

Overall, the employer subscription rate remained essentially flat from 2012 to 2014, but experienced a steep increase (from 67 percent to 78 percent) in 2016, and a decrease (to 72 percent) in 2018. These last two rates are the highest subscription rates since this survey started in 1993. Meanwhile, the percentage of employees who work for subscribers remained stable at 82 percent since 2016.

About 6 percent of the employee population do not have any type of coverage, either through workers' compensation or through a non-subscriber occupational benefit plan, in the case of a work- related injury.

Subscribers cite the option to participate in health care networks, low premium rates, and their concerns about lawsuits among their primary reasons for opting into the system. While 35 percent of non-subscribers cite high premiums as their primary reason for not having coverage in 2006, that decreased to 19 percent in 2018, almost in line with the downward trend for premium rates. About 70 percent of subscribers continue to experience either premium decreases or no premium changes from previous years.

The 2018 employer survey also showed a low, but slightly improved level of non-subscriber knowledge regarding their workers' compensation reporting requirements. Only about 16 percent to 18 percent of the non-subscriber employers reported that they were extremely knowledgeable about two of the key reporting requirements.

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